ARCHAEOLOGIA adriatica

Sveučilište u Zadru
Universitas Studiorum
Jadertina | 1396 | 2002 |

Sveučilište u Zadru / Universitas studiorum Jadertina / University of Zadar
Odjel za arheologiju / Department of Archaeology

udk 902/904 Archaeol. Adriat. issn 1846-4807

ARCHAEOLOGIA adriatica

Archaeol. Adriat. Vol. 18 / 2024 1-592 Zadar, 2025.

Izdavač / *Publisher*
Sveučilište u Zadru / *University of Zadar*
Mihovila Pavlinovića 1, 23000 Zadar, Hrvatska

Povjerenstvo za izdavačku djelatnost / *Publishing Committee*
Lena Mirošević (predsjednica / *Chair*)

Glavni i odgovorni urednik / *Editor in Chief*
Ante Uglešić

Tajnica / *Secretary*
Josipa Baraka Perica

Uredništvo / *Editorial Board*
Igor Borzić (Sveučilište u Zadru), Martina Čelhar (Sveučilište u Zadru),
Tomislav Fabijanić (Sveučilište u Zadru), Josipa Baraka Perica (Sveučilište u Zadru),
Mirja Jarak (Sveučilište u Zagrebu), Marko Dizdar (Institut za arheologiju, Zagreb),
Biba Teržan (Univerza v Ljubljani), Gian Pietro Brogiolo (Università degli Studi di Padova)

Adresa uredništva / *Adress of the Editorial Board*
Archaeologia Adriatica
Sveučilište u Zadru, Odjel za arheologiju
Obala kralja Petra Krešimira IV., 2
23000 Zadar, Hrvatska / Croatia
Tel. +385(0)23 200 522
E-mail: archaeologia.adriatica@unizd.hr

Archaeologica Adriatica referira se u / *Archaeologia Adriatica is abstracted and indexed in*
DOAJ: Directory of Open Access Journals
- Ulrich's international periodicals directory
- DYABOLA. Sachkatalog der Bibliothek – Römisch-
Germanische Kommission des Deutschen Archäologischen Instituts
ERIHPLUS: European Reference Index for the Humanities and Social Science
SCOPUS

Dostupno na / *Available at*
Morepress (morepress.unizd.hr)
Hrčak. Portal znanstvenih časopisa Republike Hrvatske (hrcak.srce.hr)

Časopis izlazi jednom godišnje / *Published annually*
ISSN 1846-4807 (Tisak)
ISSN 1848-9281 (Online)
DOI 10.15291/archeo
UDK Gorica Lovrić, Sveučilišna knjižnica u Zadru

Naslovnica / *Cover Page*
Foto / *Photo*: L. Bogdanić

Članci u časopisu su licencirani pod Creative Commons Attribution By 4.0 International Licence
The articles in the journal are licenced under a Creative Commons Attribution By 4.0 International Licence

SADRŽAJ / CONTENTS

Josipa Baraka Perica
O životu i djelu profesora emeritusa Brunislava Marijanovića
On the Life and Work of Professor Emeritus Brunislav Marijanović 11

Ana Marinović
Bibliografija profesora emeritusa Brunislava Marijanovića
Bibliography of Professor Emeritus Brunislav Marijanović 25

Leo Arbutina, Mario Bodružić, Dario Vujević
Vela Pećina kod Kali na Ugljanu - novo kazalište kasnoga gornjeg Paleolitika
na sjevernodalmatinskim otocima (Izvorni znanstveni članak)
Vela Pećina Cave near Kali on Ugljan – a New Late Upper Palaeolithic
Site in the Northern Dalmatian Islands (Original scientific paper) 35

Kristina Horvat Oštrić, Nicholas Triozzi
Rezultati probnoga arheološkog istraživanja neolitičkog
nalazišta Pod Jarugom (Prethodno priopćenje)
Results of Archaeological Trial Excavations of the
Neolithic Site Pod jarugom (Preliminary report) 77

Tihomila Težak-Gregl
Kakve veze imaju Brezovljani s Butmirom? (Prethodno priopćenje)
What does Brezovljani have to do with Butmir? (Preliminary report) 123

Maja Krznarić Škrivanko
Prostorna distribucija i unutarnja organizacija naselja sopotske
kulture na Vinkovačkom području (Prethodno priopćenje)
The Spatial Distribution and Internal Organisation of Sopot-Culture
Settlements in the Vinkovci Area (Preliminary report) 141

Dragana Rajković, Selena Vitezović
Ukrasni predmeti od školjki s lokaliteta Osijek –
Hermanov vinograd (Izvorni znanstveni članak)
Mollusc-Shell Decorative items from the Osijek –
Hermanov vinograd Site (Original scientific paper) 229

Jacqueline Balen
Lasinjska kultura u Bosni i Hercegovini - u svjetlu nalaza bočice iz Visokog Brda u Lupljanici kod Dervente (Stručni rad)
Lasinja Culture in Bosnia and Herzegovina – In the Light of a Miniature Bottle find from Visoko Brdo in Lupljanica near Derventa (Professional paper) 255

Mitja Guštin
„Zajednica sa Skadarskog jezera" na prijelazu iz bakrenog u brončano doba (Izvorni znanstveni članak)
'Lake Skadar Community' at the Turn from the Copper to the Bronze Age (Original scientific paper) 267

Biba Teržan, Ana Kruh
Srednjoeuropski elementi na srednjem Jadranu i njegovu zaleđu u rano brončano doba – rekapitulacija (Pregledni članak)
Central European Elements in the Central Adriatic and its Hinterland in the Early Bronze Age – A Recapitulation (Review paper) 297

Domagoj Perkić, Marko Dizdar, Hrvoje Potrebica, Ivan Pamić
Grob iz starijeg željeznog doba s groblja Nakovana – Zmijna (poluotok Pelješac) (Izvorni znanstveni članak)
An Early Iron grave at the Nakovana – Zmijna cemetery (Pelješac Peninsula) (Original scientific paper) 329

Martina Čelhar
Fibule tipa Certosa Ic, Id i Ie u kontekstu novih nalaza iz Nadina (Izvorni znanstveni članak)
Ic-, Id- and Ie- type Certosa Fibulae in the Context of New Finds from Nadin (Original scientific paper) 371

Mate Parica
Tragovi maslinarstva u prapovijesti istočnog Jadrana (Prethodno priopćenje)
Traces of Olive Cultivation in the Prehistoric Eastern Adriatic (Preliminary report) 413

Ana Marinović
Novac gradova Arpija i Dirahija s istraživanja
na solinskoj Zaobilaznici (Stručni rad)
Coins of the Cities of Arpi and Dyrrachion from Research
on the Solin-Zaobilaznica Site (Professional paper) 431

Dražen Maršić
Stubci s protomama Jupitra-Amona i Gorgone iz Zadra i problem
njihova arhitektonskog konteksta (Izvorni znanstveni članak)
The Pillars with Protomes of Jupiter Ammon and Gorgon from Zadar
and their Architectural Context (Original scientific paper) 445

Filomena Sirovica, Tatjana Tkalčec, Eva Buća
Izvan izvornog konteksta: keramički nalazi iz groblja
oko crkve Uznesenja blažene djevice Marije u Gori
(Izvorni znanstveni članak)
Outside of the Original Context: Ceramic Finds from
the Graveyard next to the Church of the Assumption of
the Blessed Virgin mary in Gora (Original scientific paper) 477

Karla Gusar, Ana Karađole
Prilog poznavanju kasnosrednjovjekovne i novovjekovne keramike
u Dalmaciji – nalazi sa zadarskog Muraja (Izvorni znanstveni članak)
A Contribution to the Study of Late Medieval nad Early Modern Pottery
in Dalmatia – Finds from Zadar's Muraj (Original scientific paper) 529

Upute autorima / Instructions for Authors 581



Osamnaesti svezak časopisa *Archaeologia Adriatica* posvećen je profesoru emeritusu Brunislavu Marijanoviću u znak zahvalnosti za sve što je učinio za Odjel za arheologiju, Sveučilište u Zadru i arheologiju općenito.

The eighteenth volume of the journal *Archaeologia Adriatica* is dedicated to professor emeritus Brunislav Marijanović, as an expression of gratitude for everything he has done for the Department of Archaeology, University of Zadar and archaeology in general.

O ŽIVOTU I DJELU PROFESORA EMERITUSA BRUNISLAVA MARIJANOVIĆA

ON THE LIFE AND WORK OF PROFESSOR EMERITUS BRUNISLAV MARIJANOVIĆ

JOSIPA BARAKA PERICA

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
josipa.baraka@gmail.com

UDK: 902-05Marijanović, B.
DOI: 10.15291/archeo.4718
Primljeno / Received: 2024-10-01
Prihvaćeno / Accepted: 2024-11-01

Profesor emeritus Brunislav Marijanović rođen je 6. listopada 1949. u Prozoru (Republika Bosna i Hercegovina). Osnovnu školu, a potom i gimnaziju završio je u Jajcu. Zanimanje za arheologiju razvija još u gimnazijskim danima pa ne iznenađuje što godine 1968. upisuje Studij arheologije na Filozofskom fakultetu u Beogradu, na kojem diplomira 16. prosinca 1973. godine. Na istom je fakultetu upisao i poslijediplomski studij te 16. lipnja 1980. brani magistarsku radnju „Topografija i stratigrafija starijeg neolitika u Hercegovini", a deset godina poslije, 26. lipnja 1990. i doktorsku disertaciju pod naslovom „Eneolitik Bosne i Hercegovine".

U svojoj dugoj i plodnoj radnoj karijeri najvažnije, ono formativno razdoblje, profesor provodi u Zemaljskom muzeju Bosne i Hercegovine u Sarajevu, instituciji koja ga je još kao studenta uvela u čari terenske arheologije. U tamošnjem Odjeljenju za arheologiju, u zvanjima kustosa, višeg kustosa i višega znanstvenog suradnika proveo je razdoblje od 15. srpnja 1975. do 31. prosinca 1990.

Professor Emeritus Brunislav Marijanović was born on October 6, 1949 in Prozor (Republic of Bosnia and Herzegovina). He completed elementary school and then high school in Jajce. He developed an interest in archaeology while still in high school, so it is not surprising that in 1968 he enrolled in the Archaeology Department at the Faculty of Philosophy in Belgrade, where he graduated on December 16, 1973. He also enrolled in postgraduate studies at the same faculty, and on June 16, 1980, he defended his master's thesis "Topography and Stratigraphy of the Early Neolithic in Herzegovina". Ten years later, on June 26, 1990, he defended the doctoral dissertation entitled "The Eneolithic of Bosnia and Herzegovina".

In his long and prolific career, the professor spent the most important, formative period at the National Museum of Bosnia and Herzegovina in Sarajevo, an institution that introduced him to the charms of field archaeology while he was still a student. He spent the period from July 15, 1975 to December 31, 1990, in this museum's Department of Archaeology, in the

Samostalan istraživački rad B. Marijanović je započeo kada je uz akademika B. Čovića vodio iskopavanje na željeznodobnoj gradini Kopilo kod Zenice, u literaturi i arheološkoj znanosti prepoznato zbog dokaza o ranoj obradi željezne rude koje je objavio akademik B. Čović.

Na to se nadovezala njegova tzv. „hercegovačka orijentacija" u istraživanju neolitika i eneolitika na prostoru na kojem, osim Zelene pećine i Lisičića, nisu bila poznata druga neolitička nalazišta i nijedno eneolitičko nalazište. B. Marijanović je već tijekom 1975. i 1976. godine proveo više terenskih pregleda koji su rezultirali otkrićem malih, ali ne i beznačajnih neolitičkih nalazišta (Žukovička pećina, Ilčinova lazina, Vukove njive) te više brončanodobnih gradina (Jasočka gradina, Aladinsko brdo, Džakulina glavica, Prenjska i Opličićka gradina i dr.). U tom kontekstu posebno je bilo bitno otkriće Ravlića pećine, višeslojnoga pećinskog nalazišta na vrelu Tihaljine, gotovo na samoj granici Hercegovine i Hrvatske.

Nakon toga, u razdoblju od 1977. do 1979. profesoru Marijanoviću, tada najmlađem kustosu u povijesti Zemaljskog muzeja, povjereno je samostalno vođenje posebnog projekta „Neolitička i metalodobna kultura u Ravlića pećini". Njegovi rezultati inače objavljeni u *Glasniku Zemaljskog muzeja* za 1980./1981. godinu, pridonijeli su cjelovitijem spoznavanju neolitika u Hercegovini, ali i korigiranju ranijih interpretacija o prijelazu neolitika u eneolitik ne samo na hercegovačkom već i na mnogo širem području istočnog Jadrana. Tako je prvi put u povijesti istraživanja eneolitika vrlo jasno definiran njegov autohtoni karakter i otklonjena mogućnost postojanja bilo kakvih kulturnih procesa uvjetovanih prisutnošću novih kulturnih entiteta. Istodobno je definiran daljnji razvojni tijek koji je primarno obilježen autohtonim populacijskim supstratom.

B. Marijanović je sudjelovao i na čitavom nizu drugih projekata u Bosni i Hercegovini.

positions of curator, senior curator and senior scientific associate.

B. Marijanović's independent research work began when, together with academician B. Čović, he led excavations at the Iron Age hillfort Kopilo near Zenica, recognized in the literature and archaeological science for the evidence of early iron ore processing published by academician B. Čović.

This was followed by his "Herzegovinian orientation" in the research of the Neolithic and Eneolithic, in an area in which, apart from Zelena pećina and Lisičići, no other Neolithic sites had been known, and no Eneolithic sites at all. B. Marijanović had already conducted several field surveys in 1975 and 1976, which resulted in the discovery of small, but not insignificant Neolithic sites (Žukovička pećina, Ilčinova lazina, Vukove njive) and several Bronze Age hillforts (Jasočka gradina, Aladinsko brdo, Džakulina glavica, Prenjska and Opličićka gradina, etc.). In this context, the discovery of Ravlića pećina, a multi-layered cave site at the source of the Tihaljina River, almost on the border of Herzegovina and Croatia, was particularly significant.

After that, in the period from 1977 to 1979, professor Marijanović, the youngest curator in the history of the National Museum at the time, was entrusted with the independent management of a special project "Neolithic and Metal Age Culture in Ravlića Pećina". His results, published in the *Glasnik Zemaljskog muzeja* for 1980/81, contributed to a more complete understanding of the Neolithic in Herzegovina, but also to the correction of earlier interpretations of the transition from the Neolithic to the Eneolithic, not only in Herzegovina, but also in the much wider area of the eastern Adriatic. Thus, for the first time in the history of research on the Eneolithic, its autochthonous character was very clearly defined and the possibility of the existence of any cultural processes conditioned by the presence of new cultural entities was ruled out. At the same time, a further development course was defined, which was

Kao sudionik više ranijih istraživačkih kampanja na Gradini u Ošanićima kod Stoca, u razdoblju od 1982. do 1984. godine od dr. sc. Z. Marića preuzima vođenje istraživačkog projekta „Završna istraživanja akropole na gradini u Ošanićima“, te njegove rezultate objavljuje u *Glasniku zemaljskog muzeja* za 1984. godinu. Od 1978. do 1980. kao supervizor sudjeluje u provedbi projekta „Donja dolina, naselje brončanog i željeznog doba“. U okviru općeg preustroja načina financiranja znanstvenih istraživanja u Bosni i Hercegovini i ciljanog projiciranja njihova daljnjeg tijeka, od godine 1986., s većim brojem suradnika, vodi studijski projekt „Analiza stanja istraženosti u Bosni i Hercegovini, s projekcijom daljih istraživanja (segment arheologija)“, a potom između 1987. i 1990. koordinira sva arheološka istraživanja prihvaćena za financiranje na području Bosne i Hercegovine: „Bronzano doba sjeverne Bosne“, „Kadića brdo, višeslojno praistorijsko naselje“, „Istraživanje praistorijskih gomila u Hercegovini“, „Helenistički urbani kompleks u Ošanićima kod Stoca“, „Osnovna obilježja kulturnohistorijskog razvoja na tlu istočne Hercegovine u prethistorijskim i starijim historijskim periodima“. Istodobno je vodio i svoja istraživanja u okviru projekta „Eneolitik i brončano doba u istočnoj Hercegovini“ u okviru kojeg je sustavno istražio tri višeslojna nalazišta: Hateljsku pećinu, Guvnine (Gagrice) i pećinu Lazarušu. Njihovom opsežnom monografskom objavom bitno su obogaćene spoznaje o neolitiku i razvijenom stupnju eneolitiku, te brončanom dobu u Hercegovini i istočnom Jadranu, čime je zaokružena slika razvojne dinamike stečena ranijim iskopavanjem Ravlića pećine, a tada iznesene interpretacije razvojnih procesa posve potvrđene. Brončanodobni nalazi iz Hateljske pećine i Guvnina omogućili su akademiku B. Čoviću da zajedno s iskopavanjima koje je osobno vodio na drugim nalazištima, definira novu kulturu ranoga/srednjega brončanog doba, čiji je jedan primarily marked by an autochthonous population substrate.

B. Marijanović also participated in a number of other projects in Bosnia and Herzegovina. As a participant in several earlier research campaigns at Gradina in Ošanići near Stolac, in the period from 1982 to 1984 he took over the leadership of the research project “Final Investigations of the Acropolis at Gradina in Ošanići” from Z. Marić, PhD, and published the results in the *Glasnik Zemaljskog muzeja* for 1984. From 1978 to 1980 he participated as a supervisor in the implementation of the project “Donja Dolina, a Settlement of the Bronze and Iron Ages”. Within the framework of the general restructuring of the funding of scientific research in Bosnia and Herzegovina and the targeted projection of its further course, from the year 1986, he had led the study project “Analysis of the State of Research in Bosnia and Herzegovina, with the Projection of Further Investigations (Segment Archeology)” with a number of collaborators, and then between 1987 and 1990 he coordinated all archaeological research accepted for funding in the territory of Bosnia and Herzegovina: “Bronze Age of Northern Bosnia”, “Kadića Brdo, a Multi-Layered Prehistoric Site”, “Research of Prehistoric Mounds in Herzegovina”, “Hellenistic Urban Complex in Ošanići near Stolac”, “Basic Characteristics of Cultural and Historical Development in Eastern Herzegovina in Prehistoric and Older Historical Periods”. At the same time, he conducted research within the project “Eneolithic and Bronze Age in Eastern Herzegovina”, in which he systematically investigated three multi-layered cave sites: Hateljska pećina, Guvnine (Gagrice) and Lazaruša. Their extensive monographic publication significantly enriched our knowledge of the Neolithic and the Advanced Eneolithic, as well as the Bronze Age in Herzegovina and the eastern Adriatic, thus completing the picture of the developmental dynamics obtained from the earlier excavation of Ravlića pećina, and fully confirming the interpretations of development processes presented at

razvojni stupanj nazvan Gagrice/Hatelji.

U okviru proslave 100. obljetnice osnutka Zemaljskog muzeja 1987. i 1988. godine kao komesar vodi projektiranje i realizaciju nove stalne izložbene postave „Bosna i Hercegovina u praistorijsko doba", a sa suradnicima je istodobno realizirao i tematsku izložbu pod nazivom „Oružja kroz vjekove".

Uz svoje redovite istraživačke i muzejske poslove od 1979. do 1989. godine u Odjeljenju za arheologiju obnašao je i dužnost voditelja Odsjeka za praistoriju, a 1990. godine izabran je za načelnika Odjeljenja. Bio je i član uredništva *Glasnika Zemaljskog muzeja* (arheologija) od 1985. do 1990. godine.

Iz nabrojenog je evidentno kako je djelovanje profesora Marijanovića u Zemaljskom muzeju u Sarajevu, instituciji koja ga je oblikovala kao arheologa i istraživača, ostavilo dubokog traga. Iako s razlogom iznimno sentimentalno vezan, profesor zbog osobnih i obiteljskih razloga, neposredno prije raspada tadašnje državne zajednice i početka Domovinskog rata u Hrvatskoj, 31. prosinca 1990. zaključuje svoj rad u Zemaljskom muzeju i prelazi u Arheološki muzej u Splitu. U tamo provedenome trogodišnjem razdoblju, zbog općih okolnosti ratnog vremena u Hrvatskoj koje nisu pružale široke mogućnosti terenskih istraživanja, profesor Marijanović se usredotočio isključivo na kabinetski rad o problematici neolitika i eneolitika jadranskog područja.

Golemo znanje stečeno u dotadašnjem angažmanu na terenskim i kabinetskim istraživanjima, ali i drugim muzeološkim, prezentacijskim i organizacijskim aktivnostima dovelo je do toga da se na poziv prof. dr. sc. Janka Belošević, tadašnjeg predstojnika Odsjeka za arheologiju, Filozofskog fakulteta u Zadru, profesor Marijanović zaposli na Filozofskom fakultetu u Zadru na kojem 30. rujna 1993. biva izabran u zvanje docenta na Odsjeku za arheologiju (danas Odjelu za arheologiju Sveučilišta u Zadru) i time započne svoju dugu i isto tako plodnu i uspješnu

that time. The Bronze Age finds from Hateljska pećina and Guvnine enabled academician B. Čović, together with the excavations he led at other sites, to define a new culture of the Early/Middle Bronze Age, and one of its development stages was called Gagrice/Hatelji.

As part of the celebration of the 100th anniversary of the founding of the National Museum in 1987 and 1988, professor Marijanović as a commissioner led the conceptual design and realization of the new permanent exhibition "Bosnia and Herzegovina in Prehistoric Times", and at the same time he mounted a thematic exhibition called "Weapons Through the Ages."

In addition to his regular research and museum work, from 1979 to 1989 he served as Head of the Prehistory Section in the Department of Archaeology, and in 1990 he was elected Head of the Department. He was also a member of the editorial board of the *Glasnik Zemaljskog muzeja* (*Arheologija*) from 1985 to 1990.

From the above, it is evident that professor Marijanović's work at the National Museum in Sarajevo, the institution that shaped him as an archaeologist and researcher, left a deep mark. Although having profound sentiments about it, the professor, for personal and family reasons, concluded his work at the National Museum and transferred to the Archaeological Museum in Split on December 31, 1990, immediately before the collapse of the state union and the beginning of the Croatian War of Independence. During the three years he spent there, due to the general wartime circumstances in Croatia that did not provide extensive opportunities for field research, professor Marijanović focused exclusively on the office work dealing with the issues of the Neolithic and Eneolithic of the Adriatic region.

The vast knowledge acquired in his previous engagement in field investigations and interpretation of the findings, as well as other museological, presentation and organizational activities, led to the job offer by professor Janko Belošević, PhD, then Head of the Department of Archaeology, at the Faculty of Philosophy in

karijeru sveučilišnog nastavnika. U zvanje izvanrednog profesora izabran je 24. svibnja 2000., u zvanje redovitog profesora 15. travnja 2004., te u zvanje redovitog profesora u trajnom zvanju 25. svibnja 2010. do odlaska u mirovinu 1. listopada 2017. Profesorov veliki znanstveno-nastavnički doprinos na Sveučilištu u Zadru potvrđen je izborom u zvanje *professora emeritusa* 27. veljače 2018. godine.

Od izbora u zvanje docenta predavao je kolegije: Prapovijesna arheologija I i Metodologija arheologije II, koji je osim teorijske nastave uključivao i studentsku terensku nastavu. Držao je i predavanja na izbornom kolegiju Duhovna kultura i umjetnost u neolitiku. Od osnivanja poslijediplomskoga magistarskog studija Arheologija istočnog Jadrana 2001. predavao je kolegij Prapovijesna arheologija II, a na tom je studiju bio i zamjenik voditelja studija i voditelj usmjerenja Prapovijesna arheologija.

Na reformiranom studiju arheologije na preddiplomskoj i diplomskoj razini predavao je kolegije: Neolitik Bliskog istoka i jugoistočne Europe, Neolitik istočnog Jadrana, Kultovi i vjerovanja u neolitiku, Eneolitik jugoistočne Europe, Eneolitik istočnog Jadrana, Metodologija arheoloških iskopavanja II, a na poslijediplomskome doktorskom studiju Arheologija istočnog Jadrana kolegije: Neolitizacija istočnog Jadrana, Porijeklo slikanog ukrasa u srednjem neolitiku, Rani eneolitik istočnog Jadrana, Razvijeni eneolitik istočnog Jadrana. Također je obnašao dužnost voditelja poslijediplomskoga doktorskog studija Arheologija istočnog Jadrana od 2010. do 2016. godine.

Osim nastave na matičnom Sveučilištu, kolegije Prapovijesna arheologija I i Metodologija arheologije II, predavao je i kao stalni gostujući nastavnik na Odjelu za arheologiju i povijest umjetnosti na Pedagoškom fakultetu Sveučilišta u Mostaru, a na reformiranom studiju arheologije na Filozofskom fakultetu (bivšem Pedagoškom fakultetu) istog Sveučilišta u Zadru, so professor Marijanović started working at the Faculty of Philosophy in Zadar, where on September 30, 1993 he was elected to the position of assistant professor at the Department of Archaeology (today the Department of Archaeology of the University of Zadar), thus beginning his long and equally prolific and successful career as a university teacher. He was elected to the position of associate professor on May 24, 2000, he became a full professor on April 15, 2004, and he obtained the position of full tenured professor on May 25, 2010. He was retired on October 1, 2017. The professor's great scientific and teaching contribution to the University of Zadar was confirmed when he was awarded the title of professor emeritus on February 27, 2018.

Since he started working as an assistant professor, he has taught the courses "Prehistoric Archaeology I" and "Methodology of Archaeology II", which, in addition to theoretical teaching, also included student fieldwork. He also gave lectures within the elective course "Spiritual Culture and Art in the Neolithic". From the establishment of the postgraduate master's study program "Archaeology of the Eastern Adriatic" in 2001, he taught the course Prehistoric Archaeology II, and at that study program he was also deputy head of the study program and Head of the Prehistoric Archaeology Section.

At the reformed study of archaeology at the undergraduate and graduate levels, he taught the following courses: "Neolithic of the Near East and Southeastern Europe", "Neolithic of the Eastern Adriatic", "Cults and Beliefs in the Neolithic", "Eneolithic of Southeastern Europe", "Eneolithic of the Eastern Adriatic", "Methodology of Archaeological Excavations II", and at the postgraduate doctoral study program "Archaeology of the Eastern Adriatic" the following courses: "Neolithization of the Eastern Adriatic", "Origin of Painted Decoration in the Middle Neolithic", "Early Eneolithic of the Eastern Adriatic", "Advanced Eneolithic of the Eastern Adriatic". He was also head of the postgraduate doctoral study "Archaeology of the

lišta predavao je kolegije: Neolitik, Kultovi i vjerovanja u neolitiku, Neolitik istočnog Jadrana, Eneolitik, Eneolitik istočnog Jadrana i Metodologija arheoloških iskopavanja II.

U svojstvu gostujućeg profesora predavao je i na dodiplomskom i poslijediplomskom studiju arheologije na Odjelu za arheologiju Filozofskog fakulteta u Ljubljani, te na poslijediplomskom studiju na Fakultetu hrvatskih studija Sveučilišta u Zagrebu. Kao vanjski stručnjak sudjelovao je u radu Javne agencije za raziskovalno dejavnost Republike Slovenije.

Pedagoški rad profesora Marijanovića obuhvaćao je i mentorstvo niza preddiplomskih, diplomskih, magistarskih i doktorskih radova, a znatno je pridonio i znanstvenom formiranju asistenata i znanstvenih novaka koje je izravno, od početka njihova radnog akademskog kurikuluma, uključivao u projekte i terenska istraživanja kojima je bio voditelj. U periodu između 2001. i 2006. godine vodio je znanstveni projekt „Prapovijest našeg primorja“, a od 2007. do 2012. projekt „Rani prapovijesni periodi na području istočnog Jadrana“.

Tijekom dugogodišnjeg rada na Odjelu za arheologiju organizirao je i bio je voditeljem arheoloških istraživanja na brojnim lokalitetima, među kojima se posebno izdvajaju sljedeći:

- Crno vrilo kod Zadra – lokalitet je istražen u sklopu studentske terenske nastave. Riječ je o prvome neolitičkom naselju u Dalmaciji na kojem su otkrivene nastambe te vrlo bogata keramička i litička građa koja nema usporedbi na drugim neolitičkim nalazištima na području istočnog Jadrana.
- Barice u Smilčiću kod Zadra – lokalitet je istražen u sklopu studentske terenske nastave. U ovom je slučaju riječ o iskopavanju poznatoga neolitičkog naselja kojim je bitno korigirana ranija slika ove neolitičke aglomeracije.
- Gudnja kod Stona – kontrolno iskopavanje

Eastern Adriatic” from 2010 to 2016.

In addition to teaching at his home university, he also taught the courses “Prehistoric Archaeology I” and “Methodology of Archaeology II”, as a permanent guest lecturer at the Department of Archaeology and Art History at the Faculty of Pedagogy of the University of Mostar, and at the reformed archaeology study program at the Faculty of Philosophy (former Faculty of Pedagogy) of the same university, he taught the following courses: “Neolithic”, “Cults and Beliefs in the Neolithic”, “Neolithic of the Eastern Adriatic”, “Eneolithic”, “Eneolithic of the Eastern Adriatic” and “Methodology of Archaeological Excavations II”.

As a visiting professor, he taught at both undergraduate and postgraduate levels of archaeology at the Department of Archaeology at the Faculty of Humanities and Social Sciences in Ljubljana, and at the postgraduate level of Croatian Studies at the University of Zagreb. As an external expert, he participated in the work of the “Slovenian Research Agency”.

Professor Marijanović’s educational work included mentoring a number of undergraduate, graduate, master’s and doctoral theses, and he also significantly contributed to the scientific formation of assistants and junior researchers, whom he directly involved, from the beginning of their academic working curriculum, in projects and field research that he led. Between 2001 and 2006, he led the scientific project “Prehistory of Our Coastal Region”, and from 2007 to 2012, the project “Early Prehistoric Periods in the Eastern Adriatic”.

While working at the Department of Archaeology, he organized and led archaeological excavations at numerous sites, among which the following stand out:

- Crno Vrilo near Zadar – the site was excavated as part of student fieldwork. It is the first Neolithic settlement in Dalmatia where dwelling structures and very rich ceramic and lithic artifacts were found, unparalleled among other Neolithic sites in the eastern Adriatic;

i cjelovita objava znatno prije provedenoga, ali neobjavljenog iskopavanja višeslojnoga prapovijesnog nalazišta. Njime su kulturne pojave s tog nalazišta dobile potpunu valorizaciju i jasno određeno mjesto u dinamici razvojnih procesa od ranog neolitika do brončanog doba istočnog Jadrana.

- Pokrovnik kod Šibenika – iskopavanjima je otkriveno prvo i dosad jedino neolitičko naselje u Dalmaciji ograđeno masivnim kamenim zidom, čime je ovo već i prije istraživano nalazište uključeno u skupinu onih neolitičkih nalazišta na kojim su ustanovljene slične ili istovrsne pojave.
- Barice u Benkovcu – lokalitet je istražen u sklopu studentske terenske nastave, a obuhvaća srednjoneolitičko naselje s posebno karakterističnim primjerima nastambi i naseobinske dinamike.
- Lastvine u Benkovcu – istraživanjima je otkriveno jedino eneolitičko naselje na otvorenom prostoru s nalazima eneolitičkih idola u Dalmaciji.
- Zdenci – Tomašanci kod Đakova – eneolitičko naselje s više primjera žrtvovanja životinja, te brončanodobnim i srednjovjekovnim nalazima.
- Tumuli na Ljubačkoj kosi kod Zadra – lokalitet je istražen u sklopu studentske terenske nastave. Tamo je otkriveno više liburnskih kamenih/zemljanih tumula s višestrukim primjerima sukcesivnih pokopa u brončanom i željeznom dobu.
- Tumuli u Krnezi i Podvršju kod Zadra – lokaliteti su istraženi u sklopu studentske terenske nastave, a obuhvaćaju zemljane tumule s primjerima obiteljskog pokopa u ranome željeznom dobu, odnosno sukcesivnih pokapanja od željeznog doba do ranoga srednjeg vijeka.
- Nekropola Venac na Ljubačkoj kosi kod Zadra – lokalitet je istražen u sklopu studentske terenske nastave. Odnosi se na liburnsku nekropolu ranoga željeznog doba s dvojnim načinom pokapanja i dominacijom ženskih grobova.

- Barice in Smilčić near Zadar – the site was investigated as part of student fieldwork. In this case, it was a known Neolithic settlement, excavation of which significantly corrected the previous picture of this Neolithic agglomeration;
- Gudnja near Ston - control excavation and complete publication of a much earlier, but unpublished excavation of a multi-layered prehistoric site. Cultural phenomena from that site were fully valorized and given a clearly defined place in the dynamics of development processes from the Early Neolithic to the Bronze Age of the eastern Adriatic;
- Pokrovnik near Šibenik - excavations have revealed the first and so far only Neolithic settlement in Dalmatia surrounded by a massive stone wall);
- Barice in Benkovac – the site was investigated as part of student fieldwork, and includes a Middle Neolithic settlement with particularly characteristic examples of dwelling structures and settlement dynamics.
- Lastvine in Benkovac – excavation has unearthed the only Eneolithic open air site with finds of Eneolithic idols in Dalmatia;
- Zdenci-Tomašanci near Đakovo - an Eneolithic settlement with several examples of animal sacrifices, as well as Bronze Age and medieval finds;
- Tumuli on Ljubačka Kosa near Zadar – the site was investigated as part of student fieldwork. Several Liburnian stone/earthen tumuli were discovered with multiple examples of successive burials in the Bronze and Iron Ages;
- Tumuli in Krneza and Podvršje near Zadar – sites explored as part of student fieldwork, that include earthen tumuli with examples of family burials in the Early Iron Age, or successive burials from the Iron Age to the Early Middle Ages;
- Necropolis “Venac” on Ljubačka Kosa near Zadar - site investigated as part of student fieldwork. It is a Liburnian necropolis of the Early Iron Age with a dual manner of burials

- Gradina u Zemuniku kod Zadra – lokalitet je istražen u sklopu studentske terenske nastave. Riječ je o višeslojnome neolitičkom, brončanodobnom i željeznodobnom naselju.
- Nekropola Nadin kod Zadra – željeznodobna i rimska nekropola koja je također istražena u sklopu studentske terenske nastave.

U svojstvu nositelja kolegija Metodologija arheoloških iskopavanja II na Filozofskom fakultetu Sveučilišta u Mostaru, koji je uključivao i terensku nastavu, sa studentima je proveo višegodišnja dodatna iskopavanja u Ravlića pećini koja su obogatila spoznaje s iskopavanja provedenih od 1978. do 1980. U istom kontekstu vodio je i višegodišnja iskopavanja kasnoantičkog i ranokršćanskog kompleksa na Rivinama kod Stoca s posebno bitnim primjerom u tranziciji karaktera nalazišta od sepulkralnog do sakralnog.

Posebno važan dio djelovanja Brunislava Marijanovića odnosi se na obavljanje niza odgovornih dužnosti u matičnoj i drugim institucijama. Dužnost predstojnika Odsjeka za arheologiju Filozofskog fakulteta u Zadru obnašao je od 1. listopada 2000. do 30. rujna 2003., a od 1. listopada 2003., bez prekida, do 2016. dužnost pročelnika Odjela za arheologiju Sveučilišta u Zadru. Dužnost pročelnika Odjela za arheologiju od 2001. do 2016. godine je obnašao i na Sveučilištu u Mostaru. Profesor Marijanović od godine 2000. bio je članom uredništva znanstvenog časopisa *Radovi Filozofskog fakulteta – razdio povijesnih znanosti*, a od 2004. članom uredništva znanstvenog časopisa *Archaeologia Adriatica*. Tijekom rada na Sveučilištu u Zadru u dva mandata je bio i član Senata Sveučilišta u Zadru i član drugih sveučilišnih tijela i komisija, te je također u dva četverogodišnja mandata predstavljao Sveučilište u Matičnom povjerenstvu Agencije za znanost i visoko obrazovanje Republike Hrvatske. Kao predstavnik Sveučilišta u Agenciji za

and a predominance of female graves;
- Gradina in Zemunik near Zadar – a site explored as part of student fieldwork. It is a multi-layered Neolithic, Bronze Age and Iron Age site.
- Necropolis in Nadin near Zadar – an Iron Age and Roman-era necropolis that was also explored as part of student fieldwork.

As the lecturer of the course Methodology of Archaeological Excavations II at the Faculty of Philosophy, University of Mostar, which included fieldwork, he conducted several years of additional excavations in Ravlića pećina with students, which enriched the knowledge from the excavations conducted from 1978 to 1980. In the same context, for several years he also led excavations of the late antique and early Christian complex at Rivine near Stolac, particularly significant because of the transition of the site's character from sepulchral to sacral.

A particularly important part of Brunislav Marijanović's work relates to a number of responsible duties that he performed in his home institution and other institutions. He held the position of Head of the Department of Archaeology at the Faculty of Philosophy in Zadar from October 1, 2000, to September 30, 2003. From October 1, 2003, until 2016, without interruption, he was Head of the Department of Archaeology at the University of Zadar. He also held the position of Head of the Department of Archaeology at the University of Mostar from 2001 to 2016. From 2000, professor Marijanović was a member of the editorial board of the scientific journal "*Radovi Filozofskog fakulteta u Zadru – Razdio povijesnih znanosti*", and from 2004 he was a member of the editorial board of the scientific journal "*Archaeologia Adriatica*". During his work at the University of Zadar, he was a member of the Senate of the University of Zadar for two terms and a member of other university bodies and committees, and also represented the University in the Scientific Field Committee of the Agency for Science and Higher Education of the Republic of Croatia

znanost i visoko obrazovanje sudjelovao je u kreiranju pravila za utvrđivanje istovrijednosti inozemnih visokoškolskih diploma.

Profesor Marijanović dobitnik je nekoliko priznanja: 1988. godine *Povelje za uspješnu suradnju i doprinos razvoju* Zemaljskog muzeja Bosne i Hercegovine (povodom 100 godina postojanja), 2012. godine *Rektorove nagrade* Sveučilišta u Zadru te 2016. godine dviju plaketa Filozofskog fakulteta Sveučilišta u Mostaru, *Plakete za znanstvenu djelatnost* i *Plakete za nastavno-stručni doprinos promociji Fakulteta*.

Otkad mu je kao završenom studentu 2. godine pružena prilika da svoja prva terenska znanja i iskustva stekne sudjelovanjem na iskopavanju brončanodobnog i željeznodobnog naselja Pod kod Bugojna, metodološka pedantnost, istraživačka savjesnost i znanstvena izvrsnost profesoru su ostale trajne odrednice arheološke prakse, a izazovi nepoznatog osnovni pokretači njegova istraživačkog i znanstvenog rada. Praktički inicijalno pokazan talent i arheološki instinkt Brunislavu Marijanoviću su osigurali sudjelovanje u iskopavanjima na Podu i u svim idućim istraživačkim kampanjama do 1983., a njegova uloga i značenje, posebice u metodologiji istraživanja, najbolje opisuje citat iz zahvale objave lokaliteta koji je napisao B. Čović, profesorov mentor i jedan od najuglednijih arheologa Bosne i Hercegovine te tadašnji direktor Zemaljskog muzeja: *Najzad, još jedan mlađi kolega, dr. Brunislav Marijanović, počeo je rad na ovom lokalitetu još kao student Beogradskog univerziteta (1970. godine), a zatim nastavio kao kustos Zemaljskog muzeja sve do kraja, do 1983. godine; pokazujući još u početku sve osobine vrsnog istraživača on ih je produbljivao iz godine u godinu povećavajući i svoj doprinos usavršavanju metodologije i organizacije rada. U 1982., a naročito 1983. godini, kada sam bio skrhan i bolešću i tek proživljenom porodičnom tragedijom, kolega Marijanović preuzeo je pretežan dio rukovođenja završnim istraživanjima i su-*

for two four-year terms. As the university's representative in the Agency for Science and Higher Education, he participated in the creation of rules for the assessment of foreign higher education qualifications.

Professor Marijanović received several awards: in 1988, *the Award for Successful Cooperation and Contribution to the Development of the National Museum of Bosnia and Herzegovina* (on the occasion of its 100th anniversary), in 2012, *the Rector's Award of the University of Zadar*, and in 2016, two plaques from the Faculty of Philosophy of the University of Mostar, *the Plaque for Scientific Activity* and *the Plaque for Teaching and Professional Contribution to the Promotion of the Faculty*.

Since he was given the opportunity, as a second-year student, to gain his first field knowledge and experience by participating in the excavation of the Bronze Age and Iron Age site of Pod near Bugojno, methodological meticulousness, research conscientiousness and scientific excellence have remained the permanent determinants of professor's archaeological practice, and the challenges of the unknown have been the main drivers of his research and scientific work. The talent and archaeological instinct shown in practice initially ensured Brunislav Marijanović's participation in the excavations at Pod and in all subsequent research campaigns until 1983, and his role and significance, especially in the research methodology, are best described by a quote from the acknowledgment of the publication of the site written by B. Čović, the professor's mentor and one of the most distinguished archaeologists in Bosnia and Herzegovina and the director of the National Museum at the time: *Finally, another younger colleague, dr. Brunislav Marijanović, started working on this site as a student at Belgrade University (in 1970), and then continued as curator of the National Museum until the end in 1983; showing all the qualities of an excellent researcher from the beginning, he deepened them year by year, increasing his contribution to the improvement of methodology and organization of*

višno je i reći da ih je obavio savjesno i s punim uspjehom.

Privrženost arheologiji te sva znanja i kompetencije koje je stekao i izgradio u Zemaljskom muzeju Bosne i Hercegovine poslije su mu ulaskom u sustav visokog obrazovanja omogućili da se profilira u iznimnog profesora i znanstvenika. Godine predanog rada na Filozofskom fakultetu u Zadru, poslije Sveučilištu u Zadru, profesora emeritusa Brunislava Marijanovića obilježile su kao nastavnika, istraživača, voditelja arheoloških iskopavanja i projekata, voditelja doktorskog studija, predstojnika Odsjeka, dugogodišnjeg pročelnika Odjela, člana Senata i člana uredništva. U profesorovu snažnom angažmanu u uvijek atraktivno pripremljenoj nastavi, pisanoj riječi koja uz brojne članke do sada broji čak osam monografija, zatim trajnom angažmanu na terenu kojima je kroz nastavnu praksu približio brojne generacije studenata, prije svega se iščitava velika ljubav prema arheologiji.

Koliko je ta sprega izražena, svjedoči i odabir hobija kojim se profesor Marijanović pojavljuje kao gorljivi filatelist koji ne bira bilo kakve marke, već isključivo one na kojima su bili otisnuti arheološki lokaliteti, posebni artefakti, spomenici i općenito arheološka baština. Rezultat dugogodišnjeg prikupljanja maraka, koje traje već više od dvadeset godina, iznimno je bogata filatelistička zbirka s više od 7000 maraka, o kojoj bi se mogla organizirati i posebna izložba. Osim hrvatskih izdanja, koja su tiskana od 1991. godine do danas, najveći dio zbirke čine izdanja iz svih europskih zemalja s temama iz svih grana arheologije od 1945. do danas, a njihovu smo prikupljanju dijelom pridonijeli i mi, nekada mlađi zaposlenici Odjela za arheologiju. Osobito je zanimljiva i činjenica što je Hrvatska pošta u Mostaru otisnula marke s nizom arheoloških lokaliteta koje je profesor istraživao i s kojima ga dijele godine predanog rada, na primjer od Ravlića pećine, Rivina – Crkvine, do Ošanića.

work. In 1982, and especially in 1983, when I was devastated by illness and a family tragedy that I had just experienced, my colleague Marijanović took over the majority of the management of the final research, and it is needless to say that he carried it out conscientiously and successfully.

His dedication to archaeology and all the knowledge and competencies he acquired and developed at the National Museum of Bosnia and Herzegovina later enabled him to establish himself as an exceptional professor and scholar when he entered the higher education system. Years of dedicated work at the Faculty of Philosophy in Zadar, later the University of Zadar, marked Professor Emeritus Brunislav Marijanović as a teacher, researcher, head of archaeological excavations and projects, head of doctoral studies, long-time head of the Department, member of the Senate and member of the editorial board. His great love for archaeology can easily be recognized in the professor's active engagement in always carefully prepared teaching materials, in the written word which, in addition to numerous articles, has so far numbered as many as eight monographs, and also in the permanent engagement in the archaeological fieldwork to which he introduced numerous generations of students through teaching practice.

This strong connection is evidenced by the choice of hobby which presents professor Marijanović as an ardent philatelist who does not choose just any stamps, but only those on which archaeological sites, special artifacts, monuments and archaeological heritage in general were printed. The result of his long-term stamp collecting, which has lasted for more than twenty years, is an exceptionally rich philatelic collection of over 7,000 stamps, about which a separate exhibition could be organized. In addition to Croatian editions, which have been printed from 1991 to the present, the largest part of the collection consists of editions from all European countries with topics from all branches of archaeology from 1945 to the present, and we, once young employees of the

Iz tog razloga, u prilogu teksta „O životu i djelu B. Marijanovića“, prilažemo i skupinu odabranih maraka iz profesorove zbirke kako bismo čitatelje dijelom uveli u svijet arheološke filatelije i na taj način još jednom pokazali značenje arheološke baštine u globalnom prepoznavanju civilizacijske ostavštine pojedinih država i narodnosti.

Iz svega navedenog vrlo jasno se iščitava da je profesor emeritus Brunislav Marija-

Department of Archaeology, also contributed to this collection. It is also particularly interesting that the Croatian Post in Mostar printed stamps featuring a number of archaeological sites that the professor once investigated and to which he dedicated years of work, for example Ravlića pećina, Rivina – Crkvina, Ošanići.

For this reason, in addition to this text, we are also including a group of selected stamps from the professor's collection in order to partially




BRONZEKULTWAGEN AUS EINEM URNENFELDERZEITLICHEN GRAB VON ACHOLSHAUSEN
30
DEUTSCHE BUNDESPOST
SILBERNER HALSRING VON TRICHTINGEN · ABZEICHEN EINES KELTISCHEN FÜRSTEN
50
DEUTSCHE BUNDESPOST
GOLDVERZIERTE SCHALE AUS EINEM KELTISCHEN FÜRSTENGRAB · SCHWARZENBACH
40
DEUTSCHE BUNDESPOST
RÖMISCHE KAISERZEIT MASKENBECHER AUS DEM HILDESHEIMER SCHATZFUND
120
DEUTSCHE BUNDESPOST
Dacians
Nekrasovo
5.60 УКРАЇНА 2013
UKRAINA
УКРАЇНА UKRAINA
2013
4.00
UKRAINA УКРАЇНА
2013
4.00
2013
5.60 УКРАЇНА
UKRAINA
of the 4th century B.C.
IV століття до н.е.



nović, između ostalog, ostavio veliki trag u djelovanju Odjela za arheologiju Sveučilišta u Zadru te nam je, uz znak zahvalnosti na svemu i dobrim željama, velika čast i zadovoljstvo 18. svezak našeg časopisa, povodom 75. rođendana, posvetiti upravo profesoru, prvomu glavnom uredniku i piscu mnogih redaka kojima je publici približena duboka prapovijest istočnog Jadrana.

introduce readers to the world of archaeological philately and thus once again demonstrate the significance of archaeological heritage in the global recognition of the civilizational legacy of different countries and nationalities.

From all of the above, it is clear that Professor Emeritus Brunislav Marijanović, among other things, left a great mark on the activities of the Department of Archaeology of the University of Zadar, and, as a token of gratitude for everything he did and with best wishes, it is a great honor and pleasure for us to dedicate the 18th volume of our journal, on the occasion of his 75th birthday, to the professor, the first editor-in-chief and writer of many lines that brought the deep prehistory of the eastern Adriatic closer to the audience.

Translation and proof-reading:
Marija Kostić

BIBLIOGRAFIJA PROFESORA EMERITUSA BRUNISLAVA MARIJANOVIĆA

BIBLIOGRAPHY OF PROFESSOR EMERITUS BRUNISLAV MARIJANOVIĆ

ANA MARINOVIĆ

Arheološki muzej u Splitu
Archaeological Museum in Split
Zrinsko–Frankopanska 25
HR-21000 Split
ana.marinovic@armus.hr

UDK: 902Marijanović, B.(01)
DOI: 10.15291/archeo.4719
Primljeno / Received: 2024–9–15
Prihvaćeno / Accepted: 2024–10–15

I. KNJIGE – MONOGRAFIJE / BOOKS – MONOGRAPHS

2000.

- *Prilozi za prapovijest u zaleđu jadranske obale / Contributions for the Prehistory of the Hinterland of the Adriatic Coast*, Zadar: Filozofski fakultet u Zadru.

2003.

- *Eneolitik i eneolitičke kulture u Bosni i Hercegovini / Eneolithic and Eneolithic Cultures in Bosnia and Herzegovina*, Mostar: Sveučilište u Mostaru, Pedagoški fakultet, Odsjek za arheologiju i povijest umjetnosti.

2005.

- *Gudnja – višeslojno prapovijesno nalazište / Gudnja – a stratified prehistoric site*, Dubrovnik: Dubrovački muzeji – Arheološki muzej.

2009.

- *Crno vrilo 1 – naselje ranog neolitika kod Zadra / Crno vrilo 1, Early Neolithic site*, Zadar: Sveučilište u Zadru.

2012.

- *Ravlića pećina – Prapovijesno naselje / Ravlić Cave – Prehistoric settlement*, Mostar: Matica Hrvatska, Mostar, Hrvatska franjevačka arheološka zbirka Gorica.

2022.

- *Neolitičko nalazište Barice u Smilčiću – istraživanje 2016./2017. / The neolithic site Barice in Smilčić – excavations 2016/17*, Zadar: Sveučilište u Zadru.

2023.

- *Fragmenti iz liburnskog svijeta / Fragments from the Liburnian world*, Zadar: Sveučilište u Zadru.

u tisku / in press

- *Zdenci – Tomašanci, Prapovijesno naselje kod Đakova / Zdenci – Tomašanci, Prehistoric settlement near Djakovo (Croatia*), Zadar: Sveučilište u Zadru.

II. POGLAVLJA U KNJIGAMA / BOOK CHAPTERS

1984.

- Mlađe kameno doba, u/in: *Visoko i okolina kroz historiju I*, Anđelić, P. (ur./ed.), Visoko: Skupština Općine Visoko, 15–28.

1988.

- Muzeološka djelatnost Zemaljskog muzeja Bosne i Hercegovine, u/in: *Spomenica 100.–te godišnjice Zemaljskog muzeja*, Dautbegović, A., Palavestra, V., Benac, A. (ur./eds.), Sarajevo: Zemaljski muzej Bosne i Hercegovine, 234–262.

1991.

- Kasna Hvarsko–Lisičička kultura u eneolitu, *Zbornik radova posvećenih akademiku Alojzu Bencu*, Čović, B. (ur./ed.), Posebna izdanja, Knjiga XCV, Odjeljenje društvenih nauka, knjiga 27, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, 185–192.

2007.

- Kultni riton Crnog Vrila – prilog problematici kultnih ritona u neolitiku istočnog Jadrana, u/in: *Situla, Dissertationes Musei Nationalis Sloveniae*, 44, Blečić, M., Črešnar, M., Hänsel, B., Hellmuth, A., Kaiser, E., Metzner-Nebelsick, C. (ur./eds.), Ljubljana: Narodni muzej Slovenije, 57–68.

2012.

- Odjel za arheologiju, u/in: *Sveučilište u Zadru: o desetoj obljetnici obnove*, Skračić, T. (ur./ed.), Zadar: Sveučilište u Zadru, 198–209. (*koautor T. Fabijanić*)
- Uvod / Introduction, u/in: *Tumuli iz Krneze i Podvršja kod Zadra / Tumulus from Krneza and Podvršje near Zadar*, Marijanović, B. (ur./ed.), Zadar: Sveučilište u Zadru, 7–14.
- Jokina glavica – prapovijesni grobovi / Jokina glavica, Prehistoric grave, u/in: *Tumuli iz Krneze i Podvršja kod Zadra / Tumulus from Krneza and Podvršje near Zadar*, Marijanović, B. (ur./ed.), Zadar: Sveučilište u Zadru, 14–47.
- Zaključak / Conclusion, u/in: *Tumuli iz Krneze i Podvršja kod Zadra / Tumulus from Krneza and Podvršje near Zadar*, Marijanović, B. (ur./ed.), Zadar: Sveučilište u Zadru, 179–184. (*koautor K. Gusar*)

2016.

- Početci naseljavanja na području Zemunika / The beginnings of settlement in the area of Zemunik, u/in: *Zemunik u prostoru i vremenu* / *Zemunik in the space and time*, Faričić, J., Dundović, Z. (ur./eds.), Zadar: Sveučilište u Zadru, 48–67. (*koautor K. Horvat*)

2017.

- Ljubačka kosa – liburnski svijet mrtvih / Ljubačka kosa – the Liburnian world of the dead, u/in: *Župa Ljubač – zrcalo povijesnih i geografskih mijena u sjeverozapadnom dijelu Ravnih Kotara* / *Parish of Ljubač – the mirror of historical and geographical changes in the northwest part of Ravni Kotari, Croatia*, Faričić, J. (ur./ed.), Zadar: Sveučilište u Zadru, 86–97.

2020.

- Arheološki i neki sociološki aspekti grobova br. 1 i br. 2 iz Smilčića – iskopavanje 2016./17. / Archaeological and some sociological aspects of graves no. 1 and no. 2 from Smilčić – excavation 2016/17, *Homo universalis: Zbornik radova posvećen Zorku Markoviću povodom 65. obljetnice života*, Botić, K., Kalafatić, H. (ur./eds.), *Zbornik radova Instituta za arheologiju,* vol. 15, Zagreb: Institut za arheologiju u Zagrebu, 89–105.

III. UREDNIČKE KNJIGE / EDITORSHIP

2002.

- *Ranokršćanska arhitektura na području današnje Zadarske nadbiskupije* / *Early Christian Architecture in today's Zadar Archbishopric*, Zadar*:* Filozofski fakultet u Zadru, Zadarska nadbiskupija.

2009.

- *Crno vrilo 2 – naselje ranog neolitika kod Zadra* / *Crno vrilo 2, Early Neolithic site*, Zadar: Sveučilište u Zadru.

2012.

- *Tumuli iz Krneze i Podvršja kod Zadra* / *Tumuli from Krneza and Podvršje near Zadar*, Zadar: Sveučilište u Zadru.

IV. RADOVI U PERIODICI / ARTICLES IN PERIODICALS

IV. 1. ZNANSTVENI RADOVI / SCIENTIFIC PAPERS

1976.

- Bakarne sjekire iz Tešnja / Haches en cuivre de Tešanj, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. XXX/XXXI (1975/1976), 269–276.

1977.

- Fragment eneolitske keramike iz Badnja / Un fragment ceramique eneolithique de Badanj, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. XXXII (1977), 177–180.

1978.

• Nova nalazišta impresso kulture u Hercegovini / New Sites of impresso–Culture in Hercegovina, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. XXXIII (1978), 5–21.

1979.

• O položaju privjesaka od spondylusa iz Obra, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. XXXIV (1979), 27–33.

1981.

• Ravlića Pećina (Peć Mlini) / La Grotte de Ravlić (Peć Mlini), *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. 35/36 (1980/81), 1–97.

1982.

• Novi eneolitski nalazi iz Hercegovine / Nouvelles trouvailles eneolithiques provenant de l' Herzegovine*, Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. 37 (1982), 217–225.

1983.

• Prilog proučavanju ekonomike starijeg neolita Hercegovine / Contrilbution ὰ l' étude de l'économie du néolithique ancien Herzegovine, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. 38 (1983), 65–72.

1984.

• Završna istraživanja akropole na Gradini u Ošanićima / Les recherches finales de l'acropole sur Gradina ὰ Ošanići, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. 39 (1984), 11– 22.

1987.

• Neki problemi neolita u Hercegovini, *Tribunija*, 4, 127–152.

1989.

• Kasna butmirska kultura u eneolitu / La culture de Butmir tardive a l' eneolithique, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, N. S. sv. 44 (1989), 39–60.

1991.

• Ljubljanska kultura na istočnoj Jadranskoj obali / The Ljubljana Culture on the eastern Adriatic coast, *Vjesnik za arheologiju i historiju dalmatinsku*, 84, 215–245.

1992.

• Prilog rješavanju problema podrijetla trakaste ornamentike na keramici cetinske / Contributio sul problema dell' origine dell' ornamentazione nastriforme sulla ceramica della culture della Cetina, Prijateljev zbornik I: Zbornik radova posvećenih sedamdesetogodišnjici života Krune Prijatelja, *Prilozi povijesti umjetnosti u Dalmaciji*, 32, 71–78.

1993.

• Neka pitanja eneolitika istočnog Jadrana / Certain questions relating to the Eneolithic of the eastern Adriatic, *Diadora*, 14, 5–23.

1994.

- Vučedolska kultura na istočnoj jadranskoj obali / Die Vučedolkultur an der östlichen Adriaküste, *Vjesnik za arheologiju i historiju dalmatinsku*, 86, 53–61.
- Neki aspekti pokapanja u neolitiku Dalmacije / Some aspects of burial in the Neolithic in Dalmatia, *Radovi Filozofskog fakulteta u Zadru, Razdio povijesnih znanosti*, Sv. 33 (20), 1–14.

1997.

- Vučedolska kultura na istočnoj jadranskoj obali / Vučedol Culture on the Eastern Adriatic Coast, *Godišnjak Centra za balkanološka ispitivanja*, 30/28, 31–41.

1998.

- Cetinska kultura–rana faza, samostalna kultura ili integralni dio eneolitika / The Cetina culture, early phase. An independent culture or an integral part of the copper age, *Radovi Filozofskog fakulteta u Zadru, Razdio povijesnih znanosti*, Vol. 36(23), 1–8.

2000.

- Prusac (Biograd) – prapovijesno višeslojno nalazište, eneolitički slojevi / Prusac (Biograd) – Prehistiric multi–layered archaeological site – Eneolithic layers, *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu*, N. S. sv. 48/49 (1996.–2000.), 90–114.

2002.

- Novi nalazi minijaturnih neolitičkih sjekira od jadeita u Dalmaciji / New Findings of Miniature Jadeite Neolithic Hatchets in Dalmatia, *Godišnjak Centra za balkanološka ispitivanja*, 32/30 (2002), 123–131.

2003.

- "Crno vrilo"– novi grob starijeg neolitika u Dalmaciji / Ein neues Grab des älteren Neolithikums Dalmatiens, *Opuscula archaeologica*, 27, 37–41.

2007.

- *Neka pitanja ranog neolitika istočnog Jadrana* / Certain Questions Relating to the Early Neolithic of the Eastern Adriatic, *Archaeologia Adriatica*, 1/1, 7–54.

2008.

- Pintadera iz Ravlića pećine / The Pintadera from Ravlića Cave, *Archaeologia Adriatica*, 2/1, 141–149.

2009.

- Prvi nalazi eneolitičkih idola u Dalmaciji / First Eneolithic idol finds in Dalmatia*, Archaeologia Adriatica*, 3/1, 35–49.

2012.

- Barice – naselje danilske kulture u Benkovcu / Barice – Settlement of the Danilo Culture in Benkovac, *Archaeologia Adriatica*, 6/1, 1–30.
- Nalazi eneolitičke keramike iz Bukovića–Veleševa–Benkovac / Finds of eneolithic pottery from Bukovič–Veleševo–Benkovac, *Asseria*, 10, 11–29.

2013.

- Djelatnost Katedre za prapovijesnu arheologiju Odjela za arheologiju Sveučilišta u Zadru / Activities of the Chair in prehistoric archaeology of the Department of Archaeology, *Archaeologia Adriatica*, 7/1, 1–18.
- Prilog strategiji istraživanja neolitika na Jadranu / A contribution to the research strategy of the Neolithic on the Adriatic, *Archaeologia Adriatica*, 7/1, 77–94.

2015.

- Minijatura iz Smilčića / A miniature from Smilčić, *Archaeologia Adriatica*, 9, 21–37.

2017.

- Pokrovnik – primjer ograđenoga neolitičkog naselja / Pokrovnik – an example of an enclosed neolithic settlement, *Prilozi Instituta za arheologiju u Zagrebu*, 34, 5–44.
- Lastvine – eneolitičko nalazište u Benkovcu / Lastvine – an Eneolithic Site in Benkovac, *Archaeologia Adriatica*, 11, 7–67. (*koautor Lj. Marijanović*).

2018.

- Rivine kod Stoca (Hercegovina) – Prilog neolitizaciji istočnog Jadrana / Rivine near Stolac (Herzegovina) –A contribution to the neolithization of the eastern Adriatic, *Archaeologia Adriatica*, 12, 17–45.

2019.

- Beriš kod Ljubuškog (zapadna Hercegovina) – Primjer mikroneolitičkog nalazišta / Beriš near Ljubuški (western Herzegovina) – A Case Study of Micro–Neolithic Site, *Archaeologia Adriatica*, 13, 7–47.
- A case of probable interpersonal violence from the Early Neolithic site at Smilčić, Croatia, *International journal of osteoarchaeology,* 30(3), 395–400. *(koautori: I. Janković, M. Čavka, M. Carić, M. Novak)*.

2021.

- Novi nalaz žrtvenika na neolitičkom naselju u Smilčiću / New Find of an Altar from the Neolithic Settlement of Smilčić, *Archaeologia Adriatica*, 15, 31–45.

IV.2. RADOVI U ZBORNICIMA ZNANSTVENIH SKUPOVA / CONFERENCE PAPERS

1988.

- Neolitske populacije Bosne i Hercegovine na razmeđu Istoka i Zapada / Les populations néolithiques de Bosnie–Herzegovine a la frontier entre l'Orient et l'Occident, *Zbornik referata međunarodnog simpozija "Bosna i Hercegovina u tokovima istorijskih i kulturnih kretanja u Jugoistočnoj Evropi" (Sarajevo, 6–7. oktobar, 1988.)*, Čović, B. (ur./ed.), Sarajevo: Zemaljski muzej Bosne i Hercegovine, 137–144.

1990.

- Prilog proučavanju socijalno–ekonomske organizacije neolitskih populacija u Bosni i Hercegovini / Contribution à l'étude de la structure socio–économique des populations néolithiques en Bosnie et Herzégovine, O*krugli sto „Socijalno–ekonomski odnosi od neolitika do željeznog doba"* / Table rondo „Rapports socio–economiques du neolithique jusqu'a l'age du fer dans certaines

regions de l'Europe", *Godišnjak Centra za balkanološka ispitivanja*, XXVIII, knj. 26, Benac, A. (ur./ed.), Sarajevo: Centar za balkanološka ispitivanja, 9–16.

2001.

- Značenje Neretve u prostornom rasporedu prapovijesnih kultura / Importance of Neretva in the spatial distribution of prehistoric culture**,** *Arheološka istraživanja u Naroni i dolini Neretve, Znanstveni skup, Metković, 6.–9. listopada 2001: Izdanja Hrvatskog arheološkog društva*, sv. 22, Rapanić, Ž. (ur./ed.), Zagreb: Hrvatsko arheološko društvo, 321–328.

2002.

- Geomorfološke osnove naseljavanja jadranskog područja u neolitiku / Geomorphologic basis of the Adriatic area settlement in Neolithic, *Međunarodno arheološko savjetovanje „Naselja i naseljavanje od prapovijesti do srednjeg vijeka" (Pula, 26.–30.11.2002.), Histria Antiqua*, 11, Girardi Jurkić, V. (ur./ed.), Zagreb: Institut društvenih znanosti Ivo Pilar, 107–120.

2003.

- Višeznačnost vode u životu prapovijesnih zajednica na jadranskom području / The multiple meaning of water in the life of prahistoric communities on the Adriatic Coast, *Međunarodno arheološko savjetovanje "Voda kao izvor života" (28–29. studeni 2002.), Histria Antiqua*, 12, Girardi Jurkić, V. (ur./ed.), Zagreb: Institut društvenih znanosti Ivo Pilar, 45–55.

2004.

- Transjadranska trgovina u neolitiku / Transadriatic trade in Neolithic, *Međunarodno arheološko savjetovanje „Ekonomija i trgovina kroz povijesna razdoblja" (Pula 25–29. 11*. 2004.), *Histria Antiqua*, 12, Girardi Jurkić, V. (ur./ed.), Zagreb: Institut društvenih znanosti Ivo Pilar, 103–108.

2010.

- "Crno vrilo" – nalazište impresso kulture kod Zadra / "Crno vrilo" – Impresso Culture site near Zadar, *100 godina arheološkog muzeja Istre. Nova istraživanja u Hrvatskoj / 100 years of the archaeological museum of Istria in Pula. "Latest research in Croatia". Conference Pula, October, 8th–12th, 2002, Izdanja Hrvatskog arheološkog društva*, vol. 25, Balen, J., Čečuk, B., Potrebica, H., (ur./eds.), Zagreb – Pula: Hrvatsko arheološko društvo, Arheološki muzej u Puli, 61–83.

IV.3. PRETHODNA PRIOPĆENJA / A PRELIMINARY REPORTS

2007.

- Prapovijesni tumul na Škornici u Privlaci kod Zadra, *Hrvatski arheološki godišnjak*, 3/2006, 342–345.

2009.

- Tomašanci – Zdenci (AN 23), *Hrvatski arheološki godišnjak*, 5/2008, 62–65.
- Krneza i Podvršje, prapovijesni tumuli, *Hrvatski arheološki godišnjak*, 5/2008, 486–488.

2010.

- Ljubač – Ljubačka kosa, *Hrvatski arheološki godišnjak*, 6/2009, 506–510.

2011.
- Benkovac – Više Lastvina, eneolitičko nalazište, *Hrvatski arheološki godišnjak*, 7/2010, 518–520.
- Ljubač – nekropola Venac, *Hrvatski arheološki godišnjak*, 7/2010, 543–548.

2012.
- Pokrovnik – Copića njive, *Hrvatski arheološki godišnjak*, 8/2011, 590–592.

2018.
- Smilčić – Barice, *Hrvatski arheološki godišnjak*, 14/2017, 620–622.

V. KATALOZI IZLOŽBI I LEKSIGORAFSKA IZDANJA / EXHIBITION CATALOGUES AND LEXICOGRAPHIC EDITIONS

1988.
- *Oružje kroz vjekove / Weapons through the centuries*, Sarajevo: Zemaljski muzej Bosne i Hercegovine. (*koautori: I. Marijanović, T. Glavaš, M. Niškanović*)

Arheološki leksikon Bosne i Hercegovine, Čović, B., (ur./ed.), Sarajevo: Zemaljski muzej Bosne i Hercegovine

Tom I
- *Bosna i Hercegovina u praistoriji, antici i srednjem vijeku – arheološko–historijski osvrt*
- *Opšti leksikografski dio*, 16–20, 27–29, 54–56, 60, 64–66, 68–69, 85–86, 91–94, 98–100, 102–103, 105–106, 110, 114–115, 122, 128–131, 133–13, 139–140, 144, 166–167, 169– 170, 174–177, 183–187.

Tom II
- *arheološka nalazišta*, 34, 36–38, 48–49, 63, 76–77, 79–80, 88–89, 91, 98, 105–122, 128–133, 146, 149–150, 160, 162–163, 166–177, 179–180, 195–203, 205–206.

Tom III
- *arheološka nalazišta*, 19–21, 23, 28, 40, 127, 129, 145–146, 148–151, 169–170, 172, 174–178, 181–182, 186–188, 193, 275, 279, 293, 299, 321–334, 336–337.

1993.
- Les Balkans du Nord–Ouest; – Vue general – Le néolithique ancien – Le néolithique moyen – Le néolithique recent – Culture a ceramique impressionnee – Culture de Danilo – Culture de Starčevo–Impresso – Culture de Kakanj – Culture de Hvar ou Hvar–Lisičići – Culture de Butmir, *Atlas du néolithique Europeen*, Vol. I, Etudes et Recherches Archéologique de l' Université de Liège, Kozlowski, J., Van Berg, P.-L. (ur./eds.), Liège: Université de Liège, 111–126. (koautor A. Benac)
- Les Balkans centraux et La Pannonie de Sud; – Vue general – Culture de Starčevo – Culture de Körös – Culture de Anzabegovo–Vršnik – Culture de Velušina–Porodin – Culture de Vinča – Culture de Sopot, *Atlas du néolithique Europeen*, Vol. I, Etudes et Recherches Archéologique

de l' Université de Liège, Kozlowski, J., Van Berg, P.-L. (ur./eds.), Liège: Université de Liège, 127–150.

2015.

- Crno Vrilo, *Adriatico senza confini / The Adriatic, a sea without borders: communication routes of populations in 6000 BC*, Visentini, P., Podrug, E. (ur./eds.), Udine: Civici Musei di Udine Museo Friulano, 60.
- Pokrovnik, *Adriatico senza confini / The Adriatic, a sea without borders: communication routes of populations in 6000 BC*, Visentini, P., Podrug, E. (ur./eds.),Udine: Civici Musei di Udine Museo Friulano, 64.
- Benkovac – Barice, *Adriatico senza confini / The Adriatic, a sea without borders: communication routes of populations in 6000 BC*, Visentini, P., Podrug, E. (ur./eds.), Udine: Civici Musei di Udine Museo Friulano, 72.
- Gudnja, *Adriatico senza confini / The Adriatic, a sea without borders: communication routes of populations in 6000 BC*, Visentini, P., Podrug, E. (ur./eds.), Udine: Civici Musei di Udine Museo Friulano, 76.
- La sfera spirituale dell'Adriatico orientale nel Neolitico: i "rhyta" e la ceramica falloide, *Adriatico senza confini / The Adriatic, a sea without borders: communication routes of populations in 6000 BC*, Visentini, P., Podrug, E. (ur./eds.), Udine: Civici Musei di Udine Museo Friulano, 187–193.

VELA PEĆINA KOD KALI NA UGLJANU – NOVO NALAZIŠTE KASNOGA GORNJEG PALEOLITIKA NA SJEVERNODALMATINSKIM OTOCIMA

VELA PEĆINA CAVE NEAR KALI ON UGLJAN – A NEW LATE UPPER PALAEOLITHIC SITE IN THE NORTHERN DALMATIAN ISLANDS

LEO ARBUTINA
Sveučilište u Zadru,
Odjel za arheologiju
University of Zadar,
Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
leoarbutina.faks@gmail.com

MARIO BODRUŽIĆ
Sveučilište u Zadru,
Odjel za arheologiju
University of Zadar,
Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
bodruzic.mario@gmail.com

DARIO VUJEVIĆ
Sveučilište u Zadru,
Odjel za arheologiju
University of Zadar,
Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
dario.vujevic@gmail.com

UDK: 903(497.581.1Kali)"632.5"
DOI: 10.15291/archeo.4675
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-6-12
Prihvaćeno / Accepted: 2024-9-1

Ključne riječi:
Vela pećina, Ugljan, gornji paleolitik, epigravetijen, litika

U radu se iznose rezultati probnog iskopavanja Vele pećine kod Kali na otoku Ugljanu, s naglaskom na rezultate tehno-tipološke i petrografske analize litičkog skupa nalaza. Razmatra se značenje lokaliteta u mreži naseljavanja gornjopaleolitičkih lovaca sakupljača s obzirom na vremensko razdoblje potvrđeno radiokarbonskim datiranjem i geografski položaj lokaliteta na rubu danas potopljene Jadranske nizine.

Key words:
Vela Pećina, Ugljan, Upper Palaeolithic, Epigravettian, lithics

The paper presents the results of trial excavations at Vela Pećina cave near Kali on the island of Ugljan, and in particular the results of techno-typological and petrographic analyses of the lithic find assemblage. It considers the site's significance in the settlement grid of Upper Palaeolithic hunter-gatherers within the context of the time period confirmed by radiocarbon dating and the site's geographic location on the margins of the presently submerged Adriatic Plain.

UVOD

Razdoblje kasnoga gornjeg paleolitika na području sjeverne Dalmacije još uvijek je relativno slabo poznato. Dugo su vremena jedini nalazi pripisani ovom periodu bili površinski nalazi kamenih artefakata prikupljenih s nalazišta na otvorenome na području Molata (Ledenice, Zapuntelsko polje i Dražice)[1] i Dugog otoka (Krševanje polje, Veli rat, gradina Omišenjak kod Sali te Velo i Malo jezero kod Žmana).[2] Na svim nalazištima materijal je većinom pripisan širim vremenskim razdobljima od srednjeg paleolitika pa do neolitika, a gornjopaleolitički nalazi čine tek manji dio litičkog skupa. U novije vrijeme proveden je sustavni terenski pregled niza pozicija na širem području Velog rata, a rezultati analize prikupljenih kamenih artefakata pokazali su da se većina materijala može pripisati musterijenskoj kulturi odnosno srednjem paleolitiku, a tek manji dio gornjem paleolitiku i mezolitiku koje je na ovom području teško razlikovati zbog sličnosti u tehno-tipološkoj shemi.[3]

Prekretnicu u poznavanju ovog razdoblja označilo je otkriće pećine Vlakna na Dugom otoku. Kroz istraživanja koja se provode od 2004. godine Vlakno je otkrilo stratigrafsku sekvenciju s brojnim slojevima nastalim kontinuiranim ljudskim aktivnostima u vremenskom razdoblju od oko 19 550 do 8300 god. prije sadašnjosti.[4] Do sada provedene analize litičkog skupa artefakata utvrdile su osnovne karakteristike i obrasce razvoja tehnologije izrade predmeta od lomljenog kamena od ranog do kasnog epigravetijena[5] i prijelaza na mezolitik,[6] a nalazi predmeta od umjetničkog značenja, nakita, pokopa te izrazito brojni nalazi životinjskih kostiju i ostataka malakofaune učinili su lokalitet jednom od polazišnih toča-

1 BATOVIĆ 1973.
2 BATOVIĆ 1973; 1988; 1992; 1993.
3 KRILE, VUJEVIĆ 2017: 24.
4 VUJEVIĆ, BODRUŽIĆ 2021: 5–6.
5 VUJEVIĆ et al. u tisku.
6 VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014.

INTRODUCTION

The Late Upper Palaeolithic period in the area of northern Dalmatia is still relatively unknown. For a long time, the only finds dated to this period were surface finds of stone artefacts collected from open-air sites on the islands of Molat (Ledenice, Zapuntelsko Polje and Dražice)[1] and Dugi Otok (Krševanje Polje, Veli Rat, the Omišenjak hillfort near Sali, and Velo and Malo Jezero near Žman).[2] At all sites, the material was mostly dated to wider timespans, from the Middle Palaeolithic to the Neolithic, and Upper Palaeolithic finds form only a small part of the lithic assemblage. More recently, a systematic field survey on a number of positions in the wider area of Veli Rat was conducted, and the results of the analysis of the collected stone artefacts have shown that most of the materials can be attributed to the Mousterian culture or the Middle Palaeolithic, and only a small part to the Upper Palaeolithic and Mesolithic, which in this area are difficult to distinguish due to similarities in the techno-typological scheme.[3]

A turning point in the understanding of this period was the discovery of Vlakno cave on Dugi Otok. In campaigns that have been conducted since 2004, Vlakno has displayed a stratigraphic sequence with numerous layers formed by continuous human activities over a period of about 19,550 to 8,300 BP years before present.[4] Analyses of the lithic assemblage display the basic characteristics and development patterns of a production technology of objects made of knapped stone from the Early to Late Epigravettian[5] and the transition to the Mesolithic,[6] while finds of objects of artistic importance, personal ornaments , burials and an extremely large set of finds of animal bones and remains of malacofau-

1 BATOVIĆ 1973.
2 BATOVIĆ 1973; 1988; 1992; 1993.
3 KRILE, VUJEVIĆ 2017: 24.
4 VUJEVIĆ, BODRUŽIĆ 2021: 5–6.
5 VUJEVIĆ et al. in print.
6 VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014.

ka pri proučavanju kasnog gornjeg paleolitika odnosno epigravetijenske kulture na području istočne Jadranske obale.[7]

Istraživanje Vlakna potaknulo je širenje znanstveno-istraživačkih aktivnosti usmjerenih na otkrivanje novih lokaliteta na širem području. Tako je u sklopu projekata *Tranzicija i tradicija u špilji Vlakno: Model prijelaza paleolitika u mezolitik na području Sjeverne Dalmacije* (HRZZ UIP-2014-09-1545) i *Epigravetijenske zajednice sjeverne Dalmacije – EpiC* (HRZZ IP-2019-04-6115) proveden niz terenskih pregleda na sjevernodalmatinskim otocima (Dugi otok, Rava, Molat, Ugljan i Pašman). Napravljena su i probna iskopavanja niza nalazišta i na otocima zadarskog arhipelaga i u zadarskom zaleđu, a nalazi iz razdoblja kasnog paleolitika potvrđeni su u dijelu stratigrafije novootkrivenih lokaliteta kao što su Pećina na Zmorašnjem grebenu kod Silbe[8] i Pećina u Ždrilu kod Rovanjske.[9] U isti kontekst možemo smjestiti i Velu pećinu na otoku Ugljanu.

NALAZIŠTE

Vela pećina smještena je na jugozapadnom dijelu otoka Ugljana, na području Općine Kali, između uvale Vele Lamjane na jugu i uvale Svitle na sjeveru. Ulaz u pećinu nalazi se u dnu izraženog vapnenačkog hrpta koji prati strmu jugozapadnu padinu brda Kobiljaka. Do pećine se može doći pješačkom stazom iz uvale Vele Lamjane koja vodi uz morsku obalu i koja u podnožju naglo skreće na zapad. Kamenom sipinom koja predstavlja ostatak masivnog suhozida zaraslog maslinika dolazi se direktno do ulaza otvorenog prema zapadu-jugozapadu. Pred ulazom se nalazi mala tera-

[7] VUJEVIĆ, PARICA 2011; VUJEVIĆ, BODRUŽIĆ 2014; CRISTIANI et al. 2018; CVITKUŠIĆ et al. 2018; BARBIR, VUKOSAVLJEVIĆ, VUJEVIĆ 2020; CVITKUŠIĆ, VUJEVIĆ 2021; RADOVIĆ, VUJEVIĆ 2021; CVITKUŠIĆ, RADOVIĆ, VUJEVIĆ 2018

[8] VUJEVIĆ, PARICA 2021.

[9] BODRUŽIĆ, VUJEVIĆ 2023.

na made the site a starting point in the study of Late Upper Palaeolithic (Epigravettian) culture on the eastern Adriatic coast.[7]

The excavations at Vlakno encouraged the spread of research activities aimed at discovering new sites over a wider area. As part of the project *Transition and Tradition in Vlakno Cave: Modelling the Palaeolithic-Mesolithic Transition in Northern Dalmatia* (HRZZ UIP-2014-09-1545) and *Epigravettian Communities of Northern Dalmatia – EpiC* (HRZZ IP-2019-04-6115), a series of field surveys was carried out on several northern Dalmatian islands (Dugi Otok, Rava, Molat, Ugljan and Pašman). Trial excavations were conducted at a number of sites on the islands of the Zadar archipelago, as well as in the Zadar hinterland, and finds from the Late Palaeolithic were confirmed in the stratigraphy of newly discovered caves such as Pećina at Zmorašnji Greben off Silba[8] and Pećina in Ždrilo near Rovanjska.[9] Vela Pećina cave on the island of Ugljan can also be placed in the same context.

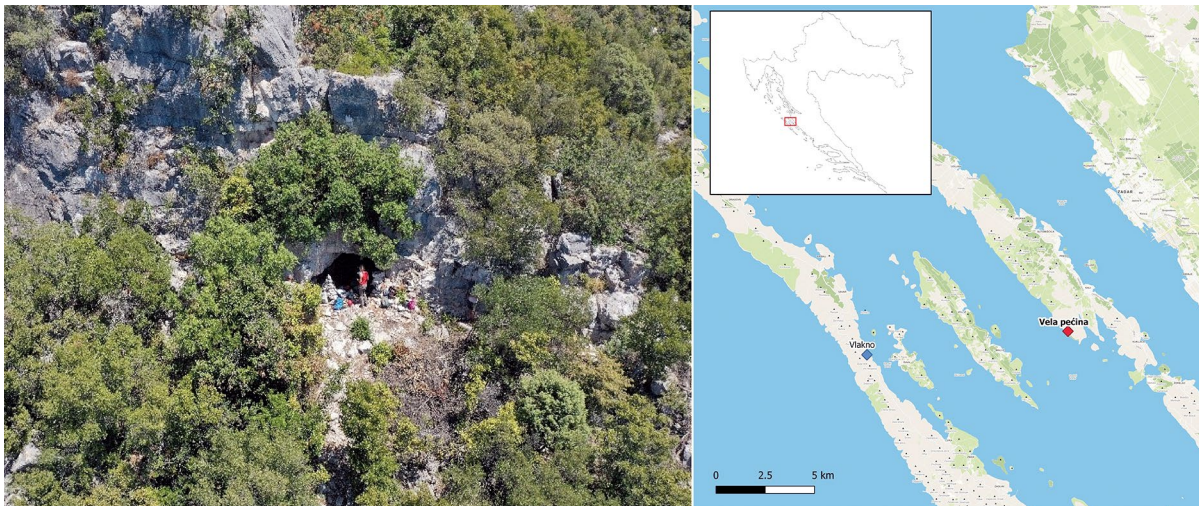
SITE BACKGROUND

Vela Pećina is located in the southwestern part of the island of Ugljan, in the municipality of Kali, between the bays of Vela Lamjana in the south and Svitla in the north. The entrance to the cave is located at the bottom of an accentuated limestone ridge that follows the steep southwestern slope of the Kobiljak hill. The cave can be reached from Vela Lamjana Bay via a walking trail, which leads along the coast and turns sharply to the west at the foot of the hill. A a trail of crushed stone – the remains of the massive drystone wall of an overgrown olive grove – leads directly to the entrance, overlooking the west/

[7] VUJEVIĆ, PARICA 2011; VUJEVIĆ, BODRUŽIĆ 2014; CRISTIANI et al. 2018; CVITKUŠIĆ et al. 2018; BARBIR, VUKOSAVLJEVIĆ, VUJEVIĆ 2020; CVITKUŠIĆ, VUJEVIĆ 2021; RADOVIĆ, VUJEVIĆ 2021; CVITKUŠIĆ, RADOVIĆ, VUJEVIĆ 2018

[8] VUJEVIĆ, PARICA 2021.

[9] BODRUŽIĆ, VUJEVIĆ 2023.



Slika 1. *Zračna snimka ulaza u pećinu tijekom obilaska 2022. godine i smještaj lokaliteta na karti* (snimio i doradio: M. Bodružić)
Figure 1 *Aerial photo of the entrance to the cave during a survey in 2022 and the site's position on the map* (photo and edited by M. Bodružić)

sa prekrivena urušenim kamenim blokovima. Ulaz ima oblik nepravilnog svoda visokog gotovo 2 metra i širokog 4,5 metara (sl. 1).

Pećina ima jednostavan tlocrt u obliku jedinstvenog hodnika koji se u dužini od 35,8 metara proteže u pravcu istok-sjeveroistok, sa suženjem po sredini nastalim intenzivnim zasigavanjem kamenja i veće količine kalcita kojima je prekriveno dno i strop objekta (sl. 2/A). Prednji dio pećine ima nizak strop (do 1,2 metra visine) sve do mjesta gdje hodnik zaokreće prema sjeveroistoku kad se pred suženjem hodnik pećine širi, a u stropu otvara veći sifon kojem se ne vidi završetak. Na ovom proširenju vidljivi su tragovi recentnih boravaka u vidu otpada i ostataka vatrišta, dok su strop i zidovi prekriveni čađom. Da je pećina korištena u recentno vrijeme kao privremeno sklonište lokalnom stanovništvu, navodi i M. Malez u svojem izvješću 1955. godine, kada donosi opis Vele pećine, ali i obližnje Male pećine s tlocrtima i presjecima obaju objekata, iako bez podataka koji bi sugerirali mogući potencijal za arheološka istraživanja.[10]

Arheološka istraživanja Vele pećine započela su 2022. godine obilaskom pozicije tijekom terenskih pregleda speleoloških objekata na

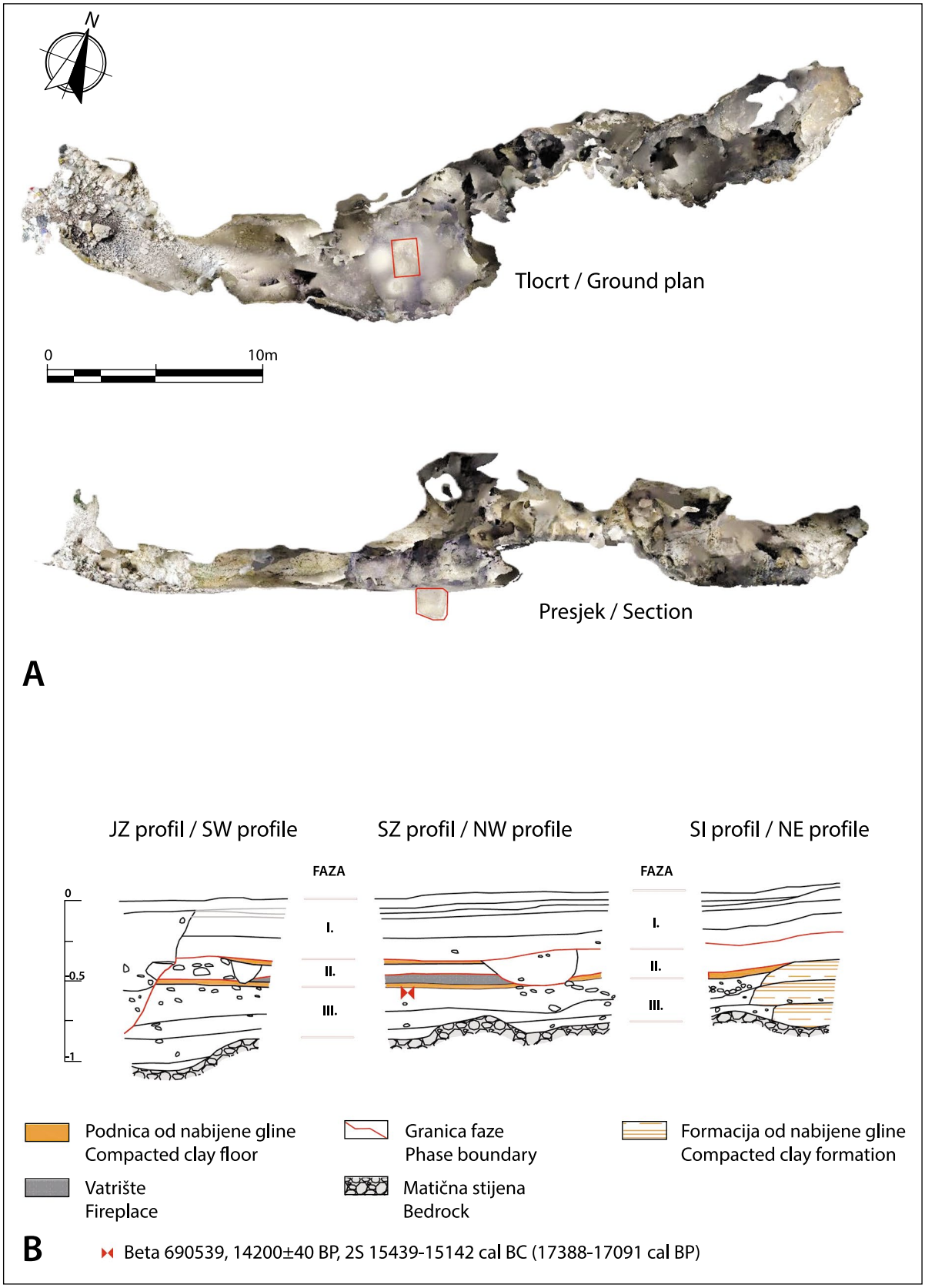
[10] MALEZ 1955: 74–77.

southwest. In front of the entrance is a small terrace covered with collapsed stone blocks. The entrance has the shape of an irregular vault, almost 2 metres high and 4.5 metres wide (Fig. 1).

The cave has a simple ground-plan in the form of a unique, 35.8-metre-long hallway stretching east/northeast, with a narrowing in the middle caused by intensive speleothem growth on the rocks and large amounts of calcite covering the structure's bottom and ceiling (Fig. 2/A). The ceiling in the front part of the cave is low (up to 1.2 metres) all the way to a spot where, in front of a narrowing, the hallway turns northeast and expands, while in the ceiling a larger siphon opens, the end of which is not visible. In the extended space, traces of more recent stays are visible: garbage, fire-site remains, and soot covering the ceiling and walls. In 1955, M. Malez reported that local population had used the cave as a temporary shelter in the near past, as he described Vela Pećina, but also nearby Mala Pećina, publishing the ground-plans and sections of both structures, although he didn't provide data that would suggest potential for archaeological excavations.[10]

Archaeological excavations at Vela Pećina began in 2022 with a survey of the site as part of field

[10] MALEZ 1955: 74–77.



Slika 2. *A – Pozicija sonde na tlocrtu i presjeku pećine, B – crtež profila s pozicijom uzorka za radiokarbonsko datiranje* (izradio: M. Bodružić)
Figure 2 *A – Position of the trial trench on the cave's ground-plan and the cross-section, B – Sketch of the profile with the position of the specimen for radiocarbon dating* (made by M. Bodružić)

Ugljanu i Pašmanu.[11] Tom prilikom, na samoj površini pećine i pri iskopu manje testne sonde do pojave arheoloških nalaza, pronađeno je nekoliko litičkih artefakata koje je na temelju morfoloških osobina bilo moguće pripisati epigravetijenskom kulturnom kompleksu (T. IV/4, 15).[12] Na tragu ovih nalaza, zbog stjecanja boljeg uvida u stratigrafiju i kronologiju nalazišta, kao i u potencijal pećine za daljnja istraživanja, tijekom 2023. godine provedena su probna iskopavanja.[13]

REZULTATI PROBNOG ISKOPAVANJA I STRATIGRAFIJA NALAZIŠTA

Za poziciju probne sonde odabran je prostor manjeg proširenja na kraju prednje dvorane, uz poziciju na kojoj su već spomenutim potpovršinskim pregledom 2022. godine pronađeni litički nalazi. Istražena je površina pravokutnog tlocrta, dimenzija 1 x 1,5 m, usmjerena dužom stranom približno u pravcu sjeverozapad-jugoistok te je dobila oznaku Sonda A.

Tijekom iskopavanja dokumentirane su ukupno 24 stratigrafske jedinice. Većinom je riječ o sukcesivno supraponiranim kulturnim slojevima, dok su u gornjem i srednjem dijelu stratigrafskog slijeda dokumentirane i tri jame s pripadajućim zapunama, dvije antropogenog te jedna biogenog postanka, pripisana životinjskoj jazbini. Matična stijena dosegnuta je na cijeloj površini probne sonde, na dubini od 1 do 1,2 m. Nakon iskopavanja, ukupni slijed podijeljen je, na osnovi stratisurveys of speleological features on Ugljan and Pašman.[11] On that occasion, on the cave's surface and in a small trial trench that was dug until the appearance of archaeological finds, several lithic artefacts were collected, whose morphological characteristics suggest the Epigravettian cultural complex (Pl. IV/4, 15).[12] On the basis of these finds, to gain a better insight into the stratigraphy and chronology of the site as well as the cave's potential for further excavations, trial excavations were conducted in the course of 2023.[13]

RESULTS OF TRIAL EXCAVATIONS AND SITE STRATIGRAPHY

The trial trench was positioned in the hall with the extension at the end of the front hall, and on the spot where lithic finds had been recovered in 2022 subsurface surveys. A rectangular 1 x 1.5 m surface was set for excavation, with its longer side stretching in approximately a northwest-southeast direction, and designated as Trench A.

During the excavations, a total of 24 stratigraphic units were documented. Most of them were successively superimposed cultural layers, while in the upper and middle part of the stratigraphic sequence, three pits were documented with accompanying fills, of which two were of anthropogenic and one of biogenic origin, with the latter interpreted as an animal den. On the entire surface of the trial trench, the bedrock was reached, at a depth of 1 to 1.2 m. After the excavations, on the basis of

11 Terenski pregled proveli su Martina Dubolnić Glavan, Mario Bodružić i Leo Arbutina.

12 Točna pozicija Male pećine koja se prema Malezovu opisu nalazi nekoliko stotina metara prema sjeverozapadu nije utvrđena. Njezin je ulaz lociran pregledom padine brda iz broda, ali obilazak nije proveden zbog nepovoljnog, gusto obraslog terena.

13 U probnim istraživanjima su, osim autora rada, sudjelovali izv. prof. Mate Parica i studentica Sarah Stettler, kojima ovim putem zahvaljujemo na trudu.

11 The field survey was conducted by Martina Dubolnić Glavan, Mario Bodružić and Leo Arbutina.

12 The exact position of Mala Pećina, which according to Malez's description was situated several hundred metres to the northwest, has not been determined. Its entrance was located by examining the slope of the hill from a boat, but no surveys were carried out due to the unfavourable, densely overgrown terrain.

13 Apart from the author of this article, the research was conducted by associate professor Mate Parica and student Sarah Stettler, to whom we would like to thank for their efforts.

grafskih karakteristika slojeva i pokretnih arheoloških nalaza, u tri glavne kronostratigrafske faze (sl. 2/B).[14]

MLAĐA FAZA – RECENTNE AKTIVNOSTI

Najmlađu fazu na lokalitetu čine površinski slojevi do oko 30 cm relativne dubine i jedna veća recentna jama. Gornja zapuna ove jame, sačinjena od prahovite zemlje s mnogo organskog materijala (raspadnuto granje) i recentnog otpada, bila je vidljiva već nakon uklanjanja tankoga površinskog sloja. Naknadno je utvrđeno i postojanje donjeg sloja zapune sastavljenog od veće količine glinastog sloja, ali uz prisustvo otpada kao i nalaza djelomično petrificiranih primjeraka ljudskog izmeta. Veći dio jame nije obuhvaćen iskopavanjima, a u prostor sonde ulazilo je tek 30-ak cm uz jugoistočni profil. Ukop jame dosegnuo je dubinu od 70 cm pri čemu je presjekao većinu starijih kulturnih slojeva.

Na ostatku površine oko recentnog ukopa dokumentirani su rahli slojevi praškastog sedimenta s većom količinom pepela, ali nehomogenog sastava koji upućuje na njihov moguće recentni karakter. U njima je pronađen i jedini primjerak keramike prikupljen tijekom istraživanja – ulomak oboda posude jajolike forme koji se na osnovi tehno-tipoloških svojstava može pripisati neolitičkom periodu. Nakon njihova uklanjanja dokumentirana je manja jama, također presječena recentnim ukopom, te ispod njezine razine još dva sloja. Ovi donji slojevi bili su kompaktnije konzistencije, sastavljeni većinom od glinastog

[14] Tijekom ranijih obilazaka pećine na desnome bočnom zidu ulaznog hodnika, uočen je ostatak sloja s puževima, po sastavu sličan mezolitičkim slojevima iz Vlakna i Vele spile, a sadržavao je i jednu pločicu izrađenu na rožnjaku. Čini se mogućim da je pećina bila korištena i u razdoblju mezolitika, a da su ti slojevi uništeni kasnijim ljudskim boravcima i intervencijama, možda u svrhu produbljivanja ulaznog hodnika i unutrašnjosti objekta jer slični slojevi nisu uočeni unutar probne sonde.

the stratigraphic characteristics of the layers and of archaeological small-finds, the overall sequence was divided into three main chronostratigraphic stages (Fig. 2/B).[14]

YOUNGER PHASE – RECENT ACTIVITIES

The most recent phase at the site consists of surface layers up to about 30 cm of relative depth, and a larger recent pit. The pit's upper fill, made of dusty earth with lots of organic material (decomposed branches) and recently discarded garbage, came to light immediately after the removal of the thin surface layer. Subsequently, the existence of a lower fill layer was determined, largely composed of clay, but also including garbage, as well as finds of partially petrified specimens of human excrement. The greater part of the pit was not included in the excavations, with only a section of 30 cm along the south-eastern profile being reached by the trial trench. The cut of the pit reached a depth of 70 cm, transecting most of the early cultural layers.

On the rest of the surface around the recent pit, loose layers of powdery sediment with a large amount of ashes were documented, but of non-homogeneous composition (possibly indicating their recent character). Recovered from these layers was the only specimen of pottery collected in the course of the excavations – a rim fragment of an egg-shaped vessel, which can – based on its techno-typological properties – be attributed to the Neolithic period. After the removal of these layers, a smaller pit was documented (also intersected by the recent

[14] In the earlier surveys of the cave, on the right side-wall of the entrance hallway, the remains of a layer with snails was identified, similar to Mesolithic layers from Vlakno and Vela Spila in terms of composition; it also contained a bladelet made of chert. Possibly the cave was also used in the Mesolithic period and the layers were destroyed by later human stays and interventions, perhaps for the purpose of deepening the entrance hallway and the structure's interior, given that no similar layers were observed in the trial trench.

depozita slično slojevima iz starijih faza, ali i dalje nehomogenog sastava koji je upućivao na moguće disturbacije u sloju. U jednom je od njih pronađena i veća količina petrificiranoga ljudskog izmeta, kakva je nađena i u zapuni već spomenute jame. Iako donji dio slojeva ove faze nije sadržavao nalaze recentnog otpada, zbog pojave petrificiranog izmeta i nehomogenog sastava sedimenta njihov nastanak potrebno je povezati s iskopima recentne jame odnosno prebacivanjem zemlje tijekom njezina ukapanja. Gornji dio slijeda ove faze vjerojatno je nastao ljudskim aktivnostima, dok je sama jama još uvijek bila u funkciji. Iako su litički artefakti i životinjske kosti i u ovoj fazi činili najbrojniju skupinu nalaza, pojava recentnog otpada u najgornjim slojevima (potplati cipela, organski otpad i slično) te indirektni pokazatelji o destruiranom karakteru donjeg dijela slijeda ove faze pokazuju da su pokretni nalazi u njih dospjeli sekundarno, prekopavanjem starijih kulturnih slojeva.

Recentne aktivnosti prema prikupljenom otpadu iz slojeva mogu se datirati u razdoblje 20. stoljeća što se poklapa s podatcima da je pećina korištena kao sklonište u Drugome svjetskom ratu. Materijalni dokaz o korištenju pećine u tom periodu pronađen je pred samim ulazom u vidu jedne čahure za protuzrakoplovni top talijanske proizvodnje kojoj je gornji dio bio rastavljen vjerojatno zbog izvlačenja baruta.[15]

[15] Tijekom oružanog ustanka stanovnika Iža protiv talijanskog okupatora, koji je započeo zbog rekvizicije maslinova ulja na otoku, ustanici su provalili u državno skladište te prebacili barkom oko 20 kvintala ulja u neimenovanu pećinu na Ugljanu, a ostatak uništili. Iako se u opisima događaja ne spominje izrijekom Vela pećina, to se čini vrlo vjerojatnim jer pećinu od Iža dijeli samo uski morski tjesnac i ostale su pećine na ovom dijelu otoka (Pećina u uvali Svitla i Mala pećina) znatno manje i nepogodnije za skrivanje. O samom ustanku vidi: SRHOJ 2019.

pit), and two more layers were identified below its level. These lower layers were more compact, composed mostly of clay deposits similar to layers from older stages, but still of non-homogeneous composition, suggesting possible disturbances of the layer. In one of them, a large amount of petrified human excrement (found also in the fill of the previously mentioned pit) was uncovered. Although the lower layers from this stage contained no recently discarded garbage, on the basis of the occurrence of petrified excrement and the non-homogeneous sediment composition their formation should be associated with the recent digging of a pit or the relocation of soil in the course of such digging. The upper layers from this stage were probably a result of human activities in the time when the pit was still in function. Although lithic artefacts and animal bones were the most numerous groups of finds from this stage, the occurrence of recently discarded garbage in the top layers (shoe soles, organic waste, etc.), along with indirect indicators of the destroyed character of the lower layers from this stage, indicate that mobile finds ended in them secondarily, by disturbation of older cultural layers.

Based on waste collected from the layers, recent activities can be dated to the 20th century, which concurs with the fact that the cave was used as a shelter during World War II. The use of the cave during that period was confirmed by a find of an anti-aircraft gun shell of Italian manufacture collected in front of the entrance; its upper part had been dismantled, probably to extract gunpowder.[15]

[15] During an armed uprising of the inhabitants of the island of Iž against the Italians, which started in response to the requisitioning of olive oil on the island, the rebels broke into a state-owned warehouse and transferred about 20 quintals of oil to an unnamed cave on Ugljan and destroyed the rest. Although the description of the event does not mention Vela Pećina, it seems very likely that this was the site, since the cave is divided from Iž only by a narrow sea strait, and the other caves in this part of the island (Pećina in Svitla bay and Mala Pećina) are significantly smaller and less favourable as refuges. On the uprising itself see: SRHOJ 2019.

SREDNJA FAZA – POREMEĆENI GORNJOPALEOLITIČKI SLOJEVI

Središnju fazu na lokalitetu primarno čini nešto deblji i homogeniji sloj gline s manjom količinom primjesa od amorfonog kamenja koji je pri vrhu zasebno izdvojen kao sloj podnice zbog nabijene konzistencije. Ispod njega dokumentiran je nepravilni plitki negativ zapunjen zemljom sličnog sastava, ali jako rahle konzistencije koji je pripisan životinjskoj jazbini. U slojevima ove faze nisu pronađeni nikakvi drugi nalazi osim malobrojnih litičkih artefakata i životinjskih kostiju.

Iako za razliku od slojeva prethodne faze ovdje nisu primijećeni jači vertikalni poremećaji u slojevima, kao ni prisutnost recentnih nalaza ili nalaza iz mlađih arheoloških razdoblja, postojanje plitkog negativa životinjske jazbine i mogućnost manjih miješanja nalaza uvjetovali su njihovo zasebno izdvajanje.

STARIJA FAZA – INTAKTNI GORNJOPALEOLITIČKI SLOJEVI

Fazu čini ukupno osam superponiranih kulturnih slojeva. Ovaj dio stratigrafske sekvencije na vrhu započinje slojem tamne zemlje i ugljena presječenim nepravilnim plitkim ukopom, vjerojatno nastalim djelovanjem životinja, a koji je pripisan prethodnoj fazi. Svi slojevi ove faze, osim najmlađega, bili su sastavljeni većinom od homogenoga glinastog matriksa pećinskog sedimenta, žućkastosmeđe do crvenkastosmeđe boje, uz različite količine amorfnog kamenja, kalcita i ostalih primjesa. Tijekom iskopa slojevi su izdvajani prije svega na temelju razlika u konzistenciji te donekle boji sedimenta, dok je sastav upućivao na primarno prirodne procese sedimentacije. Antropogene aktivnosti u slojevima, osim u pojavi pokretnih nalaza koje su činili litički artefakti i životinjske kosti, evidentirane su samo povremenom pojavom manjih količina ugljena, bez većih koncen-

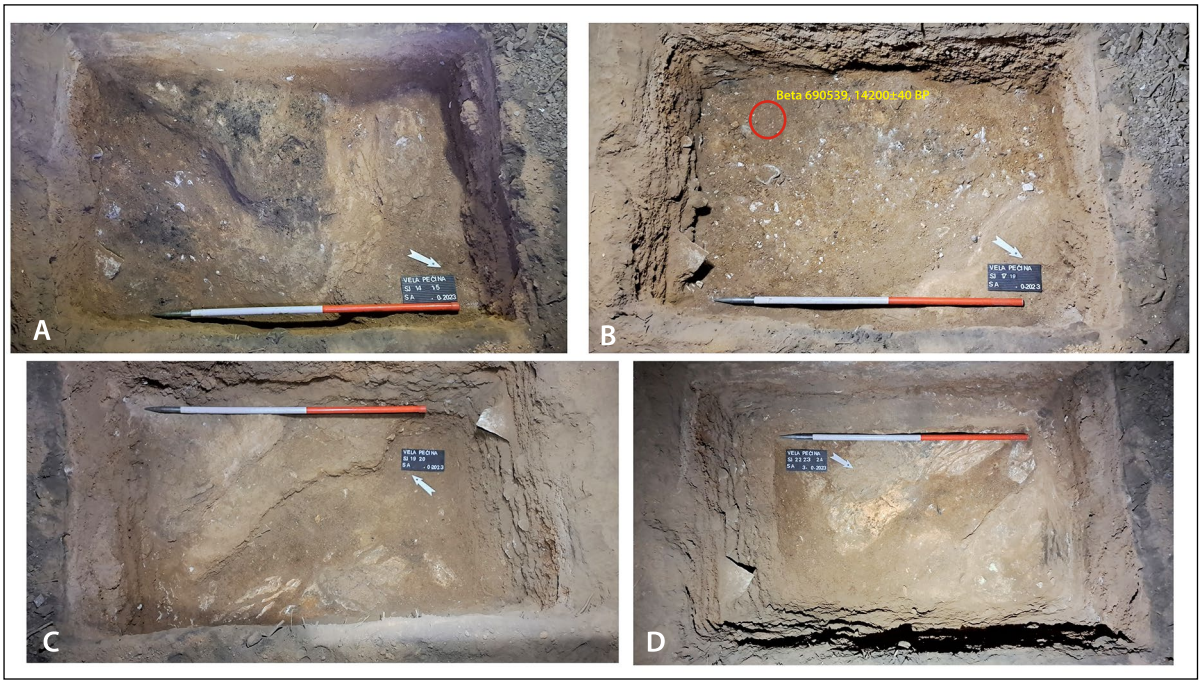
THE MIDDLE PHASE – DISTURBED UPPER PALAEOLITHIC LAYERS

The middle phase at the site primarily consists of a somewhat thicker and more homogeneous layer of clay with a smaller amount of inclusions of amorphous stone, trampled at the top and as a result interpreted as a floor layer. Documented below it is an irregular, shallow negative, filled with soil of similar composition, but of extremely loose consistency, interpreted as an animal den. With the exception of a few lithic artefacts and animal bones, no other finds were recovered from the layers of this stage.

Although, unlike in those from the previous stage, in the layers from this stage no significant vertical disturbances and no recent finds (or finds from younger archaeological periods) were observed, the fact that there was a shallow negative of an animal den and the possibility of minor mixing of the finds resulted in their separation.

THE INITIAL PHASE – INTACT UPPER PALAEOLITHIC LAYERS

This stage consists of eight superposed cultural layers. The top layer of this part of the stratigraphic sequence consists of dark earth and charcoal and is cut by an irregular shallow dig that was probably formed by animal activities that occurred during a later stage. All layers from this stage, except the newest one, consisted mostly of a homogeneous clay matrix of cave sediment of yellowish-brown to reddish-brown colour and with various amounts of amorphous stones, calcite and other inclusions. During the excavations, the layers were distinguished primarily on the basis of differences in consistency and partly by sediment colour, while the composition primarily suggested natural sedimentation processes. With the exception of small-finds (lithic artefacts and animal bones), anthropogenic activities in the layers were documented only by the occasional occurrence of small quantities of charcoal, with not many traces of burning that



Slika 3. *Intaktni paleolitički slojevi: A – ostatak vatrišta presječen nepravilnim ukopom životinjske jazbine s ostatkom podnice; B – sloj ispod podnice s označenom pozicijom uzorka ugljena za datiranje (Beta 690539); C – formacije od stvrdnute gline u sjevernom kutu sonde; D – najstariji slojevi (donja formacija od stvrdnute gline i komplementarni sloj crvenice uz matičnu stijenu)* (snimio: M. Bodružić)

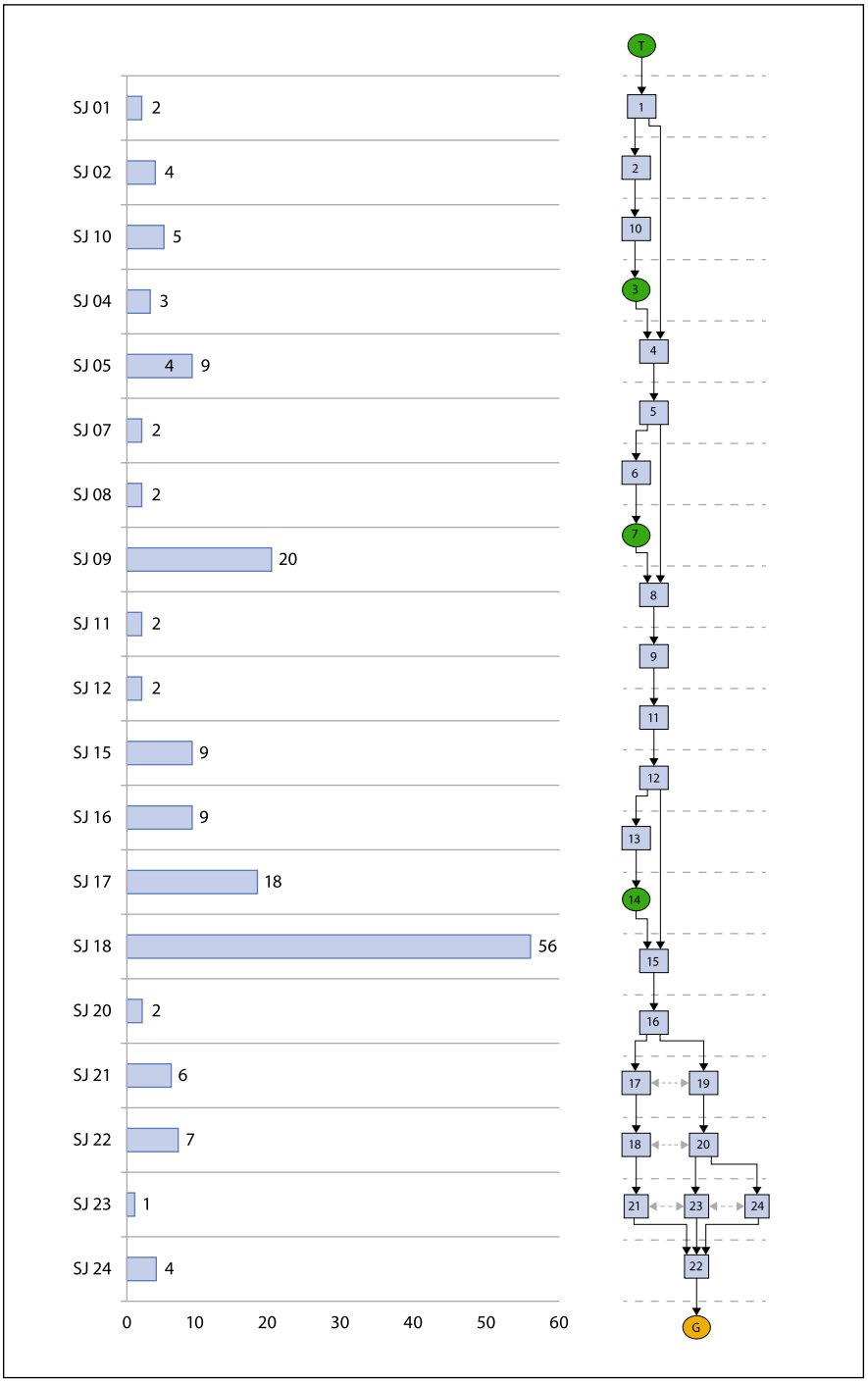
Figure 3 *Intact Palaeolithic layers: A – Remains of a fire site intersected by an irregular dig of an animal's den and the remains of a floor; B – The layer under the floor with marked position of a charcoal sample for dating (Beta 690539); C – Formations of hardened clay in the northern corner of the trial trench; D – The oldest layers (the lower formation of hardened clay and the complementary layer of red soil along the parent rock)* (photo by M. Bodružić)

tracija tragova gorenja koji bi sugerirali na ostatke vatrišta. Iznimku u tom smislu činio je jedino spomenuti najmlađi sloj, koji je po boji i sastavu uz veću količinu ugljena i pepela upućivao na postojanje vatrišta, a ležao je na tankom sloju čišće crvenkastosmeđe gline nabijene konzistencije koji vjerojatno predstavlja podnicu (sl. 3/A). Pri odabiru uzorka ugljena za radiokarbonsko datiranje, zbog činjenice da je životinjska jazbina presjekla ovaj sloj kao i dio podnice, prednost je dana uzorku ugljena iz sloja ispod podnice koji je dao datum 14200 ± 40 god. pr. sad. odnosno od 17388 do 17091 kalibriranih godina prije sadašnjosti (Beta 690539; sl. 2/B; 3/B).

Posebnost u ovoj fazi čine slojevi izrazito stvrdnute gline na sjevernom kutu sonde s manjom nakupinom pepela slične konzistencije, koji su vjerojatno formirani prirodnim procesima, poput zasigavanja njima komplementarnih kulturnih slojeva (sl. 3/C). U prilog tomu

would indicate the remains of fire sites. The only exception in this regard was the above-mentioned youngest layer, whose colour and composition with larger amounts of charcoal and ashes indicated the existence of a fireplace; in addition, it was positioned on a thin layer of more pure, reddish-brown trampled clay, which probably served as a flooring (Fig. 3/A). When selecting a charcoal sample for radiocarbon dating, due to the fact that the layer and a part of the flooring were cut by an animal den, preference was given to a charcoal sample from the layer below the flooring, which was dated to 14,200±40 BP, or 17,388 to 17,091 cal. BP (Beta 690539; Fig. 2/B; 3/B).

A special feature of this phase are layers of particularly hardened clay in the northern corner of the test trench with a smaller pile of ashes of similar consistency, probably formed by natural processes, such as precipitation and speleothem growth on complementary cul-



Slika 4. *Brojnost litičkih artefakata po stratigrafskom slijedu* (izradio: M. Bodružić)
Figure 4 *Numbers of lithic artefacts by stratigraphic sequence* (made by M. Bodružić)

ide i položaj ovih formacija u sjevernom kutu, blizu stražnjeg prolaza koji vodi u drugi dio pećine, čija je površina prekrivena debelim slojem siga.

Matična stijena dosegnuta je na cijeloj površini sonde, na dubini 1 – 1,2 metra. Čitural layers (Fig. 3/C). This is supported by the topography of the cave formations in the northern corner, near the rear passage leading to the second part of the cave, whose surface is covered with a thick layer of speleothem.

The bedrock was reached along the entire

nio ju je blok rudistnog vapnenca od kojeg je formirana i sama pećina s tankim inkluzijama crvenice unutar pukotina i sinklinala usmjerenih približno u pravcu zapad-istok, s najvišim izdankom prema zapadu i blagim padom prema istoku odnosno stražnjem dijelu dvorane. Tanki sloj crvenice na kontaktu matične stijene i kulturnih slojeva i unutar njezinih pukotina također je sadržavao litičke artefakte te sitne ulomke životinjskih kostiju.

Probnim arheološkim iskopavanjima utvrđeno je da najmlađa stratigrafska faza pokazuje jasne dokaze znatnijih poremećaja slojeva prouzročenih recentnim ukopima. U njoj su osim litike i životinjskih kostiju zabilježeni i nalazi iz mlađih prapovijesnih perioda (ulomak neolitičke keramike). Srednja faza donekle se može smatrati poremećenom zbog pojave plitkoga nepravilnog kanala životinjske jazbine, iako se u osnovi može povezati s arheološkim kontekstom ispod, dok najstarija faza obuhvaća intaktne paleolitičke slojeve koji su sadržavali i najveću količinu litičkog materijala. U svim slojevima najbrojnije nalaze činili su litički artefakti i životinjske kosti uz postupan porast broja litičkih artefakata prema starijim slojevima, vrhunac u slojevima ispod ostataka vatrišta i podnice te ponovni pad brojnosti u slojevima neposredno iznad matične stijene (sl. 4). Malobrojni nalazi litike u mlađoj kronostratigrafskoj fazi mogu se pripisati dislociranosti nalaza zbog antropogenih aktivnosti i prekapanja slojeva.

LITIČKA ANALIZA

Litički skup, uz ostatke faune, najbrojnija je kategorija nalaza iz Vele pećine. Do sada su pronađena 173 artefakta čija ukupna masa iznosi 371,92 g. Manji dio litičkih predmeta pronađen je pri površinskom pregledu i iskopu testne sonde 2022. godine (n = 12), dok su ostali pronađeni pri iskopavanju probne sonde (sonda A). Upravo je taj skup predmet anali-

surface of the trial trench at a depth of 1–1.2 metres. It consisted of a block of rudist limestone (of which the entire cave is formed), with thin inclusions of red soil in the cracks and synclines, oriented approximately west-east, with the highest outcrop towards the west and a slight inclination towards the east (to the back part of the hall). The thin layer of red soil at the contact of the bedrock and the cultural layers, as well as inside the cracks, also contained lithic artefacts and tiny fragments of animal bones.

Archaeological trial excavations brought clear evidence of significant disturbances of layers in the youngest stratigraphic phase, caused by recent digging. In addition to lithic artefacts and animal bones, finds from the younger prehistoric periods (a fragment of Neolithic pottery) were recorded in this phase. The middle phase can be considered to some extent disturbed by the appearance of the shallow, irregular cut of an animal den, although it can be associated with the archaeological context beneath it, while the oldest phase includes intact Palaeolithic layers that contained the largest amount of lithic material. In all layers, the most numerous finds were lithic artefacts and animal bones. The number of lithic artefacts gradually increased towards older layers, while their largest number was in the layers below the remains of the fire site and the flooring, and it dropped again in the layers directly above the parent rock (Fig. 4). The small number of lithic finds in the youngest chronostratigraphic phase can be attributed to the dislocation of finds due to anthropogenic activities and such as digging.

LITHIC ANALYSIS

The lithic assemblage, along with the remains of fauna, is the most numerous category of finds from Vela Pećina. So far, 173 artefacts have been found with a total mass of 371.92 g. A smaller proportion of lithic artefacts (n=12) was found in the course of the surface survey and small test excavation in 2022, while the rest were found in the course of excavating trench A). This assem-

ze u radu. U sondi A sveukupno je pronađen 161 komad ukupne mase 332,09 g, a najviše ih potječe iz sloja crvenkaste gline smještenog neposredno ispod sloja datiranog metodom radioaktivnog ugljika (n = 56; sl. 4). U kategoriju formalnog oruđa uvršteno je 65 komada što čini 40 % od ukupnog broja. Iako su u stratigrafiji definirane različite faze, činjenica da su, izuzev najstarije, sve one posljedica naknadnih postdepozicijskih procesa koji su za rezultat imali poremećaj slojeva nastalih u vrijeme paleolitika i time doveli manju količinu paleolitičkih nalaza u kronološki mlađi kontekst, utjecala je na odluku da se litički skup analizira kao cjelina.

TEHNOLOŠKA ANALIZA

Tehnološka analiza litičkog skupa provedena je po principu lanca operacija, u neznatno modificiranom obliku prilagođenom materijalu iz pećine.[16] Definirano je ukupno 17 tehnoloških kategorija, koje predstavljaju oblike karakteristične za različite stupnjeve obrade sirovinskog materijala i proizvodnju oruđa.[17] Lomljevina predstavlja grupu artefakata koju čine odbojci, sječiva i pločice, pri čemu sječiva i pločice imaju dužinu najmanje dvaput veću od širine.[18] Pri određivanju granice između sječiva i pločica korišten je Tixierov model utemeljen na dijagramu raspršenosti odnosa širine i dužine cjelovito sačuvanih sječiva i pločica (sl. 5).[19] Analiza je pokazala općenito pozitivnu korelaciju između širine i dužine; veća širina uvjetovala je veću dužinu lamelarnih

[16] Tehnološka analiza napravljena je prema KARAVANIĆ 1992; 1999; ANDREFSKY 2005; INIZAN et al. 1999.

[17] Prvotni odbojak, drugotni odbojak, odbojak, odbojčić (odbojak < 20 mm), prvotno sječivo, drugotno sječivo, sječivo, prvotna pločica, drugotna pločica, pločica, krijestasta sječiva i pločice, ulomci sječiva ili pločice, ulomci jezgara, jezgra za pločice, miješana jezgra i krhotine.

[18] KARAVANIĆ 1999: 31; INIZAN et al. 1999.

[19] TIXIER 1963: 36–39. Zbog malog uzorka, u obzir su uzeti i komadi sa stepeničastim i izvrnutim distalnim krajem, iako ne predstavljaju ciljane proizvode, nego pogreške pri proizvodnji (vidi: VUKOSAVLJEVIĆ 2014: 11).

blage is the subject of analysis in the paper. In trial trench A, 161 pieces with a total mass of 332.09 g were found, the majority originating from a layer of reddish clay located just below the carbon-dated layer (n=56; fig. 4). Sixty-five pieces were categorised as formal tools, making up 40% of the total number. Although different stratigraphic stages had been defined, the fact that all stages except the oldest are a result of subsequent post-depositional processes – that led to the disturbance of the layers formed in the Palaeolithic period and thus transferred a smaller amount of Palaeolithic finds into a chronologically newer context – resulted in the decision to analyse the lithic assemblage as a whole.

TECHNOLOGICAL ANALYSIS

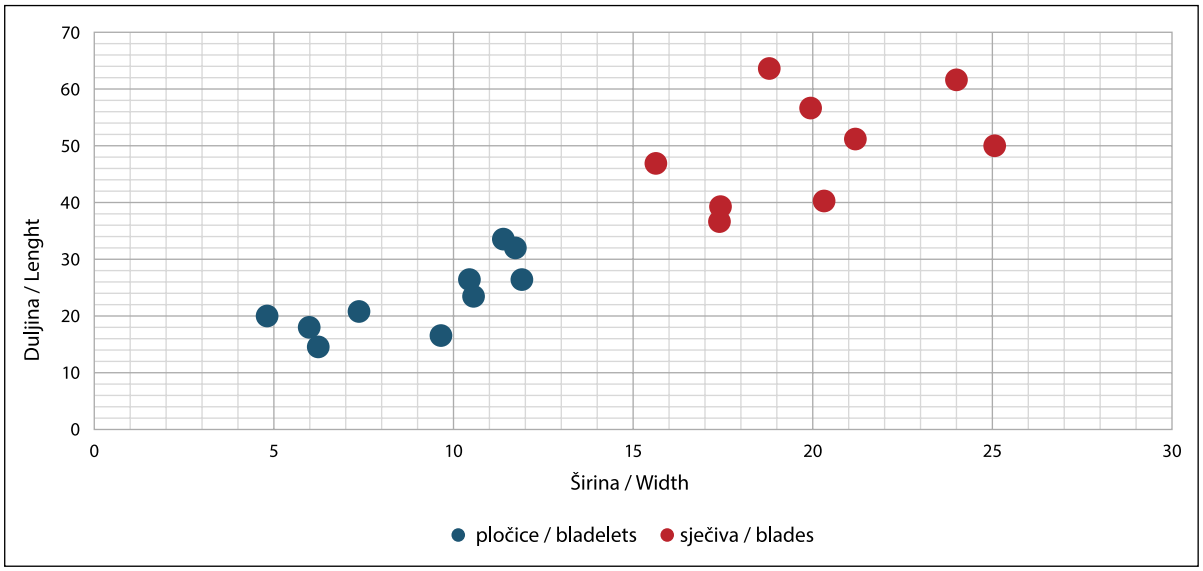
The technological analysis of the lithic assemblage was carried out by applying a slightly modified form of the operation-chain principle, adapted to the material collected in the cave.[16] A total of 17 technological categories were defined, which represent forms characteristic of various stages of raw material processing and tool production.[17] Debitage is a group of artefacts made up of flakes, blades and bladelets, the length of blades and bladelets being at least twice the width.[18] When determining the distinction between blades and bladelets, the Tixier model was used, based on the scatter plot of the width and length ratios of the completely preserved blades and bladelets (Fig. 5).[19] The analysis showed a generally positive correlation between width and length; greater width caused greater length

[16] Technological analysis was made after KARAVANIĆ 1992; 1999; ANDREFSKY 2005; INIZAN et al. 1999.

[17] Primary flake, secondary flake, flake, small flake (<20 mm), primary blade, secondary blade, blade, primary bladelet, secondary bladelet, bladelet, crested blades and bladelets, blade or bladelet fragments, core fragments, bladelet core, mixed core and chunks.

[18] KARAVANIĆ 1999: 31; INIZAN et al. 1999.

[19] TIXIER 1963: 36–39. Given the small sample size, pieces with stepped and reverse distal ends were also considered, although they do not represent the objective pieces, but rather production errors (s. VUKOSAVLJEVIĆ 2014: 11).



Slika 5. *Dijagram raspršenosti cjelovito sačuvanih sječiva i pločica* (izradili: L. Arbutina, M. Bodružić)
Figure 5 *Scatter plot of completely preserved blades and bladelets* (made by L. Arbutina and M. Bodružić)

oblika i obrnuto, a bilo je moguće izdvojiti i dvije skupine nalaza: pločice sa širinom manjom od 12 i dužinom manjom od 34 mm, te sječiva sa širinom većom od 15 i dužinom većom od 37 mm.

U kategoriju sječiva i pločica svrstani su i ulomci istih ako ih je bilo moguće jasno odrediti kao takve, dok je cjelovitost opisana zasebno. Komadi koji pak nisu imali jasne odrednice koje bi ih svrstale u jednu ili drugu skupinu svrstani su u kategoriju *Neodredivo*. Navedene kategorije lomljevine dodatno su podijeljene i po zastupljenosti okorine na dorzalnoj strani. U prvotnu lomljevinu stavljeni su svi komadi s 50 % ili više okorinske površine na komadu, dok u drugotnu lomljevinu idu komadi s manje od 50 % prekrivene površine okorinom.

Unatoč malom broju jezgre su grupirane prema kategoriji lomljevine koja se izrađivala na njima. Kategorija *Jezgre za pločice* određena je prisustvom jednog ili više negativa koji svojim oblikom ne prelaze 12 mm širine, dok pod *Mješovite jezgre* spadaju one s negativima različitih oblika za odbojke, pločice i/ili sječiva. Izdvojena je i kategorija *Krijestasta sječiva i pločice* koje se usko vežu za pripremu jezgara pri izradi pločica ili sječiva.[20] Kategorija *Krhotine*

of lamellar shapes and vice versa. It was possible to single out two groups of finds: less than 12-mm-wide/34-mm-long bladelets, and more than 15-mm-wide/37-mm-long blades.

Blade and bladelet fragments were also categorised as blades and bladelets where their clear identification was possible, while their completeness was described separately. Pieces that had no clear determinants that would classify them as belonging to a specific category were classified as *Indeterminate*. These debitage categories were additionally divided according to the presence of cortex on the dorsal surface. All pieces with a 50% or greater surface covering of cortex were categorised as primary debitage, while those with less than 50% were categorised as secondary debitage.

Despite their small number, cores were grouped according to the debitage category made on them. The category termed *Bladelet cores* was determined by the presence of one or more negatives whose shapes do not exceed 12 mm of width, while those with negatives of different shapes for flakes, bladelets and/or blades were termed *Mixed cores*. There is also a category of *Crested blades and bladelets*, closely connected with the preparation of cores for making bladelets or blades.[20] The cat-

[20] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 12–13.

[20] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 12–13.

tablica 1. *Učestalost tehnoloških kategorija* (izradili: L. Arbutina, M. Bodružić)
table 1 *Frequency of technological categories* (made by L. Arbutina and M. Bodružić)

Tehnološka kategorija / Technological type	Broj / Number	Postotak / Percentage
prvotni odbojci / primary flakes	1	0,6%
prvotna sječiva / primary blades	1	0,6%
prvotne pločice / primary bladelets	1	0,6%
drugotni odbojci / secundary flakes	14	8,7%
drugotna sječiva / secundary blades	5	3,1%
drugotne pločice / secundary bladelets	3	1,9%
odbojci / flakes	17	10,6%
odbojčići / flakes <20 mm	28	17,4%
sječiva / blades	8	5,0%
pločice / bladelets	52	32,3%
jezgra za pločice / core for bladelets	1	0,6%
miješane jezgre / mixed cores	2	1,2%
ulomci jezgara / core fragments	2	1,2%
krijestasta sječiva i pločice / crested blades-bladelets	4	2,5%
krhotine / chunks	6	3,7%
neodredivo / unidentified	16	9,9%
Ukupno / Total	**161**	**100,0%**

odnosi se na komade raznovrsnih oblika koji nemaju svoja dijagnostička obilježja, a vidno su nastali pri lomljenju.[21]

Tehnološkom analizom utvrđene su kategorije svih faza proizvodnje oruđa osim inicijalne faze, tj. faze pribavljanja sirovine (tab. 1). Početna faza lomljenja okorinskog sloja i formiranja jezgre zastupljena je prvotnim i drugotnim oblicima, a njihov udio u litičkom inventaru iznosi 15,5 %. Među njima prevladavaju odbojci (n = 15), a sječiva (n = 6) i pločice (n = 4) javljaju se usputno. Nađene su tri cjelovite jezgre te dva ulomka (T. V/1–3). Dvije su mješovitog tipa (T. V/1, 3), dok na posljednjoj dominiraju ožiljci pločica (T. V/2). Jezgra za pločice te jedna mješovita jezgra su prizmatičnog oblika, dok je treća amorfnog. U litičkom skupu zastupljena su i četiri komada krijestastih sječiva i pločica (T. III/24; T. IV/16–17).

Slična je situacija i u inventaru iz sljedeće faze lanca operacija. U litičkom skupu iz Vele pećine, gledajući tehnološke kategorije (tab.

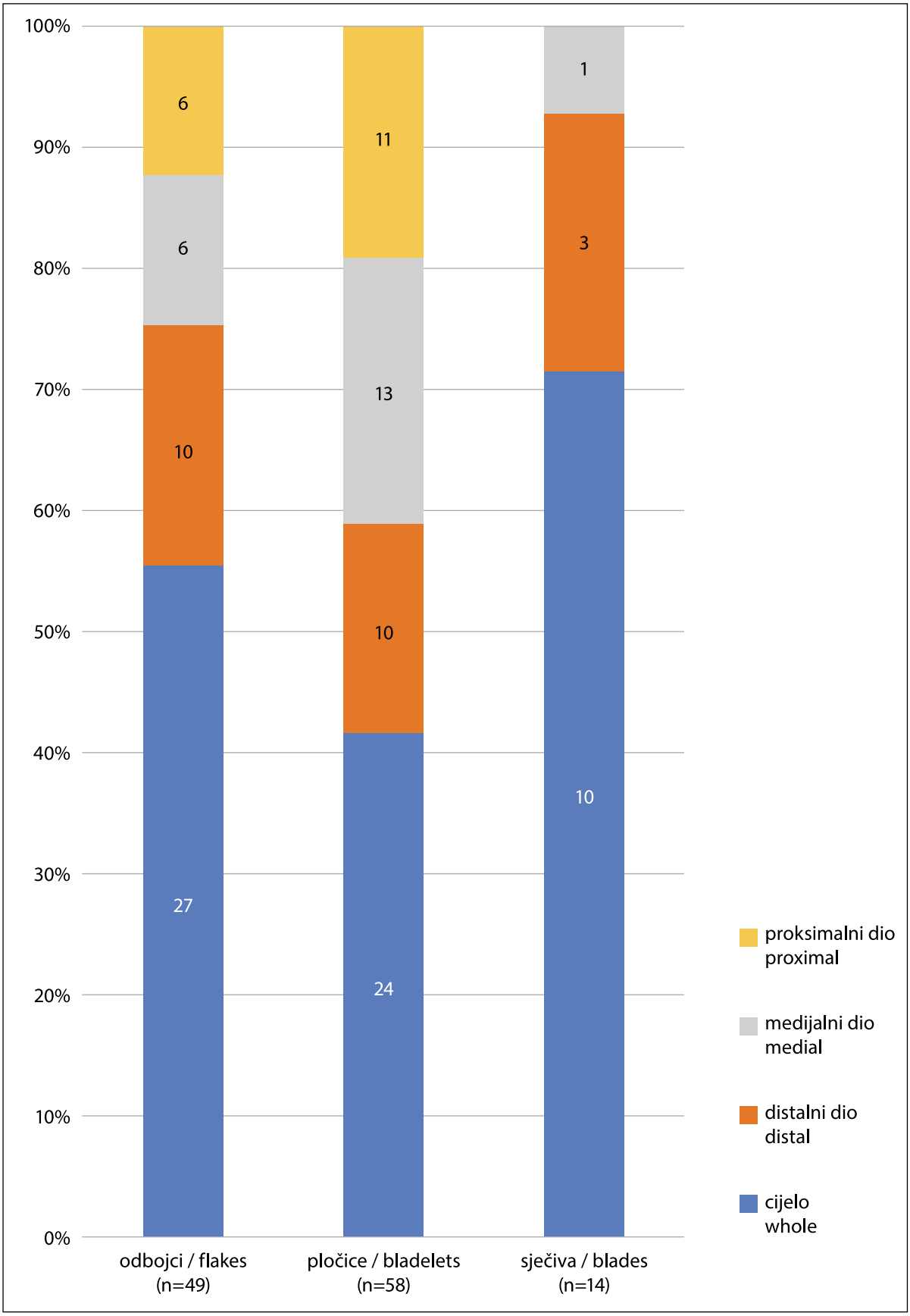
egory of *Chunks* refers to pieces of various shapes that have no diagnostic features, but were obviously formed by breaking.[21]

Based on a technological analysis, categories of all tool production stages except the initial (raw material acquisition) stage (Tab. 1) were established. The initial stage of breaking the cortex layer and forming the core is represented by primary and secondary forms. Their share in the lithic inventory is 15.5%. Among them, flakes (n=15) prevail, while blades (n=6) and bladelets (n=4) occur incidentally. Three complete cores and two fragments were found (Pl. V/1–3). Two are mixed types (Pl. V/1, 3), while on the third, bladelet scars prevail (Pl. V/2). The bladelet core and one mixed core are prismatic, while the other mixed one is amorphous. Four pieces of crested blades and a bladelet are also represented in the lithic assemblage (Pl. III/24; Pl. IV/16–17).

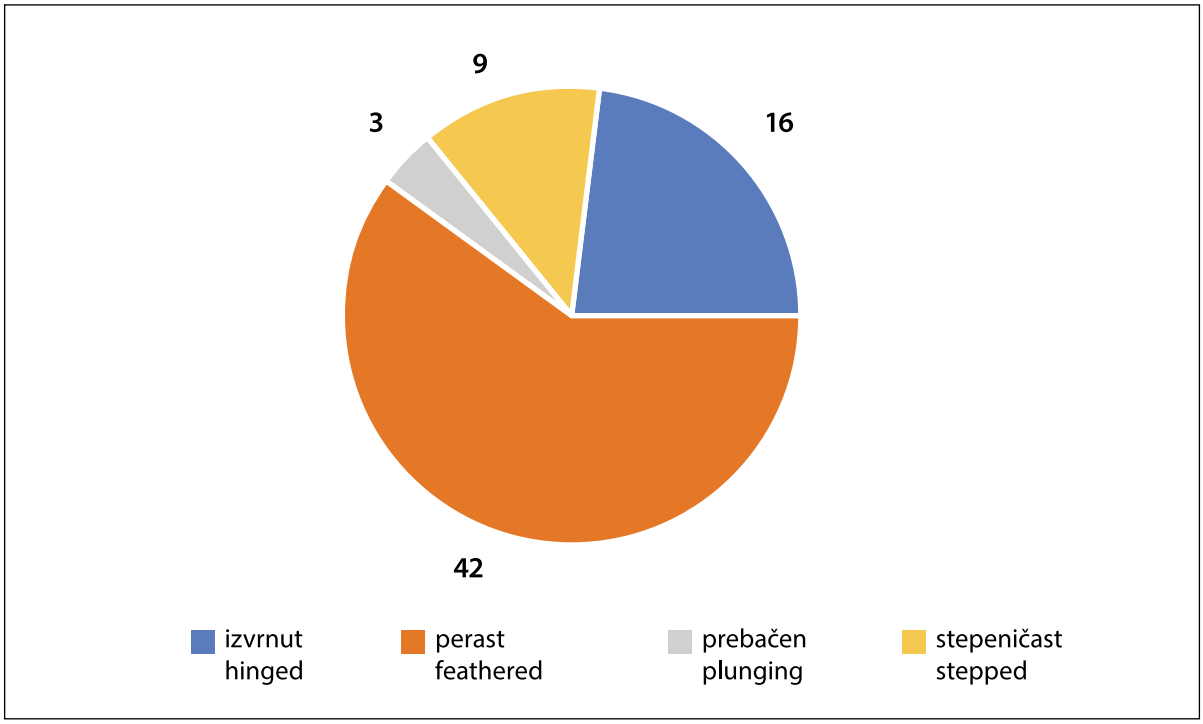
A similar situation was observed also in the inventory from the subsequent stage of the

[21] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 13.

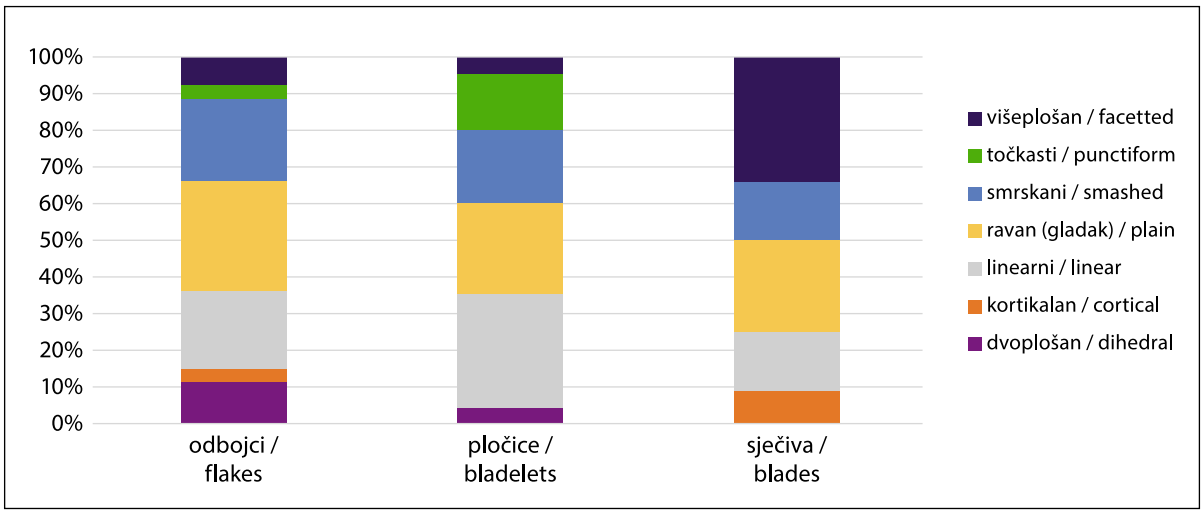
[21] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 13.



Slika 6. *Stupanj sačuvanosti lomljevine* (izradili: L. Arbutina, M. Bodružić)
Figure 6 *Degree of debitage conservation* (made by L. Arbutina and M. Bodružić)



Slika 7. *Tip završetka na lomljevini* (izradili: L. Arbutina, M. Bodružić)
Figure 7 *Termination type in debitage* (made by L. Arbutina and M. Bodružić)



Slika 8. *Tip plohka na lomljevini* (izradili: L. Arbutina, M. Bodružić)
Figure 8 *Butt type in debitage* (made by L. Arbutina and M. Bodružić)

1), brojnošću se najviše ističu pločice i sječiva (n = 64; 39,8 %) koje zatim slijede različite vrste odbojaka (n = 45; 28 %), s tim da više od polovice otpada na one manje od 20 mm. Ostale kategorije zastupljene su u jako malom broju.

Na razini cijeloga litičkog skupa dominiraju proizvodi lomljevine. Njihov udio u ukupnom broju iznosi 83,2 % (n = 134), uz gotovo po-

operation chain. In the lithic assemblage from Vela Pećina, looking at technological categories (Tab. 1), the most numerous are bladelets and blades (n=64; 39.8%), followed by different types of flakes (n=45; 28%), with more than half being less than 20 mm. Other categories are represented by very small numbers.

In the entire lithic assemblage, debitage artefacts prevail. Their share in the total num-

djednaku zastupljenost odbojaka i pločica, dok se sječiva javljaju u vrlo malom postotku (8,7 %). Suprotno tomu veći broj sječiva sačuvan je u cijelosti (71,4 %), kao i odbojci (55,1 %), dok je cjelovitost pločica manja: cjelovito (41,5 %), proksimalno (18,9 %), medijalno (22,4 %), te distalno (17,2 %) (sl. 6).

Tip završetka (sl. 7) kod lomljevine bilo je moguće odrediti na 68 komada. Većinom ona završava perastim završetkom (n = 42, 61,8 %), ali može se primijetiti visok udio izvrnutog završetka (n = 16; 23,5 %) koji se smatra neželjenim u proizvodnji.[22] Zastupljenost tipova plohka (sl. 8) kod lomljevine je potpuno drukčija za svaku kategoriju. Tako je za odbojke najčešći gladak (29,6 %), za pločice linearni (32 %), dok je kod sječiva najveći udio višeplošnog tipa plohka (33,3 %).

Rezultati mjerenja cjelovito sačuvanih pločica i sječiva daju nam sljedeće podatke. Prosjek (aritmetička sredina) duljine pločica je 24,25 mm, širine 8,99 mm i debljine 3,38 mm. Izračunan je i medijan duljine (23,58 mm), širine (9,64 mm) i debljine (2,93 mm) cjelovitih pločica. Za cjelovita sječiva prosječna duljina iznosi 49,56 mm, širina 20,12 mm, a debljina 6,54 mm. Isto kao i za cjelovite pločice, za sječiva je izračunan i medijan duljine (49,49 mm), širine (20,08 mm) te debljine (6,67 mm).

TIPOLOŠKA ANALIZA

Ukupno 65 komada iz litičkog skupa obrađeno je tipološki i svrstano u formalno oruđe. Tipološka klasifikacija artefakata provedena je prema tipologiji koju su ustanovili Sonneville-Bordes i Perrot prilagođenoj prema Sisku i Sheau[23] te Karavaniću.[24] Zbog relativno malog opsega litičkog skupa, a radi lakšeg čitanja dobivenih podataka i uspostavljanja uzoraka,

[22] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 11–12.
[23] SISK, SHEA 2013.
[24] KARAVANIĆ 1992; 1999.

ber is 83.2% (n=134), with almost equal representation of flakes and bladelets, and a very small percentage of blades (8.7%). Contrary to this, a rather large number of blades were completely preserved (71.4%), as were flakes (55.1%), while bladelets were less well preserved: complete (41.5%), proximal (18.9%), medial (22.4%), and distal (17.2%) (Fig. 6).

Determining the termination type (Fig. 7) of debitage was possible in 68 pieces. Most pieces had feathered terminations (n=42, 61.8%), but a high share of hinge terminations (n=16, 23.5%), considered undesirable in production, is noticeable as well.[22] The percentage of butt-type categories (Fig. 8) of debitage greatly varies. Thus, the most common butt type in flakes is flat (29.6%), in bladelets it is linear (32%), while most blades have a faceted butt (33.3%).

The results of measurements of completely preserved bladelets and blades are as follows. The average (arithmetic mean) bladelet length is 24.25 mm, width is 8.99 mm and thickness is 3.38 mm. The median length (23.58 mm), width (9.64 mm), and thickness (2.93 mm) of complete bladelets were also calculated. The average length of complete blades is 49.56 mm, width is 20.12 mm and thickness is 6.54 mm. As was the case with complete bladelets, the median length (49.49 mm), width (20.08 mm) and thickness (6.67 mm) of blades were also calculated.

TYPOLOGICAL ANALYSIS

A total of 65 pieces from the lithic assemblage were processed typologically and classified as formal tools. Typological classification of artefacts was done according to typologies developed by Sonneville-Bordes and Perrot, and adjusted according to Sisk and Shea,[23] and Karavanić.[24] Due to the relatively small total of artefacts contained in the lithic assemblage, for

[22] VUKOSAVLJEVIĆ, PERHOČ, ALTHERR 2014: 11–12.
[23] SISK, SHEA 2013.
[24] KARAVANIĆ 1992; 1999.

tipološke kategorije su pojednostavnjene.

Pod kategoriju *pločica s hrptom* spadaju sve pločice koje s barem jedne lateralne strane imaju više od 50 % strmo ujednačene obradbe (kut obrade u odnosu na ventralnu stranu mora biti veći od 45°) (T. I/5, T.II/1–2, T. III/2, 18, T. IV/4–8). Kategorija *pločice s obradom* obuhvaća pločice koje imaju obradbu, no ista nije toliko izražena i strma da bi to bila pločica s hrptom (T. I/11, T. II/4, 6–8, 10, 13, T. III/4, 11, 13, 23 T. IV/1–2, 9, 11). *Sječivo s obradom* jest kategorija u koju spadaju sva sječiva na kojima se vidi obradba (T. II/12, 18, 22, T. III/10, 19–20, T. IV/14, 17). *Šiljak* je svaki komad lomljevine koji se pri vrhu sužava i obradom tvori oštar kut (T. II/21), a pri analizi izdvojena su dva tipa: *Šiljak s usjekom* i *Gravetica* u koju su svrstani svi artefakti s hrptom koji se sužavaju prema vrhu. *Grebala* su svi komadi koji imaju dominantno obradbu na distalnom dijelu, a kao podtipovi za ovu kategoriju prepoznata su noktolika grebala te grebala na odbojku. Pod kategoriju *Udubak* svrstani su svi komadi koji imaju jedan izraženi konkavni negativ na kojemu se vidi obradba (T. I/4; II/11). *Strugala* obuhvaćaju litičke

easier reading of obtained data and establishing samples, typological categories were simplified.

The *Backed bladelet* category includes all bladelets that, at least on one lateral side, have > 50% of abrupt uniform retouch (the angle of the retouch must be > 45° to the ventral side) (Pl. I/5, Pl. II/1–2, Pl. III/2, 18, Pl. IV/4–8). The *Retouched bladelet* category includes bladelets with a retouch, which, however, is not as pronounced and abrupt as in backed bladelets (Pl. I/11, Pl. II/4, 6–8, 10, 13, Pl. III/4, 11, 13, 23, Pl. IV/1–2, 9, 11). The *Retouched blade* category includes all blades with visible retouching (Pl. II/12, 18, 22, Pl. III/10, 19–20, Pl. IV/14, 17). A *Point* is a debitage piece that narrows towards the peak and, as retouched, forms a sharp angle (Pl. II/21). In the course of the analysis, two types were detected, into which all backed artefacts that narrow toward the top were classified: a *Shouldered point* and a *Micrograve*tte. *Endscrapers* are pieces that have a dominant, mostly abrupt retouch on the distal side. Identified subtypes of this category are thumbnail endscrapers and endscrapers on a flake. Under the *Notch* category are pieces having a pronounced concave negative

TABLICA 2. *Učestalost oruđa* (izradili: L. Arbutina, M. Bodružić)
TABLE 2 *Frequency of tools* (made by L. Arbutina and M. Bodružić)

Tipološka kategorija / Type	Broj / Number	Postotak / Percentage
pločica s obradom / retouched bladelet	14	21,5%
pločica s hrptom / backed bladelet	12	18,5%
sječivo s obradom / retouched blade	8	12,3%
djelomično obrađeno sječivo / partially retouched blade	1	1,5%
komad s obradom / retouched piece	7	10,8%
komad s djelomičnom obradom / partially retouched piece	3	4,6%
komad sa sitnom rubnom obradom / piece with marginal retouch	5	7,7%
strugalo / sidescraper	3	4,6%
udubak / notch	3	4,6%
grebalo / endscraper	2	3,1%
zarubak / truncation	2	3,1%
šiljak / point	1	1,5%
šiljak s usjekom / shouldered point	1	1,5%
gravetica / micrograve tte	3	4,6%
Ukupno / Total	**65**	**100,0%**

komade na kojima su jedna ili dvije lateralne stranice obrađene (T. II/20; III/16). *Komadi s obradom* predstavljaju većinom odbojke s obradom na većem dijelu jednog ili dvaju rubova, dok komadi s djelomičnom obradom predstavljaju one kojima je manje od 50 % jednog ruba formalno obrađeno. Sječiva sličnih osobina izdvojena su u zasebne kategorije. *Komadi sa sitnom rubnom obradom* jesu svi artefakti koji imaju veći dio ruba prekriven sitnom rubnom obradbom, koja je mogla nastati i uporabom.

Litički skup sveukupno broji 65 nalaza koji se mogu tipološki odrediti, što je 40 % od ukupnog broja nalaza iz sonde A. (tab. 2). Među njima najveći broj pripada pločicama s obradom (n = 14; 21,5 %), pločicama s hrptom (n = 12; 18,5 %) i sječivima s obradom (n = 8; 12,3 %). Nakon toga slijede različiti obrađeni i djelomično obrađeni komadi (oko 20 % ako ubrojimo i sječiva) koji predstavljaju općenite kategorije, pridodane osnovnoj tipologiji zbog nemogućnosti uklapanju u neku od morfološki specifičnih kategorija, a obično se povezuju s oportunističkim iskorištavanjem lomljevine za uporabu u *ad hoc* situaciji. Ostale zabilježene kategorije predstavljaju različiti šiljci i gravetice (7,6 %), strugala (4,6 %), udubci (4,6 %) te grebala i zarubci (po 3,1 %).

Najviše tipološko određenih komada izrađeno je na pločicama, čak 52,38 % (n = 33). Ostalo oruđe izrađivano je na odbojcima (n = 14; 22,2 %) i sječivima (n = 10; 15,9 %). Ostatak tipološko određenih komada (n = 6) predstavljaju različiti ulomci oruđa.

Obradba na tipološko određenim komadima je po tipu većinom sitna (41,3 %) te suusporedna (41,3 %). Ljuskaste obradbe ima nešto manje (12,7 %) te u mnogo manjem broju javljaju se stepeničasta (3,1 %) i usporedna obradba (1,6 %).

Najbrojniju skupinu nalaza predstavljaju vrhovi projektila među kojima dominiraju pločice s hrptom. Zabilježene su i tri gravetice, veći šiljak napravljen na krijesastom sječivu te ulomak oruđa s usjekom koji vjerojatno pred-

with visible retouch (Pl. I/4; II/11). *Sidescrapers* include lithic pieces with retouched one or two lateral sides (Pl. II/20; III/16). *Pieces with retouch* are mostly flakes with continuous retouch on one edge or on two edges, while pieces with partial retouch have < 50% of one edge formally retouched. Blades with similar characteristics were classified into separate categories. *Pieces with marginal retouch* are artefacts in which a major part of the edge was marginally retouched, possibly also as a result of their use.

The lithic assemblage has 65 finds that can be typologically categorised, which is 40% of the total number of finds from trial trench A. (Tab. 2). Among them, the majority were retouched bladelets (n=14; 21.5%), backed bladelets (n=12; 18.5%), and retouched blades (n=8; 12.3%). These were followed by various retouched and partially retouched pieces (approximately 20% if we also include blades), which represent general categories that were added to the basic typology as they did not fit into one of the morphologically specific categories. These are usually associated with opportunistic debitage use in *ad hoc* situations. Other recorded categories are represented by various points and microgravettes (7.6%), sidescrapers (4.6%), notches (4.6%), and endscrapers and truncations (3.1% each).

The majority of the typologically classified pieces – as much as 52.38% (n=33) – was made on bladelets. Other tools were made on flakes (n=14; 22.2%) and blades (n=10; 15.9%). The rest of the typologically classified pieces (n=6) are various tool fragments.

The retouch type on the typologically classified pieces is mostly marginal (41.3%) and sub-parallel (41.3%). There is a slightly smaller percentage of scalar retouch (12.7%), and a much smaller share of stepped (3.1%) and parallel (1.6%) retouch.

The most numerous group of finds are projectile points, among which backed bladelets prevail. Also registered are three microgravettes, a larger point made on a crested blade, and a frag-

stavlja proksimalni dio šiljka s usjekom.

Prosječna duljina cjelovitih pločica s hrptom iznosi 22,78 mm, širina 6,91 mm te debljina 3,28 mm. Prosječne dimenzije cjelovitih pločica s obradom su 24,83 mm duljine, 10,93 mm širine te 3,96 mm debljine. Za sječiva s obradom na isti način određene su prosječne dimenzije oruđa koje iznose 47,51 mm duljine, 19,48 mm širine te 6,24 mm debljine.

LANAC OPERACIJA

U analiziranom skupu prisutne su sve faze lanca operacija osim početne faze nabave sirovina i izrade odnosno dorade oruđa. Generalno, može se reći da je organizacija proizvodnje bila usmjerena prema dobivanju lamelarnih oblika, uz snažnu dominaciju pločica u odnosu na sječiva, no za rekonstrukciju proizvodnog procesa koji se odvijao na lokalitetu potrebno je najprije uzeti u obzir i sirovinski sastav skupa.[25]

Preliminarnom petrografskom analizom provedenom u sklopu projekta, za sad je određeno litološko podrijetlo 110 od ukupno 161 artefakta.[26] Više od polovine skupa čine gornjokredski rožnjaci tipa Veli rat, čiji su primarni izdanci dobro poznati i dokumentirani na krajnjemu sjeverozapadnom dijelu Dugog otoka (tab. 3). Od ostalih sirovinskih skupina nešto znatnije su zastupljeni rožnjaci tipa *Scaglia Rossa* i *Scaglia Variegata* koji potječu s udaljenijih područja talijanske regije Marche, dok se ostale sirovinske grupe javljaju rijetko (< 10 % udjela), i to najčešće u obliku lomljevine.

Za proizvodnju na gornjokredskim rožnjacima tipa Veli rat iskorištavani su manji oblutci s ostatcima nodulne okorine koja na nekim primjercima ima i tragove crvenice. Najduža linearna veličina jezgre za pločice iznosila

ment of a tool with a notch that probably represents the proximal part of a shouldered point.

The average length of complete backed bladelets is 22.78 mm, width 6.91 mm and thickness 3.28 mm. On average, complete retouched bladelets are 24.83 mm long, 10.93 mm wide and 3.96 mm thick. Retouched blades are, on average, 47.51 mm long, 19.48 mm wide and 6.24 mm thick.

THE OPERATIONAL SEQUENCE

In the analysed assemblage all stages of the operational sequence are represented, except the initial stage – sourcing raw materials and tool making. In general, it can be said that the production was aimed at obtaining lamellar forms; bladelets strongly prevailed in relation to blades, but for the reconstruction of the production process that took place at the site it is necessary to first take into account the raw material composition of the assemblage.[25]

A preliminary petrographic analysis carried out as part of the project has been able to identify the lithological origin of 110 out of 161 artefacts.[26] More than a half of the assemblage is made of Upper Cretaceous cherts of the Veli Rat type, whose primary spurs are well known and documented in the northwesternmost part of Dugi Otok (Tab. 3). Among other raw material groups, *Scaglia Rossa* and *Scaglia Variegata* chert types originating from more distant regions of the Italian Marche region have a somewhat more significant share, while other raw material groups occur rarely (< 10% of the share), usually in the form of debitage.

Where raw material was sourced from upper Cretaceous cherts of the Veli Rat type, smaller pebbles with remains of nodular cortex, on some specimens with traces of red soil, were used. The longest linear core size for bladelets was

[25] SORESSI, GENESTE 2011: 338.

[26] Ovim putem zahvaljujemo Zlatku Perhoču i Ani Jagić na preliminarnim rezultatima sirovinske analize.

[25] SORESSI, GENESTE 2011: 338.

[26] We would like to thank Zlatko Perhoč and Ana Jagić for the preliminary results of the raw-material analysis.

tablica 3. *Tehnološke kategorije prema osnovnim sirovinskim skupinama* (izradili: L. Arbutina, M. Bodružić)
table 3 *Technological categories according to basic raw material groups* (made by L. Arbutina and M. Bodružić)

Sirovina /Raw material	**rožnjak tip Scaglia Variegata Alpina; Južne Alpe / chert, Scaglia Variegata Alpina type; Southern Alps**	**rožnjak tip Maiolica Gargano: Apulija / chert, Maiolica Gargano type: Apulia**	**rožnjak tip Biancone (Maiolica); Južne Alpe / chert, Biancone (Maiolica) type; Southern Alps**	**devitrificirani tuf; Lika / devitrified tuff; Lika**	**radiolarit; BIH: ofioliti Centralnih Dinarida, bosanski fliš, fluvialni sedimenti / radiolarite; Bosnia and Herzegovina: ophiolites from central Dinarides, Bosnian flysch, fluvial sediments**
prvotni odbojci / primary flakes					
prvotna sječiva /primary blades					
prvotne pločice /primary bladelets					
drugotni odbojci / secondary flakes					
drugotna sječiva / secondary blades	1				
drugotne pločice / secondary bladelets					
odbojci / flakes				1	2
odbojčići / flakes <20mm				1	
sječiva / blades					2
pločice / bladelets		1		3	1
jezgra za pločice /core for bladelets					
miješane jezgre / mixed cores					
ulomci jezgara / core fragments					
krijestasta sječiva i pločice / crested blades-bladelets					1
krhotine / chunks					
neodredivo / unidentified			1		
Ukupno / Total	**1**	**1**	**1**	**5**	**6**

je 43,6 mm, a najduži primjerak lomljevine (drugotno sječivo) 61 mm, s tim da mu je cijela lateralna strana prekrivena okorinom, što upućuje na zaključak da ni prikupljeni oblutci nisu mogli biti mnogo veći. Pri uklanjanju okorine i formiranju jezgre lomljeni su većinom odbojci, a rjeđe sječiva i pločice. Cjelovito sačuvani lamelarni komadi pokazuju izraženu pozitivnu korelaciju između širine i dužine, dok se komadi na drugim sirovinama češće javljaju kao iznimke, što može upućivati na razlike u proizvodnoj shemi na drugim sirovinama (sl. 9).

Jezgra za pločice pokazuje odlike jednosmjernog lomljenja pločica u glavnoj fazi re-

43.6 mm, while the longest debitage specimen (a secondary blade) was 61 mm, its entire lateral side being covered with cortex, suggesting that the collected pebbles could not have been much larger. The reduction process that involved removing the cortex and forming the core most often resulted in flakes, and less often in blades and bladelets. Completely preserved lamellar pieces demonstrate an obvious positive correlation between width and length. Pieces knapped from other raw materials are rather exceptions, possibly suggesting different production schemes when using other raw materials (Fig. 9).

The bladelet core displays the characteristics of unidirectional knapping of the bladelets in

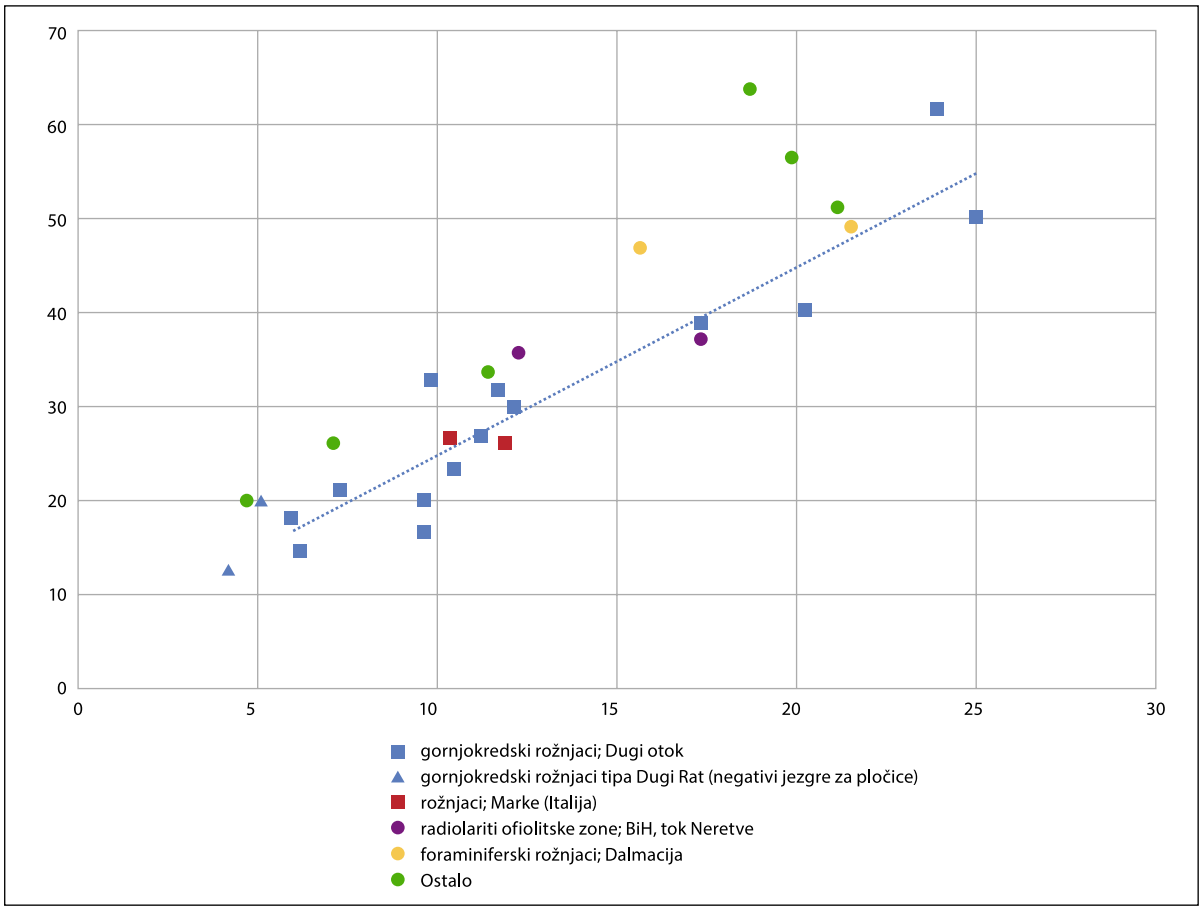
radiolaritne valutice Prominskih naslaga; Dalmacija, Ravni kotari / radiolarite pebbles of the Promina Beds; Dalmatia, Ravni kotari	foraminiferski rožnjaci; Dalmacija / foraminiferal cherts; Dalmatia	rožnjaci tip Scaglia Roassa i Scaglia Variegata; talijanska regija Marke / chert, Scaglia Roassa and Scaglia Variegata; Italy, Marche	neodredivo / unidentified	Dalmacija: Veli rat, Dugi otok / Dalmatia, Veli rat, Dugi otok	Ukupno / Total
				1	1
		1			1
				1	1
1	1	2	2	8	14
	2			2	5
	1			2	3
		3	1	9	16
1		1	1	8	12
			3	3	8
3	2	7	6	23	46
				1	1
			1	1	2
	1		1		2
1		1		1	4
	1		3	1	5
1		2	5	3	12
7	**8**	**17**	**23**	**64**	**133**

dukcije, s negativima pločica koji prevladavaju na sačuvanoj površini. Negativi su organizirani paralelno po dužini oblutka, a suprotno lice pokriveno je okorinom i vjerojatno korišteno kao hvatište. Posljednji pokušaj lomljenja izveden je iz suprotnog smjera te je završio pucanjem jezgre i nastankom dubljega nepravilnog negativa s izvrnutim završetkom. Manji negativi na dnu bloka koso položeni na os komada predstavljaju starije negative nastale početnim lomljenjem u svrhu skidanja okorine i formiranja platforme.

Završna faza proizvodnje oruđa nije sa sigurnošću potvrđena u ukupnom inventaru. Nedostaju karakteristični oblici poput sitnih

the main reduction stage, with bladelet negatives prevailing on the preserved surface. Negatives are organised in parallels alongside the pebble lengths, and the opposite face covered with cortex and probably used as a handle. The last reduction attempt was made from the opposite direction, resulting in breaking the core and the formation of a deeper irregular negative with a hinged termination. Smaller negatives at the bottom of the block, placed diagonally on the axis of a piece, are older negatives, created as a result of initial reduction aimed at removing the cortex and forming a platform.

The final stage of tool formation has not been confirmed with certainty in the overall



Slika 9. *Dijagram raspršenosti cjelovitih lamelarnih oblika s obzirom na sirovinu s označenom crtom trenda za gornjokredske rožnjake s Dugog otoka* (izradio: M. Bodružić)
Figure 9 *Scatter plot of complete lamellar forms according to raw materials, with marked trend line for Upper Cretaceous cherts from Dugi Otok* (made by M. Bodružić)

odbojaka koji bi se mogli pripisati završnoj fazi izrade ili naknadne obrade radnog ruba alata, što donekle može biti objašnjeno i postupkom prosijavanja iskopanog materijala.[27] Nedostaju i iveri dubila, što ne iznenađuje s obzirom na to da nisu zabilježena ni sama dubila.

ZAKLJUČNA RAZMATRANJA

Litički skup Vele pećine mali je brojem, pogotovo ako bismo ga razdvojili u stratigrafske kontekste, no unatoč tomu određeni se uzorci mogu uspostaviti. Kada sagledamo

[27] Tijekom iskopavanja nije provedeno mokro prosijavanje, a materijal je izdvajan nakon prosijavanja sedimenta kroz sito širine oka 5 mm.

inventory. No characteristic forms have been unearthed, such as small flakes that could be attributed to the retouch formation or subsequent retouching of the working edge of the tools. This can, to a certain extent, also be due to the sieving process applied on site.[27] Burin flakes are also missing, which is not surprising, given that no burins have been recorded either.

CONCLUDING REMARKS

The Vela Pećina lithic assemblage is small in terms of numbers, in particular after the stratigraphic contexts have been separated; neverthe-

[27] No wet sieving was conducted in the course of the excavations; the material was extracted after sieving the sediment through a 5-mesh (5-mm openings).

litički skup iz Vele pećine kao cjelinu, primjećuje se visoka zastupljenost lamelarne lomljevine, pločica i sječiva (58,65 %), uz dominaciju prvih. Osim što su spomenuti artefakti prisutni u najvećem broju, oni su i najviše iskorištavani za izradu oruđa. Zastupljenost ne ovisi o sirovinskoj osnovi, jer su pločice i sječiva najbrojnija kategorija na svim vrstama sirovine.

Izrazito mala količina prvotnih komada pokazuje da je sirovina za izradu većinom dolazila očišćena i pripremljena. Zanimljivo je da ni kod ove kategorije nema primjetnih razlika u odnosu na podrijetlo sirovine. Mali broj jezgri ili tragova njihove pripreme, uz visok postotak oruđa i iskorištenosti lomljevine ide u prilog interpretaciji da je tek manji dio predmeta izrađivan ili dorađivan u samoj pećini, a da je većina predmeta donesena kao pripremljena lomljevina ili gotovo oruđe. Pa ipak, visok udio izvrnutog završetka (23,5 %) koji se smatra neželjenim u proizvodnji,[28] nešto je što izlazi iz takve interpretacije i pokazuje *in situ* izradu u samoj pećini. Uz to, drugotna lomljevina i krijestaste pločice i sječiva sugeriraju da je dio sirovine očito donošen u pećinu u obliku jezgre.

Fragmentiranost je visoka, a posebno to vrijedi za pločice gdje je svega 41,5 % sačuvano u cijelosti. Jedan od uzroka mogli bi biti već spomenuti postdepozicijski procesi koji su utjecali i na stratigrafski raspored litičkog skupa, no u tom slučaju iznenađuje što kategorije odbojaka i sječiva bilježe upola manju brojnost lomova. Očekivali bismo da će sve kategorije imati slične postotke, pogotovo sječiva koja su zbog svoje veličine podložnija različitim oštećenjima. Možda bismo razlog tomu mogli potražiti u većem intenzitetu korištenja pločica i oruđa na njima. Preferiranje određenih tipova podrazumijevalo bi i češće trošenje i njihovu zamjenu. Pa ipak, kada se u obzir uzme samo cjelovitost formalnog oruđa, tri kategorije lomljevine

[28] WHITTAKER 1995.

less, certain patterns can be identified. Looking at the Vela Pećina lithic assemblage as a whole, a high percentage of lamellar debitage – bladelets and blades (58.65%) – is evident, the former being prevalent. These artefacts are not only predominant, but were also the most used for formal tools. Their frequency is not interconnected with sourcing raw material, since bladelets and blades are the most numerous category in all raw material types.

A particularly small amount of primary pieces indicates that the raw material mostly came cleaned of cortex and prepared. It is interesting that this category also demonstrates no evident differences as to the origin of raw materials. A small number of cores or of traces of their preparation, along with a high percentage of tools and of utilisation of debitage, supports an interpretation according to which only a small proportion of the artefacts were made or retouched in the cave itself: most objects were brought there as prepared debitage or ready-made tools. However, the high share of hinge terminations (23.5%), usually considered undesirable in production,[28] rather speaks against such an interpretation, suggesting *in situ* production in the cave. In addition, secondary debitage and crested bladelets and blades indicate that a part of the raw material was obviously brought into the cave in the form of core.

Fragmentation is high, which is especially true of bladelets, of which only 41.5% have been completely preserved. A possible cause for this might be the above-mentioned post-depositional processes that also had an impact on the stratigraphic arrangement of the lithic assemblage; however, in that case, it does comes as a surprise that the categories of flakes and blades display half the number of fractures. It is to be expected that all categories should have similar percentages, in particular the blades, which are more susceptible to various damages, due to their size. A possible reason for this might be the more frequent use of bladelets and tools made on them. Preferenc-

[28] WHITTAKER 1995.

(pločice, sječiva i odbojci) bilježe jednaku fragmentiranost, otprilike 50 %. Posebno se ističe činjenica da su gotovo sve pločice s hrptom i gravetice očuvane u cijelosti, a upravo bi pločice s hrptom, kao najčešća kategorija oruđa, po početnoj premisi trebale biti najviše trošene i oštećene. Poklapa se to s analizama litičkog skupa iz pećine Vlakna koje su također pokazale da fragmentiranost oruđa ne možemo povezati samo s intenzitetom aktivnosti koje su provođene u pećini, kao niti s iskorištavanjem litičke sirovine, a slično pokazuju i analize iz Vele spile.[29] Očito postoje i drugi faktori utjecaja koje bi trebalo uzeti u obzir.

Smještaj pećine, kao i njezine male dimenzije koje je čine pogodnom za boravak tek manjeg broja ljudi, ne uklapa se u ideju staništa i već na prvu ne odaje stambeni karakter mjesta.[30] Primjetna je i visoka zastupljenost kategorije projektila što naglašava lovačku komponentu, tj. lovni karakter litičkog skupa. Prema Zilhão,[31] viši omjer projektila (u koje je uvrstio pločice s hrptom, šiljke, pločice s obradom i geometrijske mikrolite) naspram transformacijskih tipova oruđa (grebala, strugala, svrdla, dubila, sječiva s obradom, udupci i nazupci) odlika je specijaliziranih logističkih lokaliteta. Sve zajedno otvara mogućnost interpretacije Vele pećine kao mjesta kratkotrajnog boravka paleolitičkih zajednica radi obavljanja specijalističkih radnji vjerojatno povezanih s lovnim aktivnostima. Nažalost, nalazi faune pronađeni su u malom broju i u trenutku pisanja rada nisu bili u potpunosti analizirani. Preliminarne analize pak materijala iz intaktnih slojeva koji pripadaju starijoj fazi pokazuju prisutnost kozoroga, divokoza, pragoveda, konja i divljih svinja, s time da posljednje čine najbrojniju skupinu nalaza. Na prvi pogled zanimljiva je prisutnost taksona koji su

[29] VUKOSAVLJEVIĆ 2012: 122, 254–255.
[30] Vidi: BINFORD 1980; SINCLAIR 1999.
[31] ZILHÃO 1997: 237–240.

es for certain types would also imply their more frequent wear and replacement. Nevertheless, if only the completeness of formal tools is considered, the three debitage categories (bladelets, blades and flakes) record the same fragmentation percentage: approximately 50%. Of particular note is the fact that almost all backed bladelets and microgravettes have been completely preserved, which is contrary to the initial premise that the backed bladelets in particular, as the most common category of tools, should be the most worn and damaged. This is consistent with the analysis of the lithic assemblage from Vlakno cave, which also showed that the fragmentation of the tools cannot be associated solely with the intensity of the activities carried out in the cave, or with the exploitation of the lithic raw material. The results of the analysis of the material from Vela Spila are similar.[29] Obviously other impacting factors should also be taken into account.

The location and small size of the cave, making it suitable for occupation by only a small number of people, do not conform with the idea of a habitation and the most cursory glance confirms that the place does not offer much residential character.[30] Also noticeable is a high share of the projectile category, pointing to a hunting component: the hunting character of the lithic assemblage. According to Zilhão,[31] a higher share of projectiles (including backed bladelets, points, retouched bladelets and geometric microliths) compared to transformation tools (endscrapers, sidescrapers, drills, burins, retouched blades, notches and denticulates) is a characteristic of specialised logistic sites. All together it opens up the possibility of interpreting Vela Pećina as a place of short-term residence of Palaeolithic communities for the purpose of carrying out specialist activities probably related to hunting. Unfortunately, the number of fauna finds is small; and at the time of writing this paper, they have not been fully analysed. Preliminary analy-

[29] VUKOSAVLJEVIĆ 2012: 122, 254–255.
[30] See BINFORD 1980; SINCLAIR 1999.
[31] ZILHÃO 1997: 237–240.

povezani s dvjema različitim vrstama okoliša, što može upućivati na postojanje više faza korištenja pećine od onih koje su izražene u stratigrafiji.[32]

Radiokarbonsko datiranje smješta Velu pećinu na sam početak kasne faze epigravetijena koja prema Ruizu-Redondu i suradnicima počinje između 17,5 i 17,2 tis. kal. god. pr. sad.[33] Prijelaz iz rane u kasnu fazu epigravetijena na širem jadranskom području poklapa se s početnim fazama Greenland interstadijala GI-1.[34]

Rezultati apsolutnog datiranja kojima raspolažemo za sloj Vele pećine pružaju mogućnost usporedbe s drugim nalazištima na prostoru istočne obale Jadrana. Nažalost, tek nekoliko nalazišta ima slojeve iz ovog vremena. Najbliža paralela može se povući s nalazištem Vlakno na Dugom otoku, sa slojevima ispod NYT tefre, ponajprije sa stratumima 8-10. Najstariji datirani sloj Stratuma 8 iznosi 13640 ± 40 god. pr. sad. Stratum 9 dao je datum 13880 ± 40 god. pr. sad., dok je najviši sloj posljednje istraženog Stratuma 10 dao datum 14430 ± 40 god. pr. sad. Nažalost, kada je u pitanju litika, trenutačno raspolažemo samo podatcima iz probne sonde. Prije svega se to odnosi na Stratum 9 koji je u probnoj sondi bio izražen tek kao gotovo sterilan sloj zemlje i sitnog kršja debljine 60 centimetara sa svega nekoliko pronađenih artefakata, dok je u sustavnim istraživanjima dao mnogo kompleksniju depozicijsku strukturu i daleko veći broj nalaza.

Unutar tehnoloških kategorija kod stratuma 8 i 10 dominantno su najzastupljeniji odbojci. Za Stratum 9 teško je govoriti s obzirom na to da je u probnoj sondi otkriveno tek pet artefakata. Pločice su u obama stratumima brojne, a ako se usporede stratumi 8 i 10, primjećuje se veća zastupljenost sječiva kako idemo prema starijim slojevima.

[32] Zahvaljujemo Siniši Radoviću na preliminarnim podatcima o fauni.
[33] RUIZ-REDONDO et al. 2022: 8.
[34] RASMUSSEN et al. 2014.

ses of intact layers of the older stage demonstrate the presence of ibex, chamois, aurochs, horse and wild boar, with the latter forming the most numerous group of finds. At first glance, the presence of taxa that are related to two different types of environment is interesting, which may indicate the existence of more stages of use of the cave than expressed in the stratigraphy.[32]

Radiocarbon dating places Vela Pećina at the beginning of the Late Epigravettian, which according to Ruiz-Redondo and associates commenced between 17,500 and 17,200 cal BP.[33] The transition from Early to Late Epigravettian in the wider Adriatic area coincides with initial phases of Greenland stadial GI-1.[34]

The absolute dating results available for the Vela Pećina layer enable a comparison with other sites on the eastern Adriatic coast. Unfortunately, only a few sites have layers from this period. The nearest parallel can be drawn with the Vlakno site on Dugi Otok, with layers below the NYT tephra, primarily with Strata 8–10. The oldest dated layer of Stratum 8 is from 13,640±40BP. Stratum 9 yielded the date 13,880±40 BP, and the highest layer of the last excavated Stratum 10 14,430±40 BP. Unfortunately, when it comes to lithics, we currently only have data from the trial trench. This primarily refers to Stratum 9, which in the trial trench was present merely as a nearly sterile layer of earth and some small breccia pieces, 60 centimetres thick, represented by only a few uncovered artefacts, while systematic excavations suggested a much more complex deposition structure and a far greater number of finds.

Predominantly the most represented technological categories in Stratums 8 and 10 are flakes. It is difficult to discuss Stratum 9 given that only five artefacts were unearthed in the trial trench. There are many bladelets in both strata, and a comparison of Strata 8 and 10 suggests a higher representation of the blades in the older layers. The operation chain is characterised by

[32] We would like to thank Siniša Radović for the preliminary data on fauna.
[33] RUIZ-REDONDO et al. 2022: 8.
[34] RASMUSSEN et al. 2014.

Lanac operacija karakterizira identičan trend u zastupljenosti pojedinih kategorija određene faze proizvodnje uz svega nekoliko sitnih razlika, što daje naslutiti da su u obama stratumima korištene iste tehnologije izrade artefakata. Najzastupljenije su kategorije povezane s drugom fazom proizvodnje. Od jezgri su pronađeni samo ulomci najvjerojatnije iskorištenih i odbačenih jezgara. Ostale faze lanca operacija bilježe slabu zastupljenost, a početna, kao i kod Vele pećine, u potpunosti nedostaje. U tipološkim kategorijama navedenih stratuma iz Vlakna, visok udio u skupu imaju pločice s hrptom, komadi s obradom i šiljci što je slično skupu Vele pećine. Unutar Stratuma 8 pločice s hrptom su najzastupljenije, u odnosu na stariji Stratum 10 gdje su podjednako zastupljene kao i sječiva s obradom ili šiljci. Kod kategorija projektila u mlađem stratumu najzastupljenije su gravetice, u odnosu na starije slojeve gdje one uopće nisu zabilježene. Za prisutnost ulomka oruđa s usjekom u vidu proksimalnog dijela šiljka pronađenog u Veloj pećini ne treba nužno nuditi poveznicu sa Stratumom 10 iz Vlakna kao ni s ranim epigravetijenom općenito. Sličan ulomak u Vlaknu je pronađen i u mlađim slojevima (Stratum 5).[35] Osim toga, sustavnim pregledom objavljenih primjeraka šiljaka s usjekom na istočnoj obali Jadrana, N. Vukosavljević i I. Karavanić dokazali su da njihova pojava ne može služiti kao *fossil directeur* ranog epigravetijena na ovom području.[36] Grebala i svrdla kod Stratuma 8 bilježe znatnu zastupljenost u odnosu na stariji gdje je njihova zastupljenost znatno slabija, a dubila su u oba slučaja slabo zastupljena. I stariji i mlađi stratum karakterizira prisutnost zarubljenog alata, no kod Stratuma 8 to su isključivo pločice u odnosu na Stratum 10 gdje su to većinom sječiva. Kod mlađeg stratuma najviše tipoloških kategorija formirano

[35] Sloj u kojem je pronađen primjerak iz Vlakna radiokarbonskom metodom je datiran u razdoblje od 12410 do 12070 god. pr. sad. (Beta- 416303).

[36] VUKOSAVLJEVIĆ, KARAVANIĆ 2017.

an identical trend in the representation of certain production stage categories with only a few slight differences, suggesting that in both strata the same artefact production technology was used. The most frequent are categories related to the second production stage. Only fragments of (most likely) used and discarded cores were found. Other stages of the operation chain are poorly represented, while the initial, as is the case with Vela Pećina, is completely missing. Among typological categories of the mentioned strata of the assemblage from Vlakno is a high proportion of backed bladelets, retouched pieces, and points, similar to the Vela Pećina assemblage. Within Stratum 8, most frequent are backed bladelets, compared to the older Stratum 10, where they are retouched blades and points. The most common projectiles in the newer stratum are microgravettes, which were not recorded in the older layers, in which only specimens of flat and curved backed points were recovered. The presence of a shouldered tool fragment in the form of the proximal part of a point uncovered in Vela Pećina should not necessarily suggest a link to Stratum 10 from Vlakno, or to the Early Epigravettian in general. In Vlakno, a similar fragment was found also in the newer layers (Stratum 5).[35] In addition, in a systematic review of published samples of shouldered points on the eastern Adriatic coast, N. Vukosavljević and I. Karavanić proved that their presence cannot serve as a type fossil (*fossil directeur*) of the Early Epigravettian in the area.[36] In Stratum 8, a significant number of endscrapers and drills was recorded compared to the older layers, in which their percentage is significantly lower, while burins are poorly represented in both newer and older layers. Typical for both older and newer strata is the presence of truncated tools, but in Stratum 8 these are exclusively bladelets, whereas in Stratum 10 they are mostly blades. In the newer strata, most typological categories were

[35] The layer that yielded the specimen from Vlakno was radiocarbon dated to the period from 12,410 to 12,070 BP (Beta-416303).

[36] VUKOSAVLJEVIĆ, KARAVANIĆ 2017.

je na pločicama, dok je kod starijeg fokus obrade ipak stavljen na sječiva.

Drugi lokalitet s kojim se, barem na kronološkoj razini, Vela pećina može usporediti jest Vela spila na otoku Korčuli, i to s horizontima LUP-D i LUP-C. Oba horizonta u litičkom skupu imaju izraženu lovačku komponentu kroz dominaciju pločica s hrptom. Iako, kada se u obzir uzmu drugi nalazi iz LUP-D horizonta, više se ističe stambena nego logistička komponenta.[37] Horizont LUP-D dao je datum 14100 ± 100 god. pr. sad.[38] Odbojci u ovom horizontu čine najčešći oblik lomljevine (68,61 %). Blizu 70 % njih je cjelovito, a perasti završetak daleko je najučestaliji. Kao i kod Vele pećine, nije zabilježena prvotna lomljevina. Jezgre za odbojke su najučestalije, a one za pločice čine četvrtinu nalaza. Oruđa čine manje od 10 % nalaza, a polovica ih je izrađena na pločicama.[39] Pločice s hrptom najbrojnija su kategorija s oko 50 % učestalosti, u što spadaju i zašiljeni komadi. Njih slijede grebala, i to ona na odbojku.[40]

Stariji pak horizont, LUP-C dao je datum 14500 ± 100 god. pr. sad.[41] Kao u prethodnom, i u ovom horizontu odbojci čine najčešći oblik lomljevine (52,17 %), uz visoku zastupljenost pločica (34,78 %). Blizu 70 % svih odbojaka je cjelovito, a cjelovitost ostalih kategorija je niža. Perasti završetak je daleko najučestaliji. Nije zabilježena prvotna lomljevina. Jezgre za pločice su najučestalije.[42] Oruđa čine 16 % nalaza, a gotovo 50 % ih je izrađeno na pločicama. Među njima dominiraju pločice s hrptom s oko 53 % učestalosti, u što spadaju i zašiljeni komadi. Brojem ih slijede komadi s obradom i grebala.[43]

Iako vremenski bliža horizontu LUP-D nego nešto starijem LUP-C, Vela pećina po-

[37] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 153.
[38] FARBSTEIN et al. 2012.
[39] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 104.
[40] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 105–106.
[41] FARBSTEIN et al. 2012.
[42] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 99–100.
[43] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 105–106.

formed on bladelets, while in the older strata the retouch was mainly focused on blades.

Another site comparable with Vela Pećina, at least on a chronological level, is Vela Spila on the island of Korčula, in particular its LUP-D and LUP-C horizons. The lithic assemblages of both horizons have a pronounced hunting component with backed bladelets prevailing. Admittedly, the other LUP-D horizon finds rather suggest a housing rather than a logistical component.[37] The LUP-D horizon yielded the date of 14,100±100 BP.[38] Flakes in this horizon represent the most common debitage form (68.61%). Close to 70% of the flakes are complete, with the feathered terminations being by far the most frequent. As in Vela Pećina, no primary debitage has been recorded. Flake cores are most frequent, while bladelet cores make up one quarter of the finds. Tools make up less than 10% of the finds, with a half of them made on bladelets.[39] Backed bladelets are the most numerous category, with about 50%, which includes also pointed pieces. They are followed by endscrapers, retouched on flakes.[40]

However, the older LUP-C horizon yielded the date of 14,500±100 BP.[41] Similarly as in the previous horizon, the most common form of debitage are flakes (52.17%), with a high percentage of bladelets (34.78%). Close to 70% of all flakes are complete, while the completeness of other categories is lower. The feathered termination is by far the most frequent. No primary debitage was recorded. Bladelet cores are the most frequent.[42] Tools make up 16% of the finds, and almost 50% of them are made on bladelets. Among them, backed bladelets prevail with approximately 53%, including pointed pieces. They are followed by retouched pieces and endscrapers.[43]

Although closer to the LUP-D horizon than to

[37] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 153.
[38] FARBSTEIN et al. 2012.
[39] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 104.
[40] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 105–106.
[41] FARBSTEIN et al. 2012.
[42] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 99–100.
[43] VUKOSAVLJEVIĆ, PERHOČ, RADIĆ 2022: 105–106.

kazuje nešto više sličnosti upravo s njim. Pa ipak, bez obzira na izraženu lovnu komponentu, na prvi pogled razlike u zastupljenosti oruđa u litičkom skupu i iskorištavanju lomljevine, uz prisutnost većeg broja grebala, mogle bi upućivati na različit karakter dvaju lokaliteta, tj. različitu ulogu Vele pećine i Vele spile u sustavima naseljavanja istočnojadranskog prostora.

Sloj 100 pećine Zala datiran je u 14100 ± 60 god. pr. sad.[44] Nažalost, u trenutku pisanja rada nisu objavljeni podatci samo za taj sloj pa usporedbu možemo napraviti s cjelokupnim inventarom. Litički skup iz kasnoga gornjeg paleolitika pećine Zala broji 496 komada, a najveći broj otpada na različitu lomljevinu. Odbojci dominiraju, iako pločice i sječiva čine gotovo četvrtinu litičkog skupa, s tim da su daleko zastupljenije pločice (21,1 %). Pronađene su jezgre od kojih su najbrojnije one za pločice. Uz njih i druge kategorije nalaza pokazuju da se dio izrade odvijao u pećini.[45] U kategoriju formalnog oruđa ulazi manje od 10 % nalaza. Pronađeno je svega 30 komada među kojima su najbrojnije pločice s hrptom, a slijede ih komadi s obradom i grebala. Više od polovice oruđa izrađeno je na pločicama i sječivima.[46]

Na istočnoj obali Jadrana još Badanj u Pokriveniku ima sličan datum kao sloj iz Vele pećine; 14,440 ± 50 god. pr. sad. i prisutnost epigravetijenske komponente u litičkom skupu.[47] No problem s nalazima iz Pokrivenika, prije svega graveticama kao gotovo sigurnim pokazateljem epigravetijena, jest što one potječu iz konteksta poremećenog kasnijim, neolitičkim aktivnostima. Većina ih je pronađena u istraživanjima Grge Novaka i Vladimira Mirosavljevića, a naknadno su, na osnovi tipoloških karakteristika, interpretirani kao gornjopaleolitički.[48] Tek su istraži-

[44] ŠOŠIĆ KLINDŽIĆ et al. 2015.
[45] VUKOSAVLJEVIĆ, PERHOČ, KARAVANIĆ2015: 95–96.
[46] VUKOSAVLJEVIĆ, PERHOČ, KARAVANIĆ 2015: 96.
[47] FORENBAHER 2002.
[48] NOVAK 1949; MIROSAVLJEVIĆ 1952; PETRIĆ 1978.

the somewhat older LUP-C horizon, Vela Pećina displays somewhat more similarities with the latter. Nevertheless, regardless of the pronounced hunting component, a first glance suggests differences in the share of tools in the lithic assemblage and the exploitation of the debitage, with the presence of a larger number of endscrapers, and maybe different characters for the two sites, indicating different roles of Vela Pećina in comparison to Vela Spila in the settlement systems of the eastern Adriatic area.

Layer 100 of Zala cave was dated to 14,100±60 BP.[44] Unfortunately, at the time of writing this paper no data has been published separately for the mentioned layer; therefore, it is possible to make a comparison only with the entire inventory. The lithic assemblage from the Late Upper Palaeolithic of Zala cave has 496 pieces, with debitage having the largest share. Flakes prevail, although bladelets and blades make up almost one quarter of the lithic assemblage, with bladelets being far more represented (21.1%). Cores were uncovered, of which the most numerous were bladelet cores. In addition, other find categories also indicate that part of the production took place in the cave.[45] The formal tool category makes up less than 10% of the finds. Only 30 pieces were found, among which the most numerous are backed bladelets, followed by retouched pieces and endscrapers. More than a half of the tools were made on bladelets and blades.[46]

Another site on the eastern Adriatic coast – Badanj in Pokrivenik – has a similar date to the layer from Vela Pećina: 14,440±50 BP, and the Epigravettian component present in its lithic assemblage.[47] Yet, the problem with the finds from Pokrivenik, primarily the microgravettes as an almost certain indicator of the Epigravettian, is that they originate from a context disturbed by later, Neolithic activities. Most of them were found in the course of excavations conducted by Grga Novak and Vladimir Mirosavljević and

[44] ŠOŠIĆ KLINDŽIĆ et al. 2015.
[45] VUKOSAVLJEVIĆ, PERHOČ, KARAVANIĆ 2015: 95–96.
[46] VUKOSAVLJEVIĆ, PERHOČ, KARAVANIĆ 2015: 96.
[47] FORENBAHER 2002.

vanja Staše Forenbahera donijela kronološke analize koje su potvrdile da su epigravetijenski slojevi u pećini zaista postojali, ali su zbog postdepozicijskih faktora poremećeni ili u kombinaciji s geomorfologijom pećine dospjeli u sekundarni položaj.[49]

Datumom Vela pećina korespondira i s rezultatima analiza uzoraka ugljena iz Romualdove pećine (Beta-465338 13970 ± 50 god. pr. sad. i OxA-36127 14250 ± 80 god. pr. sad.) uzetih iz sloja 2 sonde ispod paleolitičkih prikaza,[50] no zbog činjenice da navedeni rezultati nemaju uporište u slojevima s kulturnim nalazima, datiranim u ranije periode,[51] ne možemo napraviti direktnu usporedbu dvaju nalazišta.

Posljednji lokalitet za usporedbu na kronološkoj razini jest pećina Blazi u krškoj regiji Mat u Albaniji. Istraživanja pokazuju da je tijekom kasnog epigravetijena pećina služila kao specijalizirano mjesto za lov na kozoroge.[52] Sloj 2 iz sonde 5 dao je datum 14440 ± 50 god. pr. sad.[53] Malobrojnim litičkim skupom navedenog sloja (n = 182) dominira lomljevina. Jezgre i komadi koji nastaju pri pripremi ili stvaranju platforme su pronađeni, ali u manjem broju. Među lomljevinom sječiva su najbrojnija kategorija. No ako se uzme u obzir da su u litičkoj analizi zasebno izdvojene pločice (širina manja od 10 mm) i mikrosječiva (širina manja od 7 mm), što je u slučaju Vele pećine stavljeno u istu kategoriju pločica, onda možemo reći da kod obiju pećina prevladaju laminarni proizvodi manjih dimenzija. Također, sječiva i mikrosječiva su najčešće kategorije koje su iskorištavane za izradu oruđa, i to za proizvodnju oruđa s hrptom. Među njima prisutni su različiti šiljci i gravetice. U ostatku inventara pojavljuju se različite vrste grebala (među kojima su najbrojnija grebala na sječivima), iako oni

[49] FORENBAHER 2002: 364.
[50] RUIZ-REDONDO et al. 2019: 305–309.
[51] JANKOVIĆ et al. 2017.
[52] HAUCK et al. 2017: 9.
[53] HAUCK et al. 2017.

were subsequently interpreted as Upper Palaeolithic, on the basis of typological characteristics.[48] Only later, with the excavations by Stašo Forenbaher, did chronological analyses become available, which confirmed that Epigravettian layers in the cave had indeed existed, but that, due to post-deposition factors, they were disturbed or they ended up in secondary positions due to a combination with the cave's geomorphology.[49]

The date of Vela Pećina corresponds with the results of the analysis of charcoal samples from Romualdova Pećina (Beta-465338 13,970±50 BP and OxA-36127 14,250±80 BP) taken from Layer 2 of the trial trench dug at the foot of the rock with Palaeolithic paintings.[50] However, due to the fact that the results have no basis in layers with cultural finds dated to earlier periods,[51] it is not possible to make a direct comparison of the two sites.

The last site comparative at a chronological level is Blazi cave in the karst region of Mat in Albania. Research suggests that in the course of the Late Epigravettian the cave served as a place specialised for ibex hunting.[52] Layer 2 from Trial Trench 5 yielded the date of 14,440±50 BP.[53] The scanty lithic assemblage from this layer (n=182) is dominated by debitage. Cores and pieces that are a byproduct of preparation or platform creation have been recovered, but in a rather small number. The most numerous category of debitage are blades. However, given that in the lithic analysis bladelets (width < 10 mm) were distinguished from microblades (width < 7 mm), while in the case of Vela Pećina both were placed in the same bladelet category, it can be said that in both caves laminar products of smaller dimensions prevail. Also, blades and microblades are the most common categories that were used to make tools, specifically to produce backed tools. Among them are various points and mi-

[48] NOVAK 1949; MIROSAVLJEVIĆ 1952; PETRIĆ 1978.
[49] FORENBAHER 2002: 364.
[50] RUIZ-REDONDO et al. 2019: 305–309.
[51] JANKOVIĆ et al. 2017.
[52] HAUCK et al. 2017: 9.
[53] HAUCK et al. 2017.

čine manje od 15 % nalaza u sloju 2. Skup karakterizira jako mali postotak dubila i izostanak geometrijskih mikrolita.

Zbog sličnosti u pojedinim kategorijama, trenutačno od svih navedenih nalazišta litički skup iz pećine Blazi najviše odgovara nalazima iz Vele pećine na otoku Ugljanu. Iako zbog udaljenosti nije moguće uspostavljati druge paralele, odgovor za tu sličnost možda leži u karakteru mjesta i ulozi tih dviju pećina u sistemima naseljavanja kao kratkotrajnih, lovnih stanica. U budućnosti će se daleko bolje paralele moći povući s obližnjim nalazištem Vlakno na Dugom otoku, no za to treba pričekati dovršetak analize litičkog skupa sa sustavnih iskopavanja, prije svega onog iz Stratuma 9.

crogravettes. The remaining inventory includes various types of endscrapers (among which the most numerous are those on blades), although they make up less than 15% of the finds in Layer 2. The assemblage is characterised by a very small percentage of burins and the absence of geometric microliths.

Due to the similarities between individual categories, currently the closest match for the finds from the Vela Pećina on the island of Ugljan is the lithic assemblage from Blazi cave. Although it is not possible, due to the distance between the two sites, to establish other parallels, the similarities might be due to the character of the locations and the roles of the two caves in the settlement systems as short-term hunting stations. In the future, it will be possible to draw far better parallels with the nearby Vlakno site on Dugi Otok, but for this, it will be necessary to wait for the analysis of the lithic assemblage from systematic excavations, in particular from Stratum 9.

Translation and proof-reading:
ETNOtrend d.o.o.

Literatura / References

ANDREFSKY, W. 2005, *Lithics: Macroscopic Approaches to Analysis*, Cambridge: Cambridge University Press.

BARBIR, A., VUKOSAVLJEVIĆ, N., VUJEVIĆ, D. 2020, Eating well on Adriatic palaeoshore – Marine and terrestrial molluscs as evidence of Late Pleistocene and Early Holocene cuisine in Vlakno Cave, Dugi otok, Croatia, u/in: *Animal husbandry and hunting in the Central and Western Balkans through time*, Marković, N., Bulatović, J. (ur./eds.), Oxford: Archaeopress, 1–9.

BATOVIĆ, Š. 1973, Prapovijesni ostaci na zadarskom otočju, *Diadora*, 6, 5–165.

BATOVIĆ, Š. 1988, Paleolitički i mezolitički ostaci s Dugog otoka, *Poročilo o raziskovanju paleolita, neolita in neolita v Sloveniji*, XVI, 7–54.

BATOVIĆ, Š. 1992, Rekognosciranje Dugoga otoka u 1991. godini, *Obavijesti Hrvatskog arheološkog društva*, XXIV/1, 61–67.

BATOVIĆ, Š. 1993, O prapovijesti Dugoga otoka, *Zadarska smotra*, 1-2 (Zbornik Dugi otok), 99–157.

BINFORD, L. R., 1980, Willow smoke and dogs' tails: hunter- gatherer settlement systems and archaeological site formation, *American Antiquity*, 45, 4–20.

BODRUŽIĆ, M., VUJEVIĆ D. 2023, Arheološka istraživanja Pećine u Ždrilu kod Rovanjske, *Subterranea Croatica,* 21(2), 45–52.

CRISTIANI, E., RADINI, A., BORIĆ, D., Robson, H. K., Caricola, I., CARRA, M., MUTRI, G., OXILIA, G., ZUPANCICH, A., ŠLAUS, M., VUJEVIĆ, D. 2018, Dental calculus and isotopes provide direct evidence of fish and plant consumption in Mesolithic Mediterranean, *Scientific Reports*, 8, 8147. https://doi:10.1038/s41598-018-26045-9

CVITKUŠIĆ, B., RADOVIĆ, S., VUJEVIĆ, D. 2018, Changes in ornamental traditions and subsistence strategies during the Palaeolithic-Mesolithic transition in Vlakno cave, *Quaternary International*, Volume 494, 180–192. https://doi.org/10.1016/j.quaint.2017.08.053

CVITKUŠIĆ, B., VUJEVIĆ, D. 2021, Role of personal ornaments: Vlakno Cave (Croatia), u/in: *Foraging Assemblages: Papers Presented at the Ninth International Conference on the Mesolithic in Europe, Volume 1*, Borić, D., Antonović, D., Mihailović, B. (ur./eds.), Beograd/ New York: Srpsko arheološko društvo/The Italian Academy for Advanced Studies in America, Columbia University, 551–557.

CVITKUŠIĆ, B., CRISTIANI, E., ZUPANCICH, A., VUJEVIĆ, D. 2024, Prehistoric ornaments in a changing environment. An integrated approach to the Late Upper Palaeolithic and Mesolithic Columbella rustica shells from the Vlakno cave, Croatia, *Journal of archaeological science*, 165, 1–14. https://doi:10.1016/j.jas.2024.105972

FARBSTEIN, R., RADIĆ, D., BRAJKOVIĆ, D., MIRACLE, P. T. 2012, First Epigravettian Ceramic Figurines from Europe (Vela Spila, Croatia), *PLoS ONE*, 7(7): e41437. https://doi:10.1371/journal.pone.0041437

FORENBAHER, S. 2002, Prehistoric Populations of the Island of Hvar, *Collegium Antropologicum*, 26, 361–378.

HAUCK, T.C., NOLDE, N., RUKA, R., GJIPALI, I., DREIER, J., MAYER, N. 2017, After the cold: Epigravettian hunter-gatherers in Blazi Cave (Albania), *Quaternary International*, 450, 150–163. https://doi:10.1016/j.quaint.2016.11.045

INIZAN, M.-L., REDURON-BALLINGER, M., ROCHE, H., TIXIER, J. 1999, *Technology and Terminology of Knapped Stone*, Cercle de recherches et d'études préhistoriques, Nanterre.

JANKOVIĆ, I., KOMŠO, D., AHERN, J.C.M., BECKER, R., GEROMETTA, K., WEINSTOCK, J., BARBIR, A., VUKOSAVLJEVIĆ, N., CVITKUŠIĆ, B., ZUBČIĆ, K., MIHELIĆ, S., SMITH, F. H. 2017, New research on the Late Pleistocene in the Lim Channel, Istria, *Antiquity Project Gallery*, 91(359). https://doi:10.15184/aqy.2017.170

KARAVANIĆ, I. 1992, Prijedlog osnovnoga strukovnog nazivlja za srednji i mlađi paleolitik, *Opuscula Archaeologica,* 16, 15–35.

KARAVANIĆ, I. 1999, *Gornji paleolitik Šandalje II u okviru Jadranske regije*, neobjavljena disertacija/unpublished PhD thesis, Zagreb: Filozofski fakultet, Sveučilište u Zagrebu.

KRILE, I., VUJEVIĆ, D. 2017, Prilog poznavanju rane prapovijesti Velog Rata na Dugom otoku, *Diadora*, 31, 7–26.

MALEZ, M. 1955, Vela i mala pećina na otoku Ugljanu, *Speleolog*, 2(3-4), 74–77.

MIROSAVLJEVIĆ, V. 1952, Nalaz heladske kulture u spilji Pokrivenik na Hvaru, *Vjesnik za arheologiju i historiju dalmatinsku*, 53, 123–133.

NOVAK, G. 1949, Izvještaj o prethistorijskim istraživanjima otoka Hvara, *Ljetopis Jugoslavenske akademije znanosti i umjetnosti*, 55, 149–180.

PETRIĆ, N. 1978, Badanj, Pokrivenik, o. Hvar – paleolitički nalazi, *Arheološki pregled*, 20, 10–11.

RADOVIĆ, S., VUJEVIĆ, D. 2021, A tale of foxes and deer, or how people changed their eating habits during the Mesolithic at Vlakno cave (Croatia). u/in: *Foraging Assemblages: Papers Presented at the Ninth International Conference on the Mesolithic in Europe*, Volume 2, Borić, D., Antonović, D., Mihailović, B. (ur./eds.), Beograd/New York: Srpsko arheološko društvo/The Italian Academy for Advanced Studies in America, Columbia University, 374–381.

RASMUSSEN, S.O., BIGLER, M., BLOCKLEY, S.P., BLUNIER, T., BUCHARDT, S.L., CLAUSEN, H.B., CVIJANOVIC, I., DAHL-JENSEN, D., JOHNSEN, S.J., FISCHER, H., GKINIS, V., GUILLEVIC, M., HOEK, W.Z., LOWE, J.J., PEDRO, J.B., POPP, T., SEIERSTAD, I.K., STEFFENSEN, J.P., SVENSSON, A.M., VALLELONGA, P., VINTHER, B.M., WALKER, M.J.C., WHEATLEY, J.J., WINSTRUP, M. 2014, A stratigraphic framework for abrupt climatic changes during the Last Glacial period based on three synchronized Greenland ice-core records: refining and extending the INTIMATE event stratigraphy, *Quaternary Science Reviews*, 106, 14-28. https://doi:10.1016/j.quascirev.2014.09.007

RUIZ-REDONDO, A., KOMŠO, D., MAIDAGAN, D. G., MORO-ABADÍA, O., GONZÁLEZ-MORALES, M. R., JAUBERT, J., KARAVANIĆ, I. 2019, Expanding the horizons of Palaeolithic rock art: the site of Romualdova Pećina, *Antiquity*, 93(368), 297–312. https://doi:10.15184/aqy.2019.36

RUIZ-REDONDO, A., VUKOSAVLJEVIĆ, N., TOMASSO, A., PERESANI, M., DAVIE, W., VANDER LINDEN, M. 2022, Mid and Late Upper Palaeolithic in the Adriatic Basin: Chronology, transitions and human adaptations to a changing landscape, *Quaternary Science Reviews*, 276, 107319. https://doi:10.1016/j.quascirev.2021.107319

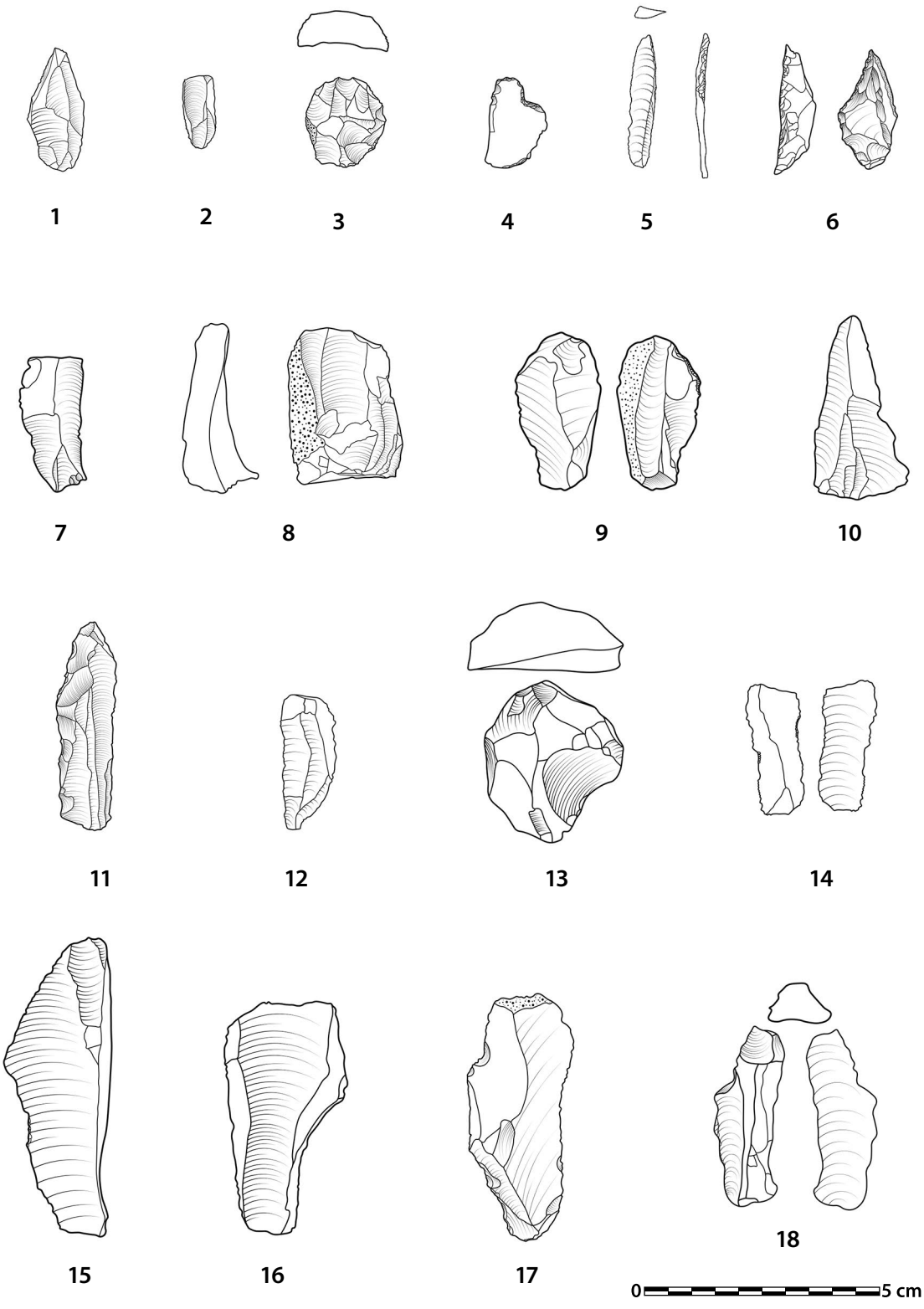
SINCLAIR, A. 1999, Technological Decision Making and the Influence of Specialised Activities: the Case of Megalakkos, u/in: *The Palaeolithic of Greece and Adjacent Areas* E. Adam, G. N. Bailey, E. Panagopoulou, C. Perles, & K. Zachos (ur/eds.), Ioannina: British School at Athens, 188–196.

SISK, J. M., SHEA, J. 2014, European Upper Paleolithic Stone Tool Typology: An annotated translation of the de Sonneville-Bordes and Perrot typology, *University of Notre Dame, Jour-*

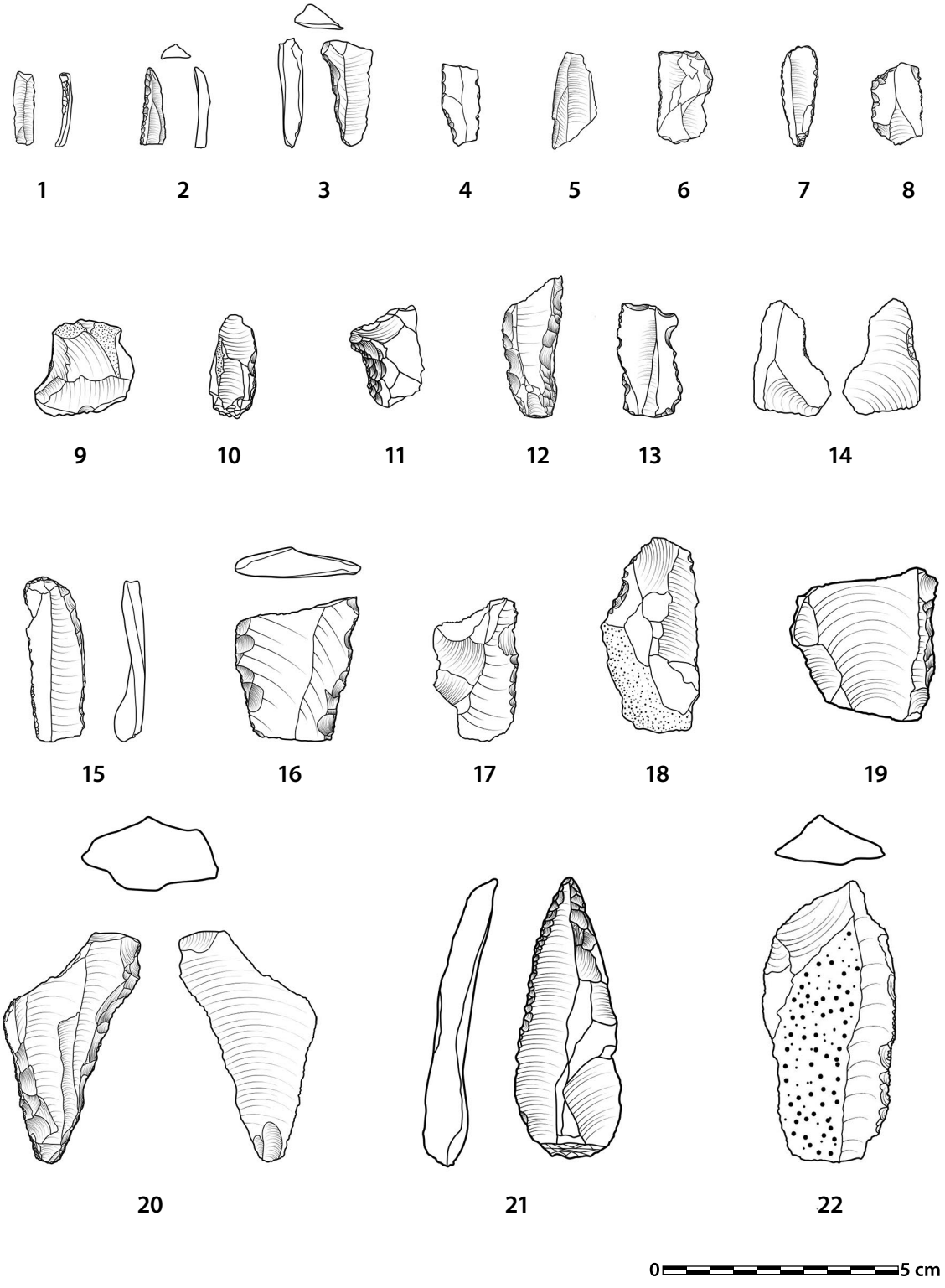
nal contribution. https://doi:10.7274/R03R0QR2
SORESSI, M., GENESTE, J.-M. 2011, The History and Efficacy of the Chaîne Opératoire Approach to Lithic Analysis; studying Techniques to Reveal Past Societies in an Evolutionary Perspective. *PaleoAnthropology*, Special Issue: Reduction Sequence, Chaîne Opératoire, and Other Methods; the Epistemologies of Different Approaches to Lithic Analysis; 334-350. https://doi:10.4207/PA.2011.ART63
SRHOJ, J. 2019, *Putovanje dolinom sjenki [Dalmacija 1941. – 1944.]*, Zagreb: ITG.
ŠOŠIĆ KLINDŽIĆ, R., KARAVANIĆ, I., VUKOSAVLJEVIĆ, N., AHERN, J. C. M. 2015, Smještaj, stratigrafija, kronologija i tijek iskopavanja špilje Zale, u/in: *Arheologija špilje Zale, od paleolitičkih lovaca skupljača do rimskih osvajača,* Vukosavljević, N., Karavanić, I. (ur./eds.), Modruš: Katedra Čakavskog sabora Modruše, 15–48.
TIXIER, J. 1963, *Typologie de l'Epipaléolithique du Maghreb, Mémoires du Centre derecherches anthropologiques préhistoriques et ethnographiques*, Vol. 2, Paris: Arts et métiers graphiques.
VUJEVIĆ, D., PARICA M. 2011, Nakit i umjetnost pećine Vlakno, *Archaeologia Adriatica*, 3(2009), 23–34.
VUJEVIĆ, D., BODRUŽIĆ, M. 2014, Mezolitičke zajednice špilje Vlakno, *Diadora*, 26–27 (2012/13), 9–30.
VUJEVIĆ, D., BODRUŽIĆ, M. 2021, Transition and tradition: Lithic variability in the cave of Vlakno, Croatia. u/in: *Foraging Assemblages: Papers Presented at the Ninth International Conference on the Mesolithic in Europe, Volume 1,* Borić, D., Antonović, D., Mihailović, B. (ur./eds.), Beograd/New York: Srpsko arheološko društvo/The Italian Academy for Advanced Studies in America, Columbia University, 5–11.
VUJEVIĆ, D., PARICA, M. 2021, Paleolitičko nalazište Pećina na Zmorašnjem grebenu kod Silbe, u/in: *Arheologija pećina na zadarskom području – recentna istraživanja, povodom 120 godina speleoloških istraživanja na zadarskom području*, Dubolnić Glavan, M. (ur./ed.), sažetak predavanja sa znanstvenog skupa, Zadar: Zavod za povijesne znanosti HAZU u Zadru.
VUJEVIĆ D., MALNAR N., CVITKUŠIĆ B., PARICA M. (u tisku), Pećina Vlakno – epigravetijenski nalazi iz Stratuma 8-10, u/in: *Arheologija pećina na zadarskom području – recentna istraživanja, povodom 120 godina speleoloških istraživanja na zadarskom području*, Vujević, D., Dubolnić Glavan, M. (ur./eds.), Zadar: Sveučilište u Zadru.
VUKOSAVLJEVIĆ, N. 2012, *Organizacija litičke proizvodnje lovačko – sakupljačkih zajednica na prijelazu iz pleistocena u holocen u Dalmaciji*, neobjavljena disertacija /unpublished PhD thesis, Zagreb: Filozofski fakultet, Sveučilište u Zagrebu.
VUKOSAVLJEVIĆ, N. PERHOČ, Z., ALTHERR, R. 2014, Prijelaz iz pleistocena u holocen u pećini Vlakno na Dugom otoku (Dalmacija, Hrvatska) – litička perspektiva, *Prilozi Instituta za arheologiju u Zagrebu*, 31, 5–72.
VUKOSAVLJEVIĆ, N., PERHOČ, Z., KARAVANIĆ, I. 2015, Litički skup nalaza od lomljenog kamena iz špilje Zale: kasni gornji paleolitik i mezolitik, u/in: *Arheologija špilje Zale, od paleolitičkih lovaca skupljača do rimskih osvajača,* Vukosavljević, N., Karavanić, I. (ur./eds.), Modruš: Katedra Čakavskog sabora Modruše, 73–118.
VUKOSAVLJEVIĆ, N., KARAVANIĆ, I. 2017, Epigravettian shouldered points in the eastern Adriatic and its hinterland: reconsidering their chronological position, *Acta Archaeologica Carpathica*, 52, 5–21.
VUKOSAVLJEVIĆ N., PERHOČ Z., RADIĆ D. 2022, *Vela spila na Korčuli. Litička tehnologija i strategije nabave kamene sirovine epigravetijenskih i mezolitičkih zajednica*, Vela Luka:

Centar za kulturu Vela Luka.
WHITTAKER, J.C. 1995, *Flintknapping. Making and understanding stone tools*. Austin: University of Texas Press.
ZILHÃO, J. 1997, The Paleolithic settlement of the Portugese Estremadura after the last glacial maximum, u/in: *El món mediterrani després del Pleniglacial (18.000–12.000 BP),* Fullola J. M., Soler M. (ur./eds.), Sèrie Monogràfica 17, Girona: Museu d'Arqueologia de Catalunya, 233–242.

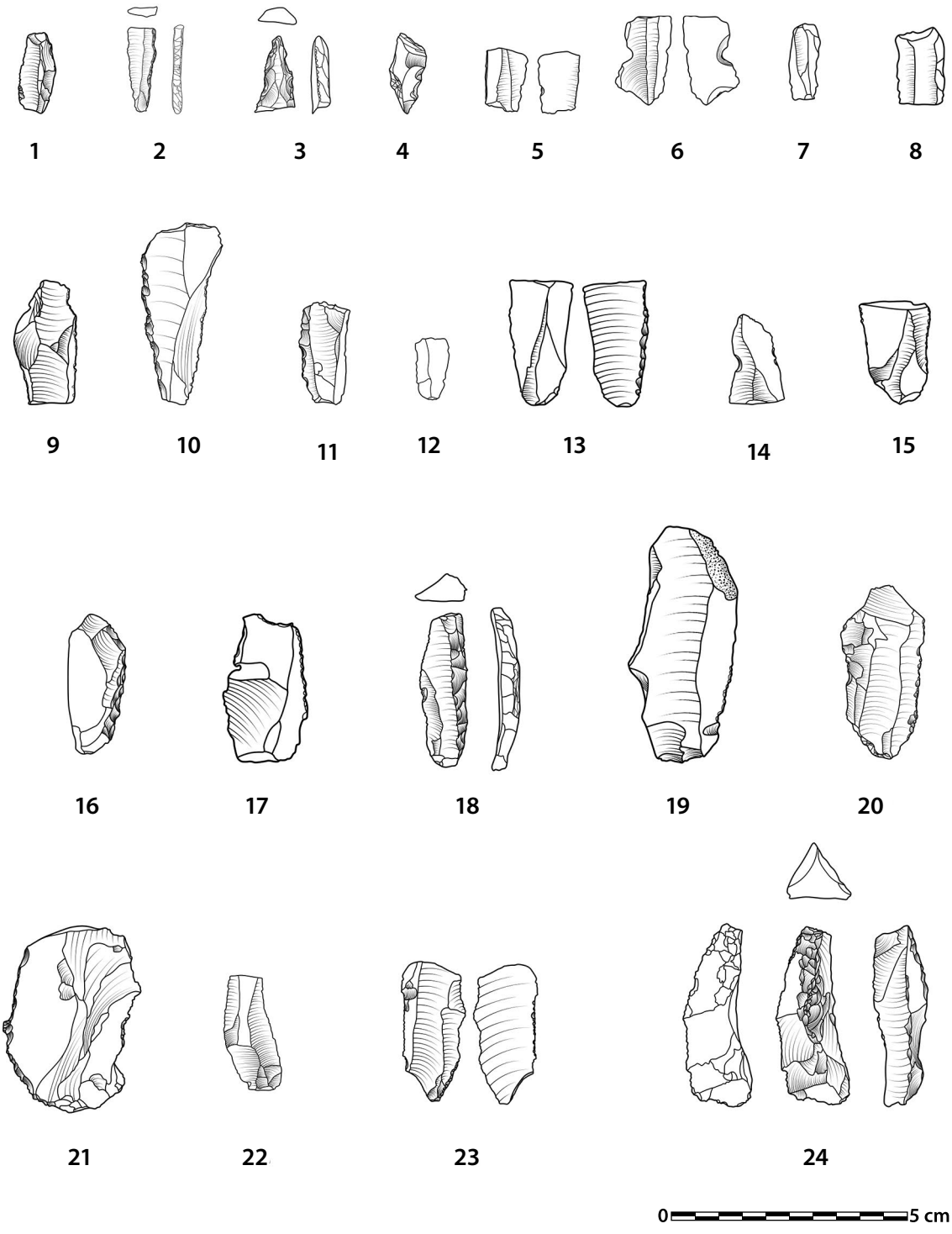
T. 1



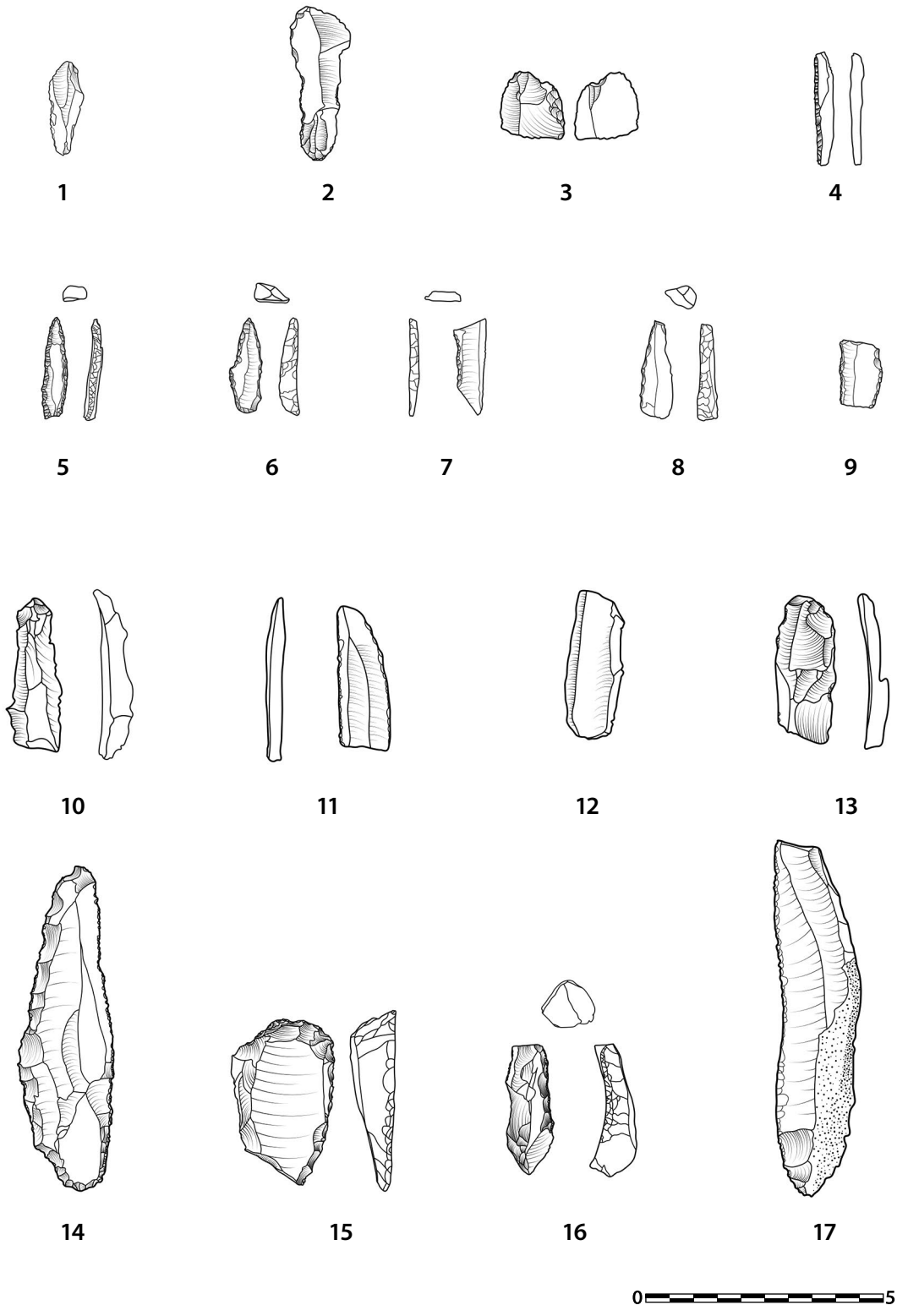
T. 2



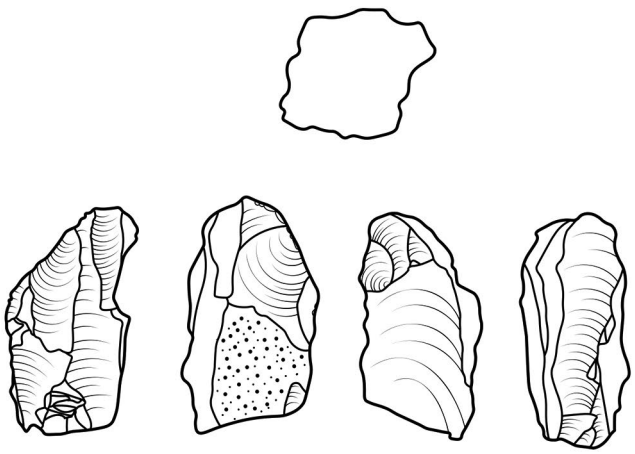
T. 3



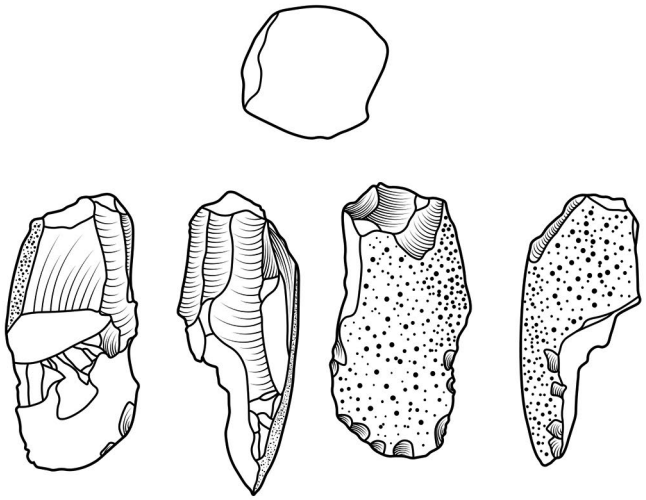
T. 4



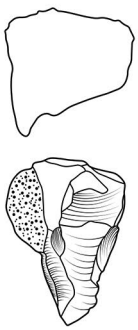
T. 5



1



2



3

0 5 cm

REZULTATI PROBNOGA ARHEOLOŠKOG ISTRAŽIVANJA NEOLITIČKOG NALAZIŠTA POD JARUGOM

RESULTS OF ARCHAEOLOGICAL TRIAL EXCAVATIONS OF THE NEOLITHIC SITE POD JARUGOM

KRISTINA HORVAT OŠTRIĆ

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of Archaeology
Obala kralja Petra Krešimira IV., 2
HR-23000 Zadar
khorvat@unizd.hr

SARAH B. McCLURE

University of California
Department of Anthropology
USA-Santa Barbara
CA 93106-3210
mcclure@anth.ucsb.edu

DORIS VIDAS

University of Oxford
Oxford Martin School
34 Broad Street
UK-OX1 38D
doris.vidas@arch.ox.ac.uk

NICHOLAS TRIOZZI

University of California
Department of Anthropology
USA-Santa Barbara
CA 93106-3210
triozzi@umail.ucsb.edu

KELLY REED

Oxford Martin School
University of Oxford
34 Broad Street
UK-OX1 38D
kellyreed@hotmail.co.uk

UDK: 903(497.581.1) "634"
DOI: 10.15291/archeo.4688
Prethodno priopćenje / Preliminary report
Primljeno / Received: 2024-7-10
Prihvaćeno / Accepted: 2024-10-15

Ključne riječi:
Pod Jarugom, srednji neolitik, danilski ukrasni stil, probno arheološko istraživanje

Probno arheološko istraživanje neolitičkog nalazišta Pod Jarugom u Podgrađu provedeno je u ožujku 2022. godine. Istraživanje je provedeno s ciljem utvrđivanja stratigrafskih i kulturnih odnosa na nalazištu, kronometrijskog datiranja nalazišta, te utvrđivanja potencijala za buduća sustavna arheološka istraživanja. Istražena je jedna probna sonda površine 3 m^2. Nalazište je pripisano srednjem neolitiku, odnosno danilskomu ukrasnom stilu.

Key words:
Pod Jarugom, the Middle Neolithic, the Danilo decorative style, archaeological trial excavations

In March 2022, archaeological trial excavations of the Neolithic site Pod Jarugom in Podgrađe were conducted. The aim of the excavations was to determine the stratigraphic and cultural relations at the site, its dating, and its potential for future systematic archaeological excavations. One trial trench with a surface area of 3 m^2 was dug. The site was dated to the Middle Neolithic, that is to say the Danilo decorative style.

UVOD

Neolitičko nalazište Pod Jarugom ili Lisičić, kako ga je nazvao Š. Batović,[1] u arheološkoj se literaturi spominje već nekoliko desetljeća. Riječ je o nalazištu koje je do probnih arheoloških istraživanja provedenih u ožujku 2022. godine bilo poznato samo po površinski prikupljenim nalazima, na osnovi kojih je to nalazište pripisano srednjem i kasnom neolitiku.[2] Probno istraživanje provedeno je s ciljem utvrđivanja stratigrafskih i kulturnih odnosa na nalazištu, kronometrijskog datiranja nalazišta te utvrđivanja potencijala nalazišta za buduća sustavna arheološka istraživanja.[3]

SMJEŠTAJ NALAZIŠTA I POZNATI PODATCI O NALAZIŠTU

Neolitičko nalazište Pod Jarugom nalazi se oko 4 kilometra jugoistočno od grada Benkovca, odnosno oko 700 metara jugozapadno od kuća Čerina, smještenih uz cestu koja iz Benkovca vodi prema Šibeniku (sl. 1). Riječ je o položaju smještenom na jugozapadnom rubu velike udoline koja se pruža između Perušićke i Bukovićke kose.

1 Nalazište je Š. Batović nazvao Lisičić prema katastarskoj općini na čijem je rubnom dijelu nalazište pozicionirano. Kako je današnje naselje Lisičić prilično daleko od samog nalazišta, koje je i sam Š. Batović dodatno povezao s toponimom Pod Jarugom kao prostorno preciznijom odrednicom, naziv nalazišta primjerenije je povezati upravo s tim toponimom.

2 Valja napomenuti da u bilješkama iz muzejske dokumentacije, danas pohranjene u Zavičajnom muzeju Benkovac, stoji podatak Š. Batovića da nalazište Pod Jarugom pripada jednoj fazi neolitika – srednjem neolitiku. U svim kasnijim objavama (BATOVIĆ 1979: 484; 1990: 28), isti autor nalazište pripisuje srednjem i kasnom neolitiku. Pregledom keramičkih nalaza pohranjenih u Zavičajnom muzeju Benkovac, nalazište je moguće pripisati srednjem i kasnom neolitiku.

3 Iskopavanje je primarno financirala potpora za unaprjeđenje istraživanja doktorske disertacije National Science Foundation Doctoral Dissertation Research Improvement Grant, pod brojem dodjele 2131489. Sva mišljenja, nalazi i zaključci ili preporuke izraženi u ovom materijalu pripadaju autorima i ne odražavaju nužno stavove Nacionalne zaklade za znanost.

INTRODUCTION

The Neolithic site Pod Jarugom (or Lisičić, as it was named by Š. Batović),[1] has been mentioned in the archaeological literature for several decades. The site was known only for its surface finds until March 2022, when archaeological trial excavations were conducted and the site was attributed to the Middle and Late Neolithic.[2] The trial excavations were conducted with the aim of determining the stratigraphic and cultural relations at the site, its dating, and its potential for future systematic archaeological excavations.[3]

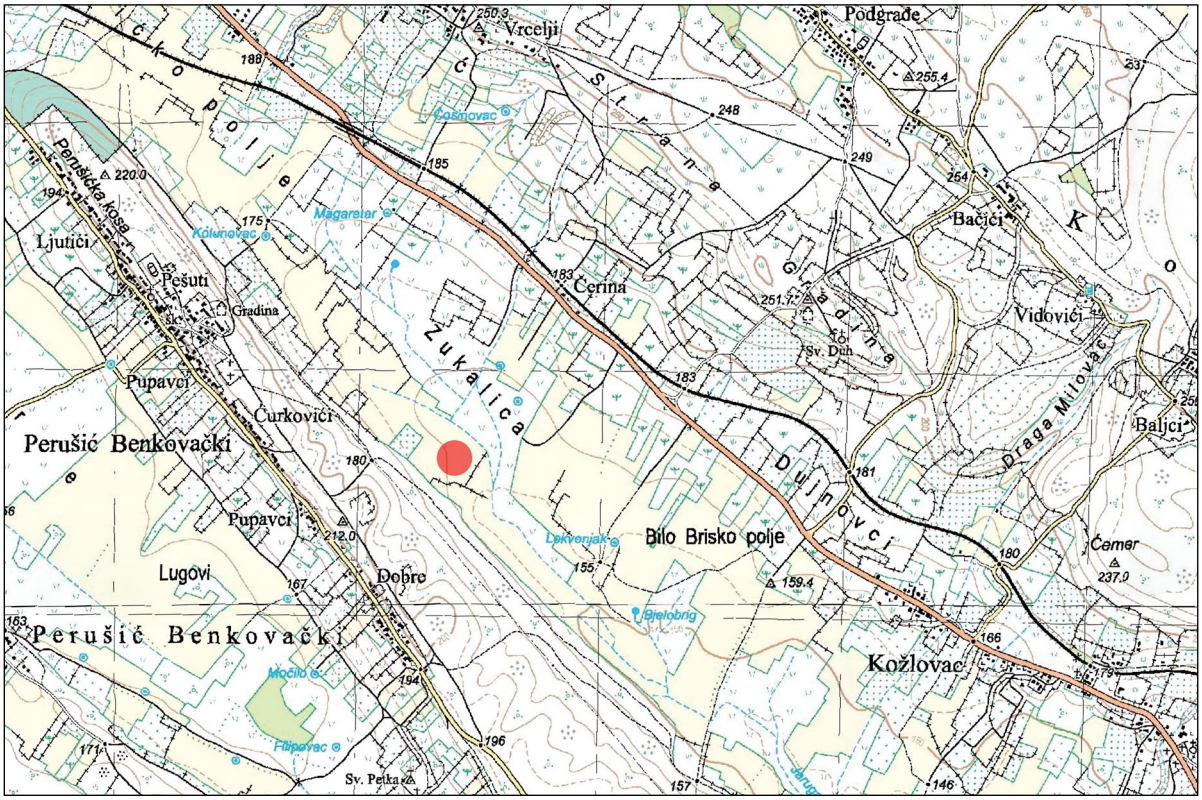
SITE LOCATION AND KNOWN INFORMATION ABOUT THE SITE

The Neolithic site Pod Jarugom is located about 4 kilometres southeast of the town of Benkovac, and about 700 metres southwest of the houses of Čerina, located along the road that leads from Benkovac to Šibenik (Fig. 1). It is positioned on the southwestern edge of a large valley stretching between Perušićka Kosa and Bukovička Kosa.

1 Š. Batović named the site after the cadastral municipality of Lisičić, on whose periphery the site is located. Given that the present-day settlement of Lisičić is rather distant from the site and that Š. Batović himself additionally referred to it as Pod Jarugom (a more precise spatial determinant), it is more appropriate to associate the site with this latter toponym.

2 It should be remarked that in the museum documentation notes, currently stored at the Benkovac Local History Museum, Š. Batović mentioned that the Pod Jarugom site was to be attributed to one Neolithic phase – the Middle Neolithic. Nevertheless, in all subsequent publications (BATOVIĆ 1979: 484; 1990: 28), he attributed the site to both the Middle and the Late Neolithic periods. A review of the ceramic finds stored in the Benkovac Local History Museum attributes the site to the Middle and the Late Neolithic.

3 The excavation was funded primarily from the National Science Foundation Doctoral Dissertation Research Improvement Grant (award number 2131489). All opinions, findings and conclusions, or recommendations expressed in this paper belong to the authors and do not necessarily reflect the views of the National Science Foundation.



Slika 1. *Topografska karta s naznačenim položajem nalazišta Pod Jarugom* (preuzeto s www.geoportal.hr)
Figure 1 *Topographic map with the location of the Pod Jarugom site* (downloaded from www.geoportal.hr)

Na tom području, koje upravno pripada selu Podgrađu, a katastarski Općini Lisičić, otkriveno je nekoliko vrlo važnih arheoloških nalazišta. Neolitičkom nalazištu s južne strane najbliži su prapovijesni tumuli pozicionirani na južnim obroncima Perušićke kose i srednjovjekovna utvrda Perušić, a sa sjeverne strane arheološka nalazišta Asseria i Polje niže Vrcelja. Broj i značenje nalazišta otkrivenih u krugu od samo dva kilometra od nalazišta Pod Jarugom, te dug vremenski period koji ona pokrivaju, neupitan su dokaz dugotrajnog i intenzivnog života na ovom području, ali i velikog arheološkog potencijala koji taj kraj skriva.

Odgovor na pitanje zašto su neolitičke, a poslije i druge prapovijesne i povijesne zajednice odabrale ovaj prostor za život, svakako mora biti povezan s lokalnim prirodno-geografskim uvjetima. Prema osnovnoj geološkoj karti,[4] eocenske i holocenske naslage predstavljaju glavne geološke naslage udoline u kojoj je

In this area, which belongs administratively to the village of Podgrađe (and cadastral municipality of Lisičić) several very important archaeological sites have been discovered. To the south, the closest to the Neolithic site are prehistoric tumuli (located on the southern slopes of Perušićka Kosa) and the Perušić medieval fortress, and to the north, the archaeological sites of Asseria and Polje niže Vrcelja. The number and significance of sites discovered within just two kilometres of the Pod Jarugom site and the long duration of the period they represent are undeniable proof of the long and intensive habitation of the area, but also of its great archaeological potential.

The answer to the question of why the Neolithic (and later also other prehistoric and historical) communities chose to live in this area is certainly related to the local natural and geographical conditions. According to the basic geological map,[4] the main geological de-

[4] IVANOVIĆ et al. 1973.

[4] IVANOVIĆ et al. 1973.

smješteno neolitičko nalazište. Zahvaljujući navedenim naslagama, udolina obiluje vrijednim agrarnim zonama, presudnim pri odabiru smještaja za osnivanje i razvoj neolitičkih naselja. Osim toga, fliš i aluvij zbog mogućnosti zadržavanja vode obiluju hidrološkim pojavama, koje su se po historijsko-geografskom razvoju i vrednovanju iskazale kao glavni oslonac za razvoj stalnih naselja od prapovijesnih do suvremenih vremena.[5]

Neolitičko nalazište Pod Jarugom otkrio je 1976. godine Š. Batović[6] pri obilasku izoranih parcela podno Perušićke kose, u polju Zukalica. Ime nalazišta povezano je s toponimom Ispod Jaruge, koji se odnosi na parcele smještene na zapadnom dijelu polja Zukalice. Riječ je o pojasu 200 – 250 metara širine smještenom između toka Jaruge i Perušićke kose, od koje teren blago pada prema sredini polja, odnosno toku Jaruge. Glavni izvor vode spomenutog polja, kao i većeg dijela udoline predstavlja nekoliko kilometara duga rječica Jaruga (sl. 2). Ona izvire u blizini nalazišta, a protječe najnižom nadmorskom visinom udoline u smjeru jugoistoka. Njezino je korito na sjeverozapadnom dijelu veći dio godine suho, dok se na prostoru Vukšića pretvara u stalni tok. Jarugu po čitavoj dužini prati nekoliko izvora i manjih lokva. Neolitičkom nalazištu danas je najbliža lokva pozicionirana oko 70 metara jugoistočno, te izvor Polača koji se nalazi oko 100 metara istočno od nalazišta.

Aktivnost Jaruge, ali i ulogu u organizaciji neolitičkog života na ovoj mikrolokaciji, sugeriraju površinski nalazi. Naime, Š. Batović navodi da je najviše nalaza prikupljeno 10-ak metara južno od Jaruge, te na pozicijama gdje je Jaruga presjekla kulturni sloj. Udaljavanjem prema jugu, odnosno Perušićkoj kosi, broj se nalaza smanjuje, a na oko 70 metara udaljeno-

posits of the valley in which the Neolithic site originate are from the Eocene and Holocene. Thanks to these deposits, the valley abounds in valuable agricultural zones, crucial for the selection of locations for the establishment and development of Neolithic settlements. In addition, due to their water retention ability, the flysch and alluvium are abundant in hydrological features that from prehistoric to modern times have proved to be the best basis for the development of permanent settlements in terms of historical and geographical development and evaluation.[5]

The Neolithic site Pod Jarugom was discovered in 1976 by Š. Batović[6] when he was surveying the ploughed plots at the foot of Perušićka Kosa, in Zukalica field. The name of the site is associated with the toponym Ispod Jaruge ('under the ravine'), which refers to plots located in the western part of the Zukalica field. It is a 200–250-metre-wide belt located between the Jaruga rivulet and Perušićka Kosa, from which the terrain gently descends towards the Jaruga, which runs through the centre of the field. The most important source of water, supplying not only the field, but also most of the valley, is the Jaruga, which is several kilometres long. (Fig. 2). It rises near the site, its flow running along the valley (at sea-level at the lowest point) in the direction of the southeast. Its northwestern section is dry for most of the year, while around Vukšić it turns into a permanent waterflow. Along its entire flow, the Jaruga features several springs and smaller pools. Today, the pool nearest to the Neolithic site is located approximately 70 metres southeast, and the spring Polača is approximately 100 metres east of the site.

Surface finds suggest the activity of the Jaruga, but also its role in the organisation of Neolithic life at this microlocation. Name-

[5] BLAĆE 2014: 137–139.

[6] Tekst je preuzet iz muzejske dokumentacije. Na mogućnostima uvida arheološke građe i muzejske dokumentacije zahvaljujemo Marinu Ćurkoviću, kustosu i ravnatelju Zavičajnog muzeja u Benkovcu.

[5] BLAĆE 2014: 137-139.

[6] The text has been taken from the museum documentation. I would like to thank Marin Ćurković, curator and director of the Benkovac Local History Museum, for giving us access to the archaeological material and museum documentation.



Slika 2. *Pogled na Jarugu 80-ih godina 20. stoljeća* (izvor: fotodokumentacija Zavičajnog muzeja Benkovac)
Figure 2 *View of the Jaruga in the 1980s* (source: Benkovac Local History Museum, photo-documentation)

sti od Jaruge nalazi nestaju.

Zanimljiv je i podatak o neravnomjernoj pojavi površinskih nalaza, odnosno njihovoj grupaciji u zonama tamne i masne zemlje, u kojima je zamijećen veći stupanj fragmentiranosti nalaza u odnosu na okolne pozicije.[7] Slični obrisi i/ili grupacije nalaza nisu evidentirani tijekom prvog posjeta nalazištu 2017. godine, niti uoči probnih istraživanja 2022. godine. Također, nisu uočeni ni na zračnim ni na satelitskim snimkama. Sjeverno od Jaruge nalazi nisu prikupljeni, što je Š. Batovića navelo na zaključak da Jaruga predstavlja sjevernu granicu nalazišta. Do istog se zaključka došlo i 2022. godine. I tada su površinski nalazi prikupljeni isključivo na parcelama južno od Jaruge, u dužini od oko 50 metara, dok u tada suhom koritu Jaruge nalaza nije bilo, kao ni naznaka kulturnog sloja, odnosno jamskih objekata. Gledano u širinu, Š. Batović navodi podatak o prikupljanju površinskih arheološ-

[7] Usporediti bilješku 6.

ly, Š. Batović states that the most finds were collected about 10 metres south of the Jaruga and at spots where the Jaruga cut the cultural layer. Further south, closer to Perušićka Kosa, the number of finds decreases, and at about 70 metres from the Jaruga, no more findspots have been detected.

Another interesting fact is that surface finds appear unevenly, being grouped in zones of dark and sticky soil, in which a higher degree of fragmentation of the finds was observed in comparison with the surrounding positions.[7] No similar contours and/or groups of finds were recorded in the course of the first site surveying in 2017, nor prior to trial excavations in 2022. Neither were they identified in aerial or satellite images. North of the Jaruga, no finds were collected, which led Š. Batović to the conclusion that the Jaruga represented the site's northern border. The same conclusion was reached also in 2022, as the surface

[7] Cf. note 6.

kih nalaza na oko 40 metara, dok je tijekom 2022. godine vrlo skroman broj nalaza evidentiran na oko 80 metara širokoj površini.[8] Imajući u vidu formacijske procese, koji su posljedica dugotrajnog djelovanja prirodnih procesa, u ovom slučaju erozije i akumulacije s Perušićke kose, te dugotrajnog iskorištavanja zemljišta u poljoprivredne svrhe, distribucija površinskih nalaza ne mora biti odraz njihova primarnog taloženja. Stoga je bez konkretnijih istraživanja moguće jedino pretpostaviti kako je riječ o manjem neolitičkom nalazištu, kojem sjevernu granicu predstavlja Jaruga.

Zahvaljujući (ne)sretnoj činjenici da je Jaruga 70-ih godina 20. stoljeća presjekla kulturni sloj, Š. Batović bio je u mogućnosti dobiti uvid u dio stratigrafske slike nalazišta. Tako je u zonama presjeka kulturnog sloja utvrdio dva sloja, od kojih je gornji sloj do relativne dubine od 50 centimetara djelomično oštećen ratarskom aktivnošću, dok je donji sloj intaktan do 70 centimetara duboke zdravice (ilovače). Jedino mjesto na kojem je relativna dubina kulturnog sloja prelazila 70 centimetara jest mjesto na kojem je evidentirana jedna jama ukopana u zdravicu. Početna relativna dubina ukapanja jame utvrđena je na 40 centimetara, dok je ukupna dubina jame širine 2,7 metara iznosila oko 1 metar. Depozit jame osim po boji, od ostatka kulturnog sloja izdvajao se po konzistenciji, te kvantiteti prikupljenih nalaza (ulomci keramičkih posuda, alatke od rožnjaka, životinjske kosti, dagnje i manje amorfno kamenje),

finds were collected solely on the plots south of the Jaruga, over a distance of approximately 50 metres. The bed of the Jaruga was dry and yielded no finds or indications of cultural layers or pit structures. When it comes to the width of the surface area that yielded archaeological surface finds, Š. Batović reported that finds were collected over approximately 40 metres, while in 2022 a very modest number of finds were recorded over a width of approximately 80 metres.[8] Bearing in mind the formations resulting from long-term natural processes (firstly, erosion as well as accumulation from Perušićka Kosa and, secondly, long-term exploitation of land for agricultural purposes), the distribution of surface finds does not necessarily reflect their primary deposition. Without further excavations it is therefore possible only to assume a smaller Neolithic site, its northern border being the Jaruga.

(Un)fortunately, the Jaruga cut the cultural layer in the 1970s, which allowed Batovic to gain a partial insight into the site's stratigraphy. Thus, in the zones where the cultural layers intersected, he identified two layers. The upper layer, with a relative depth of 50 centimetres, had been partially damaged by agricultural activities, while the lower layer was intact up to 70 centimetres of deep sterile soil (clay). The only place where the relative depth of the cultural layer exceeded 70 centimetres was the point at which one pit was buried in sterile soil. The initial relative depth of the pit was 40 centimetres, while the total depth of the 2.7-metre-wide pit was approximately 1 me-

[8] Treba napomenuti da je na fotografijama snimljenima dronom 2022. godine, kao i na satelitskim snimkama (www.geoportal.dgu.hr), jugozapadno od nalazišta vidljiv taman, izduženi obris 15-ak metara širine. Na tom mjestu, pozicioniranom neposredno uz Perušićku kosu, odnosno oko 180 metara južno od Jaruge, površinski nalazi nisu evidentirani. Obris nalikuje na one s neolitičkih nalazišta u Smilčiću (MARIJANOVIĆ 2022: 102) i Islamu Grčkom (HORVAT OŠTRIĆ, TRIOZZI 2022b), gdje su iskopavanjima evidentirani rovovi iz vremena neolitika. Bez iskopavanja, u slučaju nalazišta Pod Jarugom nije moguće utvrditi je li riječ o rovu, nekome drugom ukopanom objektu ili prirodnoj formaciji.

[8] It should be noted that drone footage from 2022, as well as satellite images (www.geoportal.dgu.hr) indicate a dark, elongated, 15-metre-wide shape southwest of the site. At that point, positioned directly next to Perušićka Kosa, or about 180 metres south of the Jaruga, no surface finds have been recorded. The outline resembles those from the Neolithic sites in Smilčić (MARIJANOVIĆ 2022: 102) and Islam Grčki (HORVAT OŠTRIĆ, TRIOZZI 2022b), where excavations yielded trenches from the Neolithic period. In the case of the Pod Jarugom site, without excavations it is not possible to determine whether it was once a trench, another buried structure, or a natural formation.

uz koje su zabilježeni i ostatci pepela. Drugi objekti nisu utvrđeni.

Od površinskog materijala koji je prikupio Š. Batović, a poslije i M. Savić, nekadašnji kustos Zavičajnog muzeja Benkovac, valja izdvojiti kamene žrvnjeve, bruseve, sjekire (kalupaste i trapezaste) i kugle, strelice i sječiva od rožnjaka, životinjske kosti i ulomke keramičkih posuda.[9] Riječ je o nalazima od kojih su dosad objavljeni ulomak jedne keramičke posude i jedna kamena strelica u radu Š. Batovića,[10] te nekoliko keramičkih i kamenih nalaza u sklopu doktorske disertacije voditeljice probnih iskopavanja.[11] Valja napomenuti da je za potrebe iste disertacije makroskopski pregledan manji dio litičkih artefakata radi utvrđivanja podrijetla kamene sirovine,[12] te je provedena analiza životinjskih kostiju u svrhu utvrđivanja zastupljenih vrsta.[13] Analizama je utvrđeno da su litički artefakti izrađeni od zamjenskoga (metasomatskog) nodularnog rožnjaka podrijetlom s Gargana, a da životinjske kosti pripadaju svinji, ovikapridima i govedu.[14]

Prije probnog istraživanja 2022. godine po površini nalazišta prikupljeno je 20-ak ulomaka keramičkih posuda, među kojima je od dijagnostičkih nalaza moguće izdvojiti jednu visoku prstenastu nogu i ulomak oboda posude ukrašene urezivanjem (T. II/1). Osim toga, prikupljeni su i malobrojni nalazi od rožnjaka, među kojima se posebno izdvaja u cijelosti sačuvana listolika strelica.[15]

tre. The pit's deposit stood out from the rest of the cultural layer by its colour and texture, as well as the quantity of the collected finds (ceramic vessel fragments, chert tools, animal bones, mussels and small amorphous stones), alongside which remains of ash were also recorded. No other structures have been identified.

Among the surface finds collected by Š. Batović and later also M. Savić, former curator of the Benkovac Local History Museum, worth mentioning are: grindstones; whetstones; shoe-last and trapezoidal axes; chert nodules, arrows and blades; animal bones; and ceramic vessel fragments.[9] Of these finds, a ceramic vessel fragment and a stone arrow have been published in papers by Š. Batović,[10] and several ceramic and stone finds in the dissertation written by the Head of the Trial Excavations.[11] For the purposes of this dissertation, an examination of a minority of the lithic artefacts was made, to determine the origin of the stone raw material,[12] and an analysis of the animal bones was conducted to identify the represented species.[13] The analyses showed that the lithic artefacts were made from a nodular chert originating from Gargan that was formed by metasomatic replacement, and that the animal bones were of pigs, ovicaprids and cattle.[14]

Before the trial excavations of 2022, approximately 20 surface finds of ceramic vessel fragments were collected at the site, among which a high ring-shaped foot and a rim fragment of a vessel decorated with incising stand out as diagnostic finds (Pl. II/1). In addition, a small number of chert finds were collected, among which a completely preserved leaf-shaped arrow is particularly worthy of mention.[15]

9 Nalazi su pohranjeni u Zavičajnom muzeju Benkovac.
10 BATOVIĆ 1990: sl. 12; 4, 5.
11 HORVAT 2017: 70, T. XII.
12 Ekspertizu benkovačke litike obavio je dr. sc. Zlatko Perhoč, kojem zahvaljujemo na pomoći.
13 Analizu je provela Mija Košćak, kojoj zahvaljujemo na pomoći.
14 HORVAT 2017: 70.
15 HORVAT OŠTRIĆ, TRIOZZI 2022a: 75.

9 The finds are stored in the Benkovac Local History Museum.
10 BATOVIĆ 1990: Fig. 12; 4, 5.
11 HORVAT 2017: 70, Pl. XII.
12 We would like to thank to Zlatko Perhoč, PhD for providing expertise on the Benkovac lithics.
13 We express gratitude to Mija Košćak for conducting the analysis.
14 HORVAT 2017: 70.
15 HORVAT OŠTRIĆ, TRIOZZI 2022a: 75.

ISTRAŽENA POVRŠINA I STRATIGRAFSKA SLIKA

Probno arheološko iskopavanje provedeno je u razdoblju od 21. do 29. ožujka 2022. godine.[16] Otvorena je jedna sonda (sonda A) dimenzija 1 x 3 metra.[17] Sonda je bila orijentirana u smjeru sjeveroistok-jugozapad. Primijenjena je metoda stratigrafskog iskopavanja, uz prikupljanje sedimenta za flotaciju (ukupno oko 120 litra). Iskopani sediment suho je prosijavan uz uporabu sita s mrežom otvora 1 cm na samom nalazištu, s iznimkom površinskog sloja (SJ 1) koji nije prosijavan.

Stratigrafska slika istraženog dijela nalazišta prilično je jednostavna. Depozit je koherentan i bez stratigrafskih cezura. Ispod poljoprivrednim radovima poremećenog površinskog (SJ 1) i potpovršinskog sloja (SJ 2), u kojima je pronađen manji broj keramičkih nalaza danilskih karakteristika (T. II/2–7), otkriven je prvi intaktni kulturni sloj (SJ 3). Taj sloj ima lagani nagib od juga prema sjeveru, u skladu s prirodnim padom terena od Perušićke kose prema toku Jaruge. Na jugozapadnom dijelu sonde otkriven je na relativnoj dubini od 25 centimetara, dok je na sjeveroistočnom dijelu otkriven na relativnoj dubini od 40 centimetara. U tom sloju svjetlosmeđe boje, s dosta gareži i povećanom gustoćom nalaza, evidentirana je jedna jama (SJ 4), i to u sjeveroistočnom dijelu sonde (sl. 3), na relativnoj dubini od 57 centimetara. Ona je ulazila u profil sonde, zbog čega je istražen tek dio njezina volumena. Zapuna jame duboke 10 centimetara

[16] Voditeljica istraživanja bila je doc. dr. sc. Kristina Horvat Oštrić, a zamjenica voditeljice dipl. arh. Marina Šimičić. U stručnom timu bili su Nicholas Triozzi, tada doktorand s Department od Antropology, University of California Santa Barbara i studenti studija arheologije sa Sveučilišta u Zadru: Martin Keretić, Marijan Aničić, Enzo Gabrijelić. Suradnicima i studentima zahvaljujem na njihovu doprinosu uspješnoj provedbi istraživanja.

[17] Sonda je bila smještena na zemljišnoj čestici 1195/2, k. o. 300560 Lisičić.

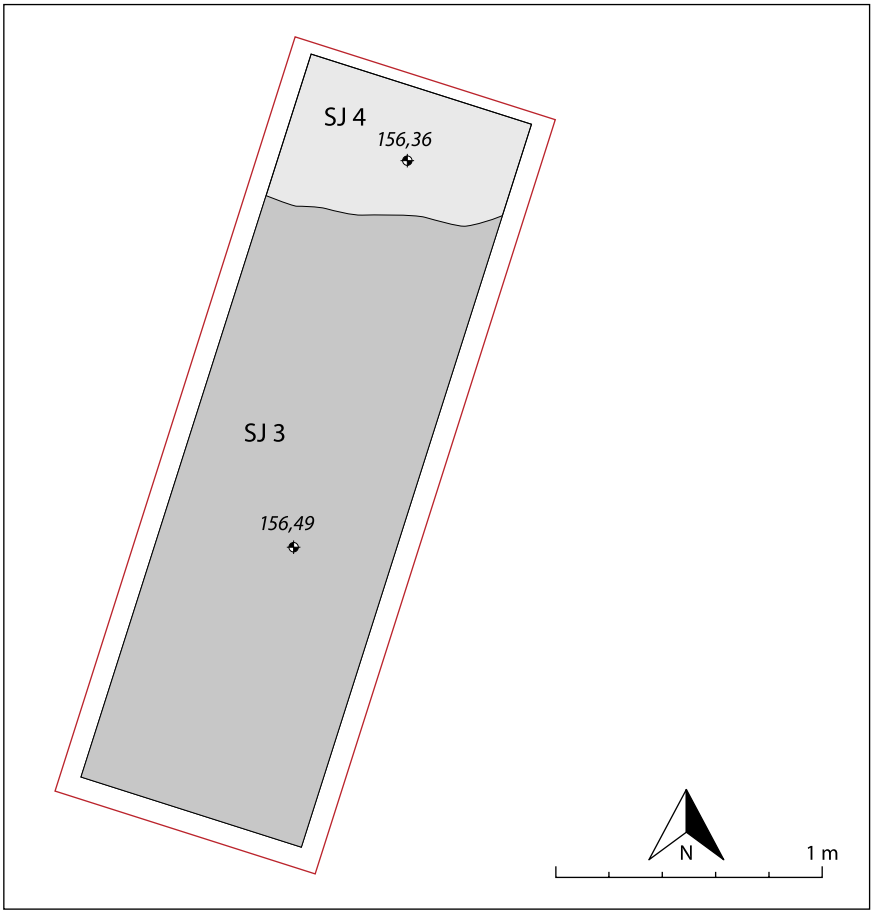
EXCAVATED SURFACE AREA AND STRATIGRAPHIC PICTURE

From 21 to 29 March 2022, archaeological trial excavations were conducted.[16] Trial trench A, measuring 1 x 3 metres, was dug,[17] oriented northeast–southwest. Applying the stratigraphic excavation method, sediment samples for flotation (in total about 120 litres) were taken. The excavated sediment was dry-sieved at the site using a wire mesh with 1-centimetre-wide openings; the surface layer (SU 1) was exempted from the sieving.

The stratigraphic picture of the investigated part of the site is rather simple. The deposit is coherent and without stratigraphic gaps. The surface (SU 1) and subsurface (SU 2) layers, yielding a small number of ceramic finds with features of the Danilo culture (Pl. II/2-7), had been disturbed by agricultural works. Uncovered beneath them was the first intact cultural layer (SU 3). This layer has a mild slope from south to north, in accordance with the natural slope of the terrain from Perušićka Kosa to the course of the Jaruga. On the southwestern side of the trial trench, SU 3 was reached at a relative depth of 25 centimetres, and on the northeastern side at a relative depth of 40 centimetres. In this layer – of light brown colour with quite a lot of soot and an increased density of finds – a pit (SU 4) was recorded in the northeastern part of the trial trench (Fig. 3), at a relative depth of 57 centimetres. It entered the trial-trench profile, which is why only part of its volume has been investigated. The 10-centimetre-deep pit was filled with a dark brown sediment, in which, apart from several sporadic finds, an intercala-

[16] The excavations were led by Kristina Horvat Oštrić, PhD, and her deputy was Marina Šimičić, mag. archaeol. The expert team included Nicholas Triozzi, at that time a PhD student at the Department of Anthropology of the University of California in Santa Barbara (UCSB) and three archaeology students at the University of Zadar: Martin Keretić, Marijan Aničić and Enzo Gabrijelić. We would like to thank my colleagues and students for their contribution to the successful execution of the excavations.

[17] The trial trench was dug at cadastral plot 1195/2, cadastral municipality 300560 Lisičić.



Slika 3. *Tlocrt razine SJ 3 s ukopanom jamom SJ 4* (crtež: M. Šimičić)
Figure 3 *Ground-plan of the level of SU 3 with the buried pit SU 4* (illustration by M. Šimičić)

sastojala se od tamnosmeđeg sedimenta, u kojem je osim nekoliko sporadičnih nalaza utvrđen i proslojak pepela uz sjeveroistočni kut sonde.

Ispod opisanoga kulturnog sloja, čije je iskopavanje provedeno prema standardima arbitrarnog pristupa s otkopnim slojevima debljine 20 cm, na relativnoj dubini od 85 centimetara na jugozapadnoj, odnosno oko 100 centimetara na sjeveroistočnoj strani sonde, otkriven je novi rahli sloj sive boje (SJ 5) s primjetno većom količinom gara, osobito na sjeveroistočnom dijelu sonde. U tom sloju otkrivena je i veća količina amorfnog kamenja (SJ 3/5), koje je zapunilo 10-ak centimetara dubok usjek smjera pružanja sjever-jug (sl. 4). Je li riječ o dijelu neke konstrukcije, odnosno substrukciji koja predstavlja zapunu kanala, nije moguće utvrditi zbog male površine istraživanja. Također, ostaje upitno i je li riječ o kanalu nastalom prirodnim ili antropogenim putem.

tion of ash was found along the northeastern corner of the trial trench.

The described cultural layer was excavated using the arbitrary level method, with 20-centimetre-thick spits. Below it, at a relative depth of 85 centimetres on the southwestern and about 100 centimetres on the northeastern side of the trial trench, a new, loose layer of a grey colour (SU 5) with a noticeably larger amount of soot, especially on the northeastern side of the trial trench. Also uncovered in this layer were a large amount of amorphous stones (SU 3/5), which filled the approximately 10-centimetre-deep cutting oriented north-south (Fig. 4). Due to the small surface area covered by the excavations, it is not possible to determine whether it is a part of a construction, or a substructure filling the channel. It also remains in question whether it is a natural or an anthropogenic channel.

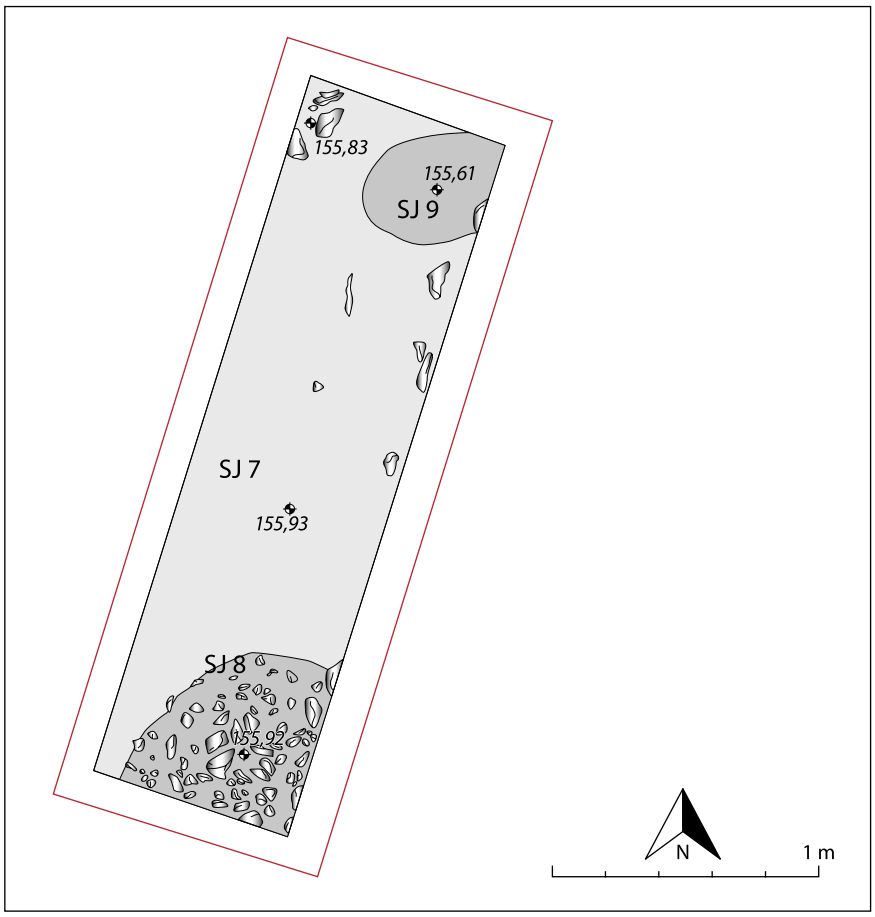
At a relative depth of approximately 90 centimetres on the southwest, or approximately



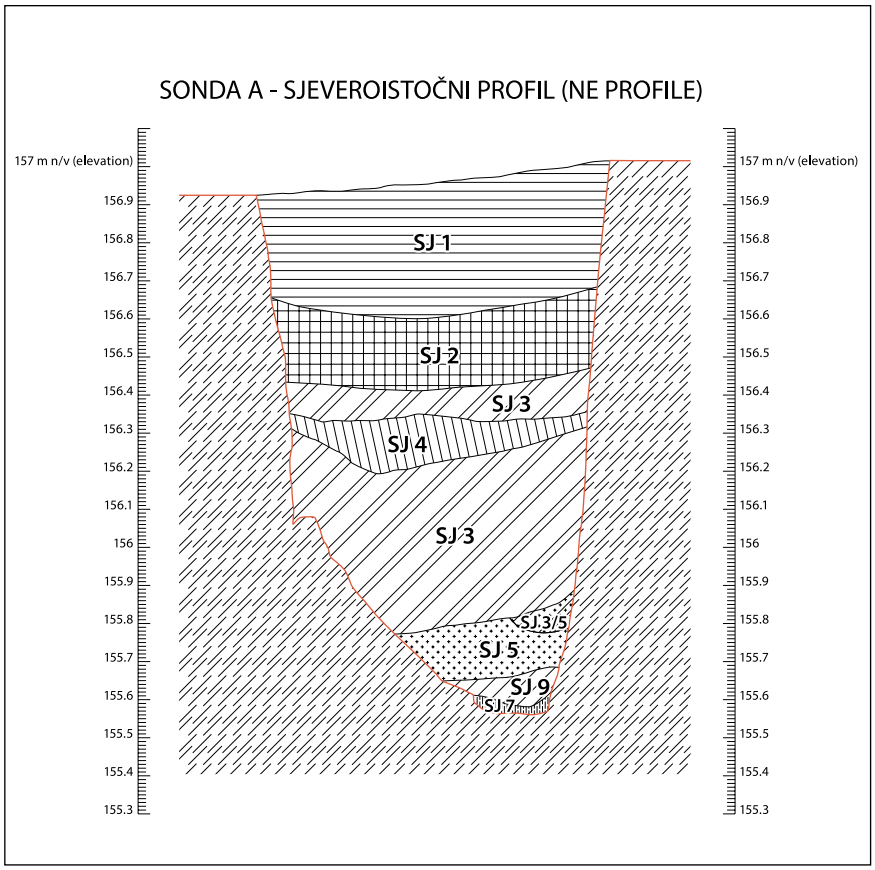
Slika 4. *Tlocrt usjeka (SJ 3/5) i amorfnog kamenja* (crtež: M. Šimičić)
Figure 4 *Ground-plan of the cutting (SU 3/5) and the amorphous stones* (illustration by M. Šimičić)

Na relativnoj dubini od oko 90 centimetra na jugozapadnoj, odnosno oko 110 centimetara na sjeveroistočnoj strani sonde, otkrivena je zdravica (SJ 7). Riječ je o ilovastoj, kompaktnoj i vodonepropusnoj podlozi oker boje. U njoj su evidentirane nakupine vrlo sitnih kamenčića, vjerojatno povezane s djelovanjem potpovršinskih voda, koje su uz sjeveroistočni profil sonde izbijale od relativne dubine 140 centimetara. U zdravični sloj ukopane su dvije strukture (sl. 5). U sjeveroistočnom dijelu sonde riječ je o jami u kojoj je zabilježena veća količina gareži (SJ 9). Ona je definirana na relativnoj dubini od oko 140 centimetara te je ulazila u profile SI kuta sonde (sl. 6), u kojem je zbog prodiranja potpovršinskih voda bilo otežano iskopavanje. Dubina jame iznosila je 15-ak centimetara. Istražen je dio njezina volumena, do profila. U zapuni jame pronađeno je svega nekoliko nalaza bez ukrasa (T. VIII/2–3, 6). U jugozapadnom dijelu

110 centimetres on the northeastern side of the trial trench, sterile soil was uncovered (SU 7). It is a compact and impervious clay substratum of ochre colour. In it, clusters of very small stones were recorded, probably related to the activity of subsurface waters, which, along the northeastern profile of the trial trench, flowed from a relative depth of 140 centimetres. Two structures are buried in the sterile soil layer (Fig. 5). One of them was a pit on the northeastern side of the trial trench with a large amount of soot (SU 9). It was defined at a relative depth of about 140 centimetres and entered the profiles of the southeastern corner of the trial trench, in which excavations were made difficult due to the penetration of subsurface water. The depth of the pit was approximately 15 centimetres. A part of its volume up to its profile was excavated. In the pit fill, only a few finds (without any ornaments) were found (Pl. VIII/2-3, 6). In the southwestern part of the trial trench,



Slika 5. *Tlocrt vrha zdravice (SJ 7) s ukopanom jamom (SJ 9) i strukturom od amorfnog kamenja (SJ 8)* (crtež: M. Šimičić)
Figure 5 *Ground-plan of the top of the sterile soil (SU 7) with a buried pit (SU 9) and a structure of amorphous stones (SU 8)* (illustration by M. Šimičić)



Slika 6. *Sonda A – sjeveroistočni profil* (crtež: M. Šimičić)
Figure 6 *Trench A - northeastern cross-section* (illustration: M. Šimičić)

tablica 1. *Radiokarbonski datum s nalazišta Pod Jarugom* (izradila: K. Horvat Oštrić)
table 1 *Radiocarbon date from the Pod Jarugom site* (made by K. Horvat Oštrić)

Laboratorijski broj uzorka Lab. sample nr.	**Nalazište, broj uzorka (materijal), arheološki kontekst Site, sample nr. (material), archaeol. context**	**Starost prije sadašnjosti Date BP**	**Starost pr. Kr. (kalibrirani raspon 2σ) 2σ cal BC 95.4% confidence**
UCIAMS 271164	LS-A-3-A (charred wood), sonda A, sj 3	6185 ± 20	5214-5051 cal BC

sonde, u zdravici je otkrivena kružna struktura od složenoga amorfnog kamenja (SJ 8). Pri vrhu te strukture nalazilo se manje, a pri dnu strukture veliko amorfno kamenje. Između i unutar kamenja evidentirani su ulomci keramičkih posuda, životinjske kosti te manji komadi drva (sl. 5). Struktura je istražena do relativne dubine od 135 centimetara jer je kamenje ulazilo u jugozapadni i jugoistočni profil sonde koji bi daljnjim iskopavanjem bili urušeni. Riječ je o strukturi koja je nastala na samom početku korištenja ove lokacije. Promjer strukture kao i njezina funkcija ostaju nepoznati do opsežnijih iskopavanja.

Iz probne sonde A radiokarbonski je analiziran jedan uzorak iz prvoga intaktnog sloja (SJ 3) (tab. 1).[18] Dobiveni kalibrirani[19] vremenski raspon iznosi oko 5200 do 5050 BC.

a circular structure of arranged amorphous stones was discovered in sterile soil (SU 8). At the top of this structure were smaller, and at its bottom larger amorphous stones. Recorded between and among the stones were ceramic vessel fragments, animal bones and smaller pieces of wood (Fig. 5). The structure was excavated to a relative depth of 135 centimetres because the stones were entering the southwestern and southeastern profiles of the trial trench (Fig. 6), which would have collapsed if further dug. It is a structure that was created at the very beginning of the use of the site. The diameter of the structure as well as its function will remain unknown until more extensive excavations are carried out.

From trial trench A, one sample from the first intact layer (SU 3) was carbon dated (Tab. 1).[18] The calibrated[19] time range obtained was approximately 5200 to 5050 BC.

[18] Analiza je provedena na sljedećim institucijama; UCSB Paleoecology and AMS Radiocarbon Research Facility (pretreatments), Yale Analytical and Stable Isotope Center (analiza isotopa), UCI W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory (AMS radiocarbon date). Posebnu zahvalu dugujemo N. Triozziju i dr. Richardu Georgeu sa Sveučilišta UCSB.

[19] Jedan uzorak pougljenjenog drva (UCIAMS-271164) prethodno je tretiran kiselinsko-bazno-kiselinom procedurom za uklanjanje kontaminanata uz ponavaljnje dok kisela otopina nije postala bistra. Uzorak je sušen na termobloku preko noći na 100°C i spaljen s CuO i Ag žicom na 900°C u vakuumski zatvorenim kvarcnim cijevima, te poslan u KCCAMS na analizu. Datum je kalibriran u odnosu na kalibracijsku krivulju IntCal20 u OxCal 4.1 (BRONK RAMSEY et al. 2009; REIMER et al. 2020).

[18] The analysis was conducted by the following institutions: UCSB Paleoecology and AMS Radiocarbon Research Facility (pretreatments), Yale Analytical and Stable Isotope Center (isotope analysis), UCI W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory (AMS radiocarbon date). We owe special thanks to N. Triozzi and Richard George, PhD, of the UCSB.

[19] One charred wood sample (UCIAMS-271164) was pretreated using the acid-base-acid procedure to remove contaminants and repeated until the acid solution was clear. The sample was dried on a heat block overnight at 100° C and combusted with CuO and Ag wire at 900° C in vacuum-sealed quartz tubes, and sent to KCCAMS for analysis. The date was calibrated with reference to the IntCal20 calibration curve in OxCal 4.1 (BRONK RAMSEY et al. 2009; REIMER et al. 2020).

POKRETNI NALAZI

Prikupljena pokretna arheološka građa pripada uobičajenim kategorijama neolitičkih nalaza – ulomcima keramičkih posuda, izrađevinama od lomljenog kamena i životinjskih kostiju. Ostatak prikupljenih nalaza pripada skupini prehrambenih ostataka koju sačinjavaju životinjske kosti, biljne sjemenke i nekoliko ljuštura školjkaša.

Lončarija

Prikupljena su sveukupno 842 ulomka lončarije, od kojih najviše u SJ 3 (62 %). Iako je riječ o količinski gledano skromnom uzorku, što je svakako uvjetovano i malim dimenzijama probne sonde, statistička analiza prikupljenih nalaza pruža uvid u osnovne tehnološke, tipološke i ukrasne aspekte lončarske produkcije neolitičkih zajednica nalazišta Pod Jarugom.

Na osnovi tehnoloških karakteristika i obrade površine, keramičke nalaze moguće je podijeliti u četiri skupine: grubu, finu ili glačanu, metličastu i slikanu (tzv. *figulinu*) keramiku. Gruboj keramici pripada 6,5 %, finoj glačanoj 90 %, metličastoj 0,8 %, a slikanoj 2,7 % keramičkih nalaza. Gruba, fina i metličasta keramika izrađene su od pročišćene gline s primjesama zrnaca vapnenca i kalcita, jasno vidljivih u presjeku i na površini stijenke posude. Distinkcija između grube, fine i metličaste keramike napravljena je na temelju obrade stijenki posuda. Tako su u kategoriju grube keramike ubrojeni oni ulomci čija je površina samo poravnana, bez dodatne obrade stijenke. Kod ulomaka ubrojenih u ovu skupinu glina uglavnom sadrži nešto veću količinu utrusaka vapnenca koji su lako uočljivi i opipljivi na neravnim stijenkama posuda. U kategoriju fine keramike ubrojeni su ulomci posuda glačanih stijenki. U toj kategoriji moguće je izdvojiti primjerke s nemarno glačanim površinama (oko 30 %), primjerke s umjereno zaglačanom površinom

SMALL FINDS

The collected movable archaeological material has been attributed to the usual categories of Neolithic finds: ceramic vessel fragments, knapped stone and animal bone artefacts. The rest of the collected finds have been classified as belonging to the food residue group, consisting of animal bones, plant seeds and several shellfish shells.

Pottery

A total of 842 pottery fragments were collected, most of which (62%) were in SU 3. Although in terms of quantity the sample is rather modest (certainly also as a result of the small size of the trial trench), a statistical analysis of the collected finds provides insight into the basic technological, typological and decorative aspects of the pottery production of Neolithic communities at the Pod Jarugom site.

Based on technological characteristics and surface workmanship, the ceramic finds can be divided into four groups: coarse ware, fine or smoothed ware, brushed ware, and painted (*figulina*) ware. Coarse ware makes up 6.5%, fine smoothed ware 90%, brushed ware 0.8%, and painted ware 2.7% of the pottery finds. Coarse, fine and brushed wares are made of purified clay with limestone and calcite grain tempering, clearly visible in the cross-section and on the surface of the vessel wall. The distinctions between coarse, fine and brushed ware were made based on the workmanship of the vessel walls. Thus, the fragments whose surface was only flattened without additional working of the walls were classified as coarse ware. The clay from which fragments attributed to this group were made mainly contained a slightly larger amount of limestone phenocrysts, which are easily visible and tangible on the uneven walls of the vessels. Fragments of the vessels with smoothed walls were classified as fine ware. In this category, it is possible to distinguish specimens with a casually smoothed sur-

(oko 30 %) i primjerke s izrazito zbijenom i fino uglačanom površinom (oko 40 %). Kod potonjih, sitne glinene čestice zbog intenzivnog glačanja dospijevaju na površinu u zaseban sloj koji nalikuje na premaz. Kod metličaste keramike, vanjska je stijenka poravnana i prevučena metlicom ili nekim sličnim predmetom po još vlažnoj površini posude. Na temelju sedam sačuvanih ulomaka pripisanih ovoj kategoriji (T. III/9–10), čini se da je cijela vanjska stijenka bila prevučena metlicom, kao što je to slučaj s metličastom keramikom i s drugih neolitičkih nalazišta istočnog Jadrana s kojih potječe ova kategorija keramičkih nalaza.[20]

Prema boji stijenki, evidentno je da su posude pečene redukcijski i oksidacijski, kao i kombinacijom tih uvjeta. Kod nekih posuda kombinacija redukcijskih i oksidacijskih uvjeta pečenja do izražaja dolazi na vanjskoj stijenci koja varira u nijansama iste boje (T. II/3– 4;VI/2–3), dok se kod drugih očituje u distinkciji boje unutarnje i vanjske stijenke. Većina je ulomaka svjetlosmeđe ili tamnosmeđe boje (oko 90 %), dok su manje učestale posude pečene u nijansama tamnosive, crne, oker i crvenkaste boje.

Na temelju dijagnostičkih ulomaka (ulomci oboda, dna i ručaka, ukrašeni ulomci posuda) kojima pripada oko 15 % prikupljenih keramičkih nalaza, u kategoriji grube, fine i metličaste keramike moguće je izdvojiti sljedeće oblike posuda: zdjele, zdjelice, lonce, plitice (tanjure) i šalice (čaše).

Najzastupljeniji i tipološki najraznovrsniji oblik na nalazištu Pod Jarugom predstavljaju zdjele, među kojima je moguće izdvojiti nekoliko varijanti: polukuglaste zdjele (T. II/2), duboke zdjele uvučenog otvora (T. III/1–3; VII/1–2, 4; V/2), zdjele široka otvora (T. VI/3), bikonične zdjele (T. IV/6; VI/3–4; VII/5), zdjele blagog S profila (T. VI/7), te kuglaste zdjele suženog otvora (T. V/4). Lonci

face (approximately 30%), specimens with a moderately smoothed surface (approximately 30%) and specimens with a highly compacted and finely smoothed surface (approximately 40%). In the latter, due to intensive smoothing, fine clay particles reach the surface in a separate coating-like layer. In brushed pottery, the outer wall was flattened and swept with a brush or a similar item over the still-damp surface of the vessel. Based on seven preserved fragments that were attributed to this category (Pl. III/9-10), the entire outside wall appears to have been swept by a brush, as is the case with brushed pottery from other Neolithic sites of the eastern Adriatic, from which this category of ceramic finds originates.[20]

The colour of the walls makes it evident that both reduction and oxidation firing (as well as a combination of the two firing methods) were used to produce the vessels. In some, the combination of reduction and oxidation firing is evident on the outer walls, with variations in shades of the same colour (Pl. II/3-4; VI/2-3), while in others it is manifested in the colour distinction between the inner and outer walls. Most fragments are light brown or dark brown (about 90%), while vessels fired in shades of dark grey, black, ochre and reddish are less frequent.

Based on diagnostic fragments (rim, bottom and handle fragments, decorated potsherds) to which about 15% of the collected pottery finds belong, the following vessel shapes can be classified as coarse, fine and brushed ware: bowls, small bowls, pots, saucers (plates) and cups (beakers).

The most common and typologically most diverse form from the Pod Jarugom site are bowls, among which several variants can be discerned: hemispherical bowls (Pl. II/2), deep bowls with a recessed opening (Pl. III/1-3; VII/1-2, 4; V/2), bowls with a wide opening (Pl. VI/3), biconic bowls (Pl. IV/6; VI/3-

[20] FORENBAHER, VRANJICAN 1985: 8; ČUKA 2014: 19–21; FORENABHER, RADIĆ, MIRACLE 2020: 23, 28.

[20] FORENBAHER, VRANJICAN 1985: 8; ČUKA 2014: 19-21; FORENBAHER, RADIĆ, MIRACLE 2020: 23, 28.

suženog otvora (T. II/1), polukuglaste zdjelice suženog otvora (T. III/4), plitice (T. V/5) i šalice (T. VIII/6) zastupljene su sporadično. Obod posuda kod većine je posuda blago zaobljen i neprofiliran (T. II/2; IV/1–6). Rjeđe su u pitanju prstenasto zadebljani obod (T. VI/5; VII/1–2; VIII/1).

Iako malobrojne, visoke i niske prstenaste noge kao izrazita pojava jadranskoga srednjeg neolitika i na ovom su nalazištu najzastupljeniji oblik (T. VI/6) (ukupno 6 primjeraka). Osim njih, pronađeno je jedno nisko ravno dno, te jedno konkavno dno. Jednostruke i dvostruke bradavičaste aplikacije evidentirane su na ukupno šest ulomaka, od kojih jedan pripada skupini metličaste keramike (T. III/9). Perforacije su evidentirane na ukupno tri ulomka. Kod svih primjeraka pozicionirane su ispod oboda posude (T. VI/2).

Ukras je izveden na ukupno 44 ulomaka, odnosno 5,2 % keramičkih nalaza u kategoriji grube i fine keramike. Izuzev ukrasa u vidu bradavičastih aplikacija, nalazi su ukrašeni tehnikom urezivanja, koja je na tri ulomka fine keramike upotpunjena crvenom (T. II/5), a na tri ulomka bijelom inkrustacijom (T. II/7). Svi ukrašeni ulomci pripadaju poznatomu i prepoznatljivomu danilskom stilu. Ukras je uglavnom izveden na gornjem dijelu posude, ispod oboda. Na mnogim je ulomcima izvedena samo jedna vodoravna urezana linija uz obod posude. Na ostalim keramičkim posudama pojavljuju se viseći trokuti ispunjeni kosim paralelnim ili mrežasto kombiniranim linijama (T. II/1), koncentrične kružnice (T. II/7; VIII/8), paralelne linije, kombinacija paralelnih vodoravnih i cik-cak linija (T. VIII/10), te složenije kombinacije pravocrtnih i krivocrtnih motiva (T. II/5–6).

Od tipičnoga danilskog repertoara tipološki i stilski u manjoj mjeri odskaču dva ulomka, za koje nije isključivo da pripadaju kasnom neolitiku. Riječ je o ulomku polukuglate zdjele svjetlosmeđe boje ukrašenom jedva primjet-

4; VII/5), bowls with a gentle S-profile (Pl. VI/7), and spherical bowls with a narrowed opening (Pl. V/4). Pots with a narrowed opening (Pl. II/1), hemispherical little bowls with a narrowed opening (Pl. III/4), saucers (Pl. V/5) and cups (Pl. VIII/6) are represented sporadically. Most vessels had a slightly rounded and unprofiled rim (Pl. II/2; IV/1-6). Less frequent are those with a ring-shaped thickened rim (Pl. VI/5; VII/1-2; VIII/1).

Although few in numbers, the high and low ring-shaped feet as a distinct phenomenon of the Adriatic Middle Neolithic, are the most common form (Pl. VI/6), represented by a total of six specimens. In addition, one low flat bottom and one concave bottom were found. Single and double knob-shaped appliqués were recorded on a total of six fragments, one of which belongs to the group of brushed pottery (Pl. III/9). Perforations were recorded on three fragments. In all specimens, they are positioned below the vessel rim (Pl. VI/2).

A total of 44 fragments, or 5.2% of the ceramic finds from the coarse and fine ware categories, were decorated. Apart from the decorations in the form of knob-shaped appliqués, the finds were decorated applying the incising technique: in three fragments of fine ware (Pl. II/5) complemented with red, and on three fragments with white incrustation (Pl. II/7). All decorated fragments belong to the known and recognisable Danilo style. The decoration was mainly performed on the upper part of the bowl, under the rim. On many fragments, only one horizontally cut line was made along the vessel rim. On other ceramic vessels, hanging triangles filled with oblique parallel or combined meshed lines (Pl. II/1), concentric circles (Pl. II/7; VIII/8), parallel lines, a combination of parallel horizontal and zigzag lines (Pl. VIII/10), as well as more complex combinations of rectilinear and curvilinear motifs (Pl. II/5-6) appear.

A slight deviation from the typical Danilo repertoire in terms of typology and style is embodied in two fragments, for which a Late

nim, plitko urezanim linijama (T. IX/6). Na tom ulomku dvije linije izvedene su ispod oboda, dvije na trbuhu posude te jedna na donjem dijelu ulomka. Drugi je ulomak oboda i visokoga, cilindričnog vrata posude tamnosmeđe boje, također s izvedenim višestrukim urezanim, paralelnim linijama (T. IX/1). Ako na umu imamo površinski prikupljene keramičke nalaze spomenute u uvodnom dijelu rada, koje je Š. Batović opredijelio u kasni neolitik, nije isključeno da uz srednji neolitik na nalazištu postoji i kasnoneolitička faza. Kao takvo, nalazište bi bilo blisko brojnim neolitičkim nalazištima sjeverne Dalmacije na kojima su potvrđene dvije neolitičke faze (npr. rani i srednji neolitik na Sikovo – Koinki,[21] Gradini u Zemuniku Donjem,[22] Pokrovniku[23] ili srednji i kasni neolitik na Graduša – Lokvama u Islamu Grčkom,[24] Brgudu[25] i Lepurima – Brigovima[26] itd.).

U kategoriju fine keramike moguće je ubrojiti i četiri ulomka posuda na četiri noge, odnosno dijelove dva ritona. Dva ulomka pripadaju bogato ukrašenoj ručki ritona (T. IX/4). Ručka je s unutarnje strane ukrašena crvenim premazom nanesenim nakon pečenja (tzv. crusted slikanje), a s vanjske strane tipičnim danilskim ukrasnim stilom izvedenim kombinacijom urezivanja i crvene inkrustacije. Ukras sačinjavaju koncentrično formirani trokuti i trake s kraćim kosim linijama ispunjeni crvenom inkrustacijom. Druga dva ulomka pripadaju ručki i dijelu otvora ritona (T. IX/1, 3). Oni su ukrašeni debelim nanosom crvene pastozne boje. Na isti je način ukrašen i ulomak s naglašnim rebrastim zadebljanjem (T. IX/2), za koji nije moguće sa sigurnošću utvrditi pripada li dijelu nekog ritona ili manjoj posudi.

Svi ulomci slikane keramike (T. V/6–10)

[21] ČONDIĆ 2012/2013.
[22] MARIJANOVIĆ, HORVAT 2016.
[23] BRUSIĆ 2008; VUJEVIĆ, HORVAT 2017.
[24] BATOVIĆ 1987: 24–31; HORVAT OŠTRIĆ, TRIOZZI 2022b.
[25] HORVAT 2017: 71–74.
[26] Isti: 75–76.

Neolithic origin cannot be excluded. One is a light brown hemispherical bowl decorated with barely noticeable, shallowly incised lines (Pl. IX/6). On this fragment, two lines were incised under the rim, two on the belly of the vessel, and one on the fragment's lower part. The second fragment is that of the rim and the high, cylindrical neck of a dark brown vessel, also with incised multiple parallel lines (Pl. IX/1). Bearing in mind the surface pottery finds mentioned in the introduction, which Š. Batović dated to the Late Neolithic period, it is not excluded that as well as the Middle Neolithic phase at the site there was also a Late Neolithic. As such, the site would be akin to numerous Neolithic sites in northern Dalmatia where two Neolithic phases have been confirmed (such as the Early and the Middle Neolithic at Sikovo – Koinka,[21] Gradina in Zemunik Donji,[22] Pokrovnik;[23] or the Middle and Late Neolithic at Graduša – Lokve in Islam Grčki,[24] Brgud,[25] and Lepuri – Brigovi[26]).

Categorised as fine ware are four fragments of four-footed vessels – parts of two rhytons. Two fragments belong to a richly decorated rhyton handle (Pl. IX/4). The handle inside is crusted red-painted, while its outside bears typical Danilo decorations worked by a combination of incising and red incrustation. The decoration consists of concentric triangles and ribbons with shorter oblique lines filled with red incrustation. The remaining two fragments belong to a rhyton handle and part of its mouth (Pl. IX/1, 3). They are decorated with a thick coat of red paste colour. Decorated in the same way is also a fragment with a pronounced ribbed thickening (Pl. IX/2); it is not possible to determine with certainty whether this was part of a rhyton or of a smaller vessel.

[21] ČONDIĆ 2012/2013.
[22] MARIJANOVIĆ, HORVAT 2016.
[23] BRUSIĆ 2008; VUJEVIĆ, HORVAT 2017.
[24] BATOVIĆ 1987: 24-31; HORVAT OŠTRIĆ, TRIOZZI 2022b.
[25] HORVAT 2017: 71-74.
[26] Ibid: 75-76.

pronađeni su u SJ 3. Ta je keramika izrađena od potpuno pročišćene glinene mase, ravnomjerno pečene. Na svim ulomcima naziru se tragovi premaza naneseni i s unutarnje i s vanjske strane stijenke posude. Riječ je o premazu sjajne bijelo-sive boje, na koji su prije pečenja posude naneseni slikani ornamenti. Na svim ulomcima na kojima je slikani ornament sačuvan, ukras se nazire samo na vanjskoj strani stijenke. Na šest ulomaka slikanje je izvedeno sivom bojom (T. V/7), dok je na jednom ulomku riječ o kombinaciji crvene i crne boje (T.V/10). U ukrasnom sustavu slikane keramike prepoznatljivi su snopovi paralelnih linija. Od dijagnostičkih ulomaka, među finom keramikom moguće je izdvojiti samo jednu trakastu ručku (T. V/6), koje nisu uobičajene u kategoriji slikane keramike.[27]

Po pitanju materijalne kulture, odnosno nalaza prikupljenih u istraženoj probnoj sondi A, ovo se nalazište također dobro uklapa među poznata danilska nalazišta,[28] iako prema zastupljenosti i bogatstvu ukrasa daleko zaostaje za ostalim istovremenim nalazištima.[29]

Izrađevine od kamena

Prikupljeno je ukupno trinaest izrađevina od lomljenog rožnjaka i jedan ulomak nodule rožnjaka. Većina nalaza potječe iz prvoga intaktnog kulturnog sloja (SJ 3). U tehnološkom smislu, u litičkom skupu najzastupljenija su sječiva (ukupno pet komada, od čega samo jedan cjelovito), zatim slijede odbojci (ukupno četiri komada), pločice (ukupno tri komada) i nekoliko neodredivih komada. Tipološki, osim ulomka sječiva s mogućim dubilom (T. I/4), na jedan od četiri fragmenta sječiva (1 proksimalni, 1 distalni i 2 medijalna) evidentirani su mogući tragovi uporabe, ali i alatka – grebalo formirano na distalnom rubu sječi-

All painted pottery shards (Pl. V/6-10) were found in SU 3. The pottery was made of completely purified, evenly fired clay mass. All fragments display traces of coating applied on both the inside and outside of the vessel wall. The coating is of a glossy white-grey colour, on which, before firing, ornaments were painted. In all fragments with preserved painted ornamentation, the decoration is visible only on the wall outside. Six fragments have grey painting (Pl. V/7), while one fragment has a combination of red and black (Pl. V/10). Identified in the decorative system of painted pottery are bundles of parallel lines. Among the fine ware, only a single ribbon handle (Pl. V/6), uncommon in the painted ware category, could be categorised as a diagnostic fragment.[27]

The site accords with other known Danilo sites[28] also in terms of material culture (finds collected in the excavated trial trench A), although based on the share of decorations and their opulence it lags far behind other contemporary sites.[29]

Stone artefacts

A total of 13 knapped chert artefacts and a fragment of a chert nodule were collected. Most of the finds were recovered from the first intact cultural layer (SU 3). In the lithic assemblage, the most common items in terms of technology are blades (five pieces, of which only one is complete), followed by flakes (four pieces), bladelets (three pieces), and several indeterminable pieces. In terms of typology, in addition to a fragment of a blade possibly with a burin (Pl. I/4), recorded in one out of four blade fragments (one proximal, one distal and two medial parts) were possible traces of use, but also a tool – an endscraper formed on the distal edge of

[27] KOROŠEC 1958: 45; BATOVIĆ 1979: 545–546.
[28] KOROŠEC 1958; 1964; BATOVIĆ 1979; BRUSIĆ 2008; FORENBAHER, KAISER, MIRACLE 2013.
[29] KOROŠEC 1958; 1964; BATOVIĆ 1979: 540–548; VUJEVIĆ, HORVAT 2012; 2017.

[27] KOROŠEC 1958: 45; BATOVIĆ 1979: 545-546.
[28] KOROŠEC 1958; 1964; BATOVIĆ 1979; BRUSIĆ 2008; FORENBAHER, KAISER, MIRACLE 2013.
[29] KOROŠEC 1958; 1964; BATOVIĆ 1979: 540-548; VUJEVIĆ, HORVAT 2012; 2017.

va (T. I/12). Oruđima treba pridodati i jedan fragment vrha strelice (T. I/7). Predmeti od glačanog kamena zastupljeni su samo s jednim oštećenim kamenim oblutkom kruškolikog oblika (T. I/2), koji je s jedne strane zaravnan i uglačan, a s druge strane prekriven patinom te predstavlja neku vrstu kamenog brusa.

Ostali nalazi izrađevina

U potpovršinskom sloju (SJ 2) pronađena je 1 koštana plosnata perla (T. I/1). U prvome intaktnom kulturnom sloju (SJ 3) pronađen je 1 glačani koštani predmet (igla/ubadalo?) (T. I/3). Na jednom je kraju stanjen i završava polukružno, dok je na dugom kraju zašiljen. Slični predmeti poznati su s danilskih nalazišta,[30] a njihova namjena mogla je biti različita.[31]

Analiza biljnih ostataka

Tijekom terenske sezone 2022. prikupljeno je ukupno 10 sedimenata taložina iz 4 kulturna sloja. Uzorci su obrađeni strojnom flotacijom, osim polovice uzorka 6 koji je flotiran s pomoću sita. Sitna frakcija skupljena je uz korištenje otvora od 300 μm, dok je teška frakcija prosijana kroz mrežice s otvorima od 1 mm. Svi biljni ostatci su karbonizirani i identificirani pomoću stereo zoom mikroskopa s povećanjem od 7 × do 45 × . Materijal veći od 1 mm je 100 % razvrstan i identificiran, dok je materijal manji od 1 mm poduzorkovan (1/2 uzoraka 1, 2, 3, 4, 5 i 9, 1/4 uzoraka 6, 8 i 11, uzorak 7 je 100 % razvrstan). Ukupan broj nalaza u pregledanim poduzorcima zatim je pomnožen uzimajući u obzir veličinu frakcije (tj. ostatci od 1/4 frakcije < 1 mm se množe s 4 da se postigne procijenjeni ukupni broj). Identifikacija je napravljena korištenjem suvremene referentne zbirke i referencije na Jacomet.[32]

[30] VUJEVIĆ, HORVAT 2017: 48.
[31] BATOVIĆ 1979: 538.
[32] JACOMET 2006.

the blade (Pl. I/12). Among the tools was also an arrowhead fragment (Pl. I/7). Smoothed stone objects are represented only by a single, damaged, pear-shaped stone pebble (Pl. I/2), which on one side is flattened and smoothed, while on the other side it is covered with a patina and represents a sort of whetstone.

Other artefact finds

In the subsurface layer (SU 2), one flat bead made of bone (Pl. I/1) was found. In the first intact cultural layer (SU 3), a smoothed bone item (a needle/burin?) was found (Pl. I/3). At one end, the item is thinned and ends in a semicircle, while at the other end it is pointed. Similar objects are known from Danilo sites,[30] and with varying functions.[31]

Archaeobotanical remains

A total of 10 environmental samples were collected during the 2022 field season from four contexts. Samples were processed through machine flotation, except half of sample 6 which was floated via bucket flotation. The flot was collected within a 300 μm mesh, while the heavy residue was sieved to 1mm. All plant remains were carbonised and were identified using a stereo zoom microscope with 7 × to 45 × magnification. Material over 1mm was 100% sorted and identified, while material below 1mm was subsampled ($^1/_2$ of samples 1, 2, 3, 4, 5, and 9, ¼ of samples 6, 8 and 11, sample 7 was 100% sorted). The total number of items in the scanned subsamples was then multiplied by considering the fraction size (i.e., remains form 1/4 of <1mm fraction-is multiplied by 4 to reach the estimated total number). Identifications were made using a modern reference collection and reference to Jacomet.[32] The nomenclature of scientific

[30] VUJEVIĆ, HORVAT 2017: 48.
[31] BATOVIĆ 1979: 538.
[32] JACOMET 2006.

Nomenklatura znanstvenih naziva biljaka slijedi Zohary i Hopf[33] za kultivirane biljke i bazu podataka Flora Croatica[34] za divlje biljke. Korištena je standardizirana metoda brojenja, pri čemu se svako zrno računa kao jedno, a minimalni broj jedinki (MNI) procijenjen je za fragmente zrna. Fragmenti baze pljeve brojeni su kao jedan, osim ako je jasno da predstavljaju dio nekoga drugog fragmenta, dok su cijeli viličasti djelovi klasa računani kao dvije baze pljeve. Sjeme voća i korova računalo se kao jedno, čak i kad je pronađen samo fragment. Gustoća biljnih ostataka uključuje fragmentirana zrna identificirana na razini roda i fragmente žitarica, a isključuje neodređene fragmente.

Pougljenjeni biljni makrofosili bili su prisutni u svih 10 sedimenata taložina, a rezultati su prikazani u tablici 2. Očuvanost je bila loša, a mnoga su zrna bila ili fragmentirana ili jako nabubrena, deformirana ili istrošena. Gustoće su općenito bile niske, iako su uzorci 6, 8 i 9 sadržavali veliki broj ostataka pljeve, tj. ostataka ovojnica pšenice. Najveći dio zrna žitarica evidentiran je u dvama uzorcima (6 i 9). Tu su pronađeni dvozrna pšenica (*Triticum dicoccum*), jednozrna pšenica (*Triticum monococcum*), kao i nekoliko zrna obične pšenice (*Triticum aestivum/durum*) i ječma (*Hordeum sp*.). Zrna tetraploidne (*Triticum turgidum/durum*) i heksaploidne obične (*Triticum aestivum/compactum*) pšenice nisu razlikovana unutar uzoraka zbog morfoloških sličnosti zrna i odsustva dijagnostičkih dijelova stabljike. Zbog loše očuvanosti nekoliko je zrna identificirano samo kao moguća pšenica (*Triticum* sp.) ili fragment zrna žitarice (Cerealia).

Iz uzoraka 1, 6 i 9 identificirane su tri leće (*Lens culinaris*), kao i jedno zrno slanutka (*Cicer arietinum*) iz uzorka 6. Divljim travama pripisano je pet nalaza (od toga je

plant names follows Zohary and Hopf [33] for cultivars and the Flora Croatica Database[34] for wild plants. A standardised counting method was used, whereby each grain counts as one and minimum number of individuals (MNI) was estimated for fragments of grains. Glume base fragments were counted as one unless clearly representing part of another fragment, while whole spikelet forks were counted as two glume bases. The fruit and weed seeds were counted as one, even when only a fragment was found. Density of the plant remains include fragmented grains identified to genus level and Cerealia fragments but excluded indeterminate fragments.

Charred plant macrofossils were present in all 10 samples and the results are presented in Table 2. Preservation was poor with many of the grains being either fragmented or severely puffed, distorted or worn. Densities were generally low, although sample 6, 8 and 9 contained high numbers of glume wheat glume bases. Most of the cereal grain was recovered from samples 6, a pit, and sample 9, a general layer. This included emmer (*Triticum dicoccum*), einkorn (*Triticum monococcum*), as well as a few grains offree-threshing wheat (*Triticum aestivum/durum*) and barley (*Hordeum* sp.). The free-threshing tetraploid (*Triticum turgidum/durum*) and hexaploid (*Triticum aestivum/compactum*) wheat grains were not distinguished within the samples due to morphological similarities in the grains and absence of diagnostic rachis fragments. Due to poor preservation several grains were identified only as possible wheat (*Triticum* sp.) or a fragment of cereal grain (Cerealia).

Three lentils (*Lens culinaris*) were identified from samples 1, 6 and 9, as well as one chickpea (*Cicer arietinum*) from sample 6. One seed of dwarf elder (*Sambucus ebulus*) was identified from sample 9 and only three

[33] ZOHARY, HOPF 2012.
[34] NIKOLIĆ 2018.

[33] ZOHARY, HOPF 2012.
[34] NIKOLIĆ 2018.

TABLICA 2. *Rezultati makrofosila pougljenjenih biljaka, Pod Jarugom, sonda A po uzorku. * Označava vrijednosti izračunane iz poduzoraka* (izradile: K. Reed i D. Vidas)
TABLE 2 *Results of macrofossils of charred plants, Pod Jarugom, trial trench A, per sample. * Indicates values obtained from subsamples* (made by K. Reed and D. Vidas)

Stratigraphic unit (SJ)		SJ3	SJ3	SJ3	SJ3	SJ3	SJ3/5	SJ3/5	SJ4	SJ5	SJ9	
Level		3	3	1	2	2						
Sample no.		3	8	4	11	9	1	2	6	5	7	
Volume (L)		10	11	14	11	11	11	15	13	15	10	
Context		General layer	General layer	General layer	General layer	General layer	General layer	General layer	Pit	General layer	Pit	**Total**
Density		**0.4**	**7.1**	**0.6**	**2.3**	**5.1**	**0.3**	**0.1**	**8.0**	**0.3**	**0.3**	
Cereals	Plant part											
Hordeum sp.	Grain					1			2			**3**
Triticum dicoccum	Grain					3			8	1		**12**
Triticum dicoccum	Glume base				3	7			2			**12**
Triticum cf. dicoccum	Glume base								3			**3**
Triticum monococcum	Grain					2			4			**6**
Triticum monococcum	Glume base		3			1						**4**
Triticum monococcum (basal)	Glume base					2						**2**
Triticum mono./dicoccum	Grain				1				4			**5**
Triticum aestivum/durum	Grain			1		3						**4**
Triticum spp. fragment	Grain	3				1			13			**17**
Triticum spp.	Glume base		62*	4*	20*	34*	2*	2*	46*		2	**172**
Cerealia fragments	Grain	1	12	3	1				18	3	1	**39**
Pulses												
Lens culinaris	Seed					1	1		1			**3**
Cicer arietinum	Seed								1			**1**
Wild Taxa												
Poaceae (large)	Seed								2			**2**
Poaceae (millet)	Seed		1									**1**
Sambucus ebulus	Seed					1						**1**
Indeterminate fragments		**5***	**54***	**4***	**1**	**58**		**2**	**194***			**318**

jedna pripisana vrsti *Poaceae*), bazgi (*Sambucus ebulus*) jedna sjemenka iz uzorka 9, a sjemenu tipa prosa dvije sjemenke, jedna iz uzorka 6 i jedna iz uzorka 8.

Općenito je prihvaćeno da je osam primarno domesticiranih kultura: jednozrna pšenica (*Triticum monococcum*), dvozrna pšenica (*Triticum dicoccum*), ječam (*Hordeum vulgare*), grašak (*Pisum sativum*), leća (*Lens culinaris*), slanutak (*Cicer arietinum*), lećasta grahorica (*Vicia ervilia*) i lan (*Linum usitatissimum*). Njihova pojava, širenje i korištenje diljem jugozapadne Azije, Anatolije i Europe ovisili su o mnogim faktorima.[35] Te rane kultivirane biljke čine osnovu neolitičkog uzgoja, iako istraživanja sugeriraju da se potpuni „paket usjeva" nije u cijelosti proširio jugoistočnom i središnjom Europom.[36]

Po pronalasku ječma, jednozrne i dvozrne pšenice, nalazište Pod Jarugom ne odskače od dosad otkrivenih kultiviranih vrsta s obližnjih neolitičkih nalazišta.[37] Iako obična pšenica nije okarakterizirana kao „osnovna kultura", prisutna je od ranog neolitika diljem Europe, iako u manjim količinama, što sugerira da je bila ili manje važna kultura ili žitni korov. Ograničen broj žitarica pronađenih na nalazištu Pod Jarugom onemogućuje raspravu o tome koje su se žitarice primarno uzgajale na nalazištu. U usporedbi s drugim nalazištima u Dalmaciji,[38] vjerojatno je da ječam, jednozrna i dvozrna pšenica predstavljaju glavnu vrstu biljne hrane na ovom nalazištu. Međutim, važno je napomenuti da spaljeni makrofosili predstavljaju samo mali i pristrani uzorak jestivih biljaka koje su vjerojatno korištene u neolitičkim naseljima.[39]

Pronalazak jednog slanutka na nalazištu Pod Jarugom, nažalost, ostaje upitan, s ob-

[35] ZOHARY, HOPF 2012.
[36] COLLEDGE, CONOLLY 2014.
[37] REED, PODRUG 2016.
[38] REED 2015; REED, COLLEDGE 2016.
[39] COLLEDGE, CONOLLY 2014: 193.

Poaceae, two fragments of large grass seeds and one millet type seed, were recovered from sample 6 and 8.

It is commonly acknowledged that eight 'founder crops': einkorn (*Triticum monococcum*), emmer (*Triticum dicoccum*), barley (*Hordeum vulgare*), pea (*Pisum sativum*), lentil (*Lens culinaris*), chickpea (*Cicer arietinum*), bitter vetch (*Vicia ervilia*) and flax (Linum usitatissimum), were introduced in varying degrees across southwest Asia, Anatolia and Europe[35]. These early domesticates form the basis of Neolithic farming, although research suggests that the complete 'crop package' did not spread in its entirety throughout southeast and central Europe.[36]

At Pod Jarugom the identification of barley, emmer and einkorn is consistent with the arrival of these founder crops into Dalmatia during the early Neolithic and are consistently found at other nearby Neolithic sites.[37] Although naked wheat is not characterised as a 'founder crop' it is present from the early Neolithic across Europe, although in smaller quantities, suggesting it was either a minor crop or a cereal weed. The limited number of grains found at Pod Jarugom restricts any interpretation of which cereals were primarily grown at the settlement. Compared to other sites at Dalmatia[38] it is likely that barley, emmer and einkorn form the main staple at the site. However, it is important to note that the charred macrofossils represent only a small and biased sample of the edible plants likely utilised by the early Neolithic settlements.[39]

The recovery of one chickpea from the site requires further investigation, including carbon dating. This is due to the rare nature of this find in the region. Finds of chickpea in southeast Europe are only identified

[35] ZOHARY, HOPF 2012.
[36] COLLEDGE, CONOLLY 2014.
[37] REED, PODRUG 2016.
[38] REED 2015; REED, COLLEDGE 2016.
[39] COLLEDGE, CONOLLY 2014: 193.

zirom na to da je uzorak bio loše očuvan i da nije uključivao dovoljno ugljika za pouzdano kronometrijsko datiranje kojem je podvrgnut. Nalazi slanutka u jugoistočnoj Europi dosad su identificirani samo u Bugarskoj,[40] Grčkoj i nedavno na neolitčkim nalazištima u Can Sadurní na južnoj obali Španjolske[41]. Pronalazak slanutka na nalazištu Pod Jarugom stoga nije nemoguć, ali bez karbonskog datiranja na nalaz treba gledati s oprezom.

Analiza životinjskih ostataka

Na neolitičkom lokalitetu Pod Jarugom, u sondi A pronađeno je ukupno 1268 fragmenata kostiju i zuba težine 2205,08 g. Ostatci faune prikupljeni su izravno iz sloja i sita, te sedimenata taložina iz četiriju kulturnih slojeva koji su flotirani (teška frakcija). Životinjske kosti i zubi analizirani su u Mediterranean Prehistory and Paleoecology Laboratory, the Department of Anthropology, University of California, Santa Barbara. Taksonomska pripadnost uzoraka određena je prema komparativnom materijalu laboratorija te s pomoću odgovarajuće literature.[42] Fragmenti kostiju i zuba određeni su taksonomski i anatomski, izbrojeni i izvagani, makroskopski su utvrđeni tragovi rezanja, gorenja, antropogenih i prirodnih procesa. Gdje je bilo primjenjivo, fragmenti su izmjereni pomoću Fowlere digitalne pomične mjerke prema standardiziranim mjerama Von den Driesch[43] i McClure et al.[44]. Procjena starosti jedinki u trenutku smrti temeljena je prema stupnju sraštenosti epifiza za sve identificirane vrste, te na izbijanju i stupnju istrošenosti zuba ovce, koze i goveda prema Payneu,[45] Grant[46] i

[40] MARINOVA, POPOVA 2008.
[41] ANTOLÍN, SCHÄFER 2024.
[42] SCHMID 1972; HILLSON 2005.
[43] DRIESCH 1976.
[44] McCLURE et al. 2022.
[45] PAYNE 1973.
[46] GRANT 1982.

at Neolithic sites in Bulgaria[40] and Greece, although chickpea was recently identified at the Neolithic site of Can Sadurní Cave on the southern coast of Spain[41]. The discovery of chickpea at Pod Jarugom is therefore not impossible, but until carbon dated the find should be viewed with caution.

Archaeofaunal remains

A total of 1268 bone and teeth fragments weighing 2205.08g were recovered from Sonda A at the Neolithic site of Pod Jarugom. All soil was screened in 10mm mesh and faunal remains were collected both directly from the unit and from the screens. In addition, 10 soil samples were collected from four contexts and processed through flotation. The heavy fraction of the flotation residue was sorted and faunal remains were collected. Animal bone and teeth were analyzed at the Mediterranean Prehistory and Paleoecology Laboratory in the Department of Anthropology at the University of California, Santa Barbara. Taxonomic identifications are based on comparative skeletal material housed in the laboratory with additional assistance from published comparative works.[42] Bone and teeth fragments were identified to element and taxon, counted and weighed, assessed macro–visually for cut marks, burning, or other human or non–human modifications, and, where applicable, measured using a Fowler digital caliper following standardized measurements in von den Driesch[43] and McClure et al.[44] Age estimations were based on epiphyseal fusion for all identifiable species, and on dental eruption and wear for sheep, goats, and cattle following Payne[45], Grant[46],

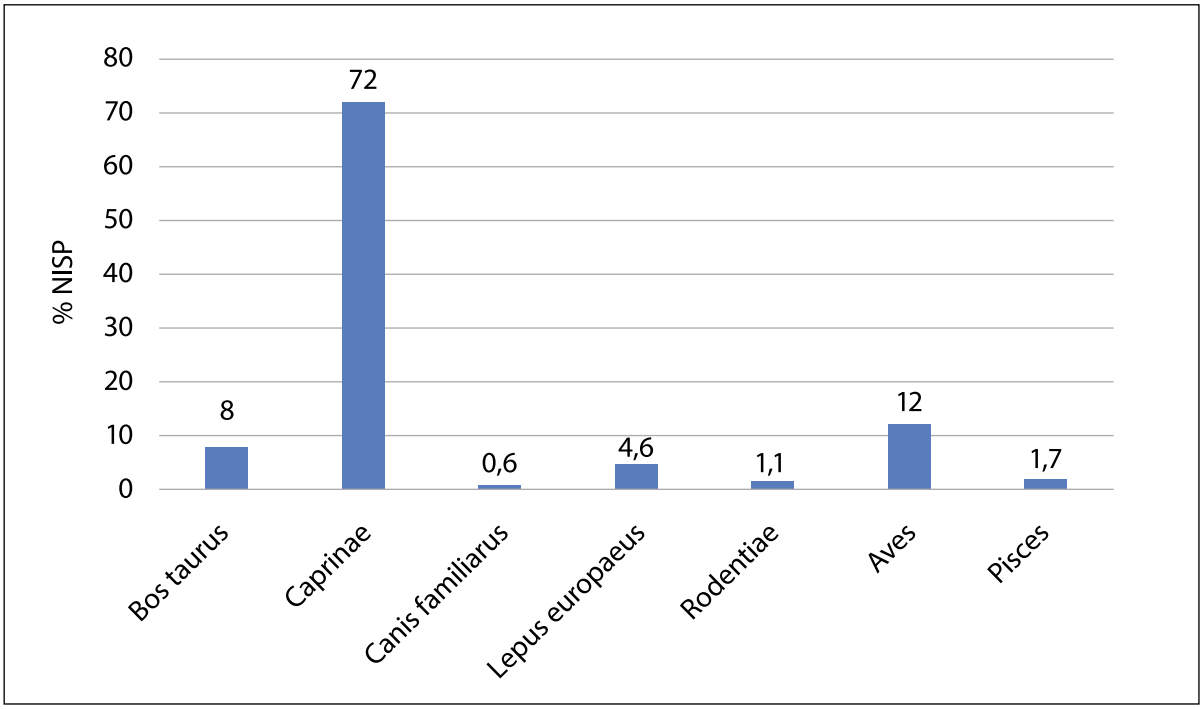
[40] MARINOVA, POPOVA 2008.
[41] ANTOLÍN, SCHÄFER 2024.
[42] SCHMID 1972; HILLSON 2005.
[43] DRIESCH 1976.
[44] McCLURE et al. 2022.
[45] PAYNE 1973.
[46] GRANT 1982.

Zeder[47]. Broj fragmenata (NF) odnosi se na sve fragmente kostiju i zuba u uzorku, dok se broj odredivih uzoraka (NISP) odnosi na fragmente kostiju i zuba koji su određeni na temelju morfoloških karakteristika, na taksonomskoj razini roda ili vrste, zahtijevajući prethodno određivanje skeletnog elementa.[48] Razlikovanje ovce od koze određeno je prema kriterijima navedenim u Zeder i Laphamu[49] te Zeder i Pilaar[50]. Tamo gdje nije bilo moguće odrediti je li riječ o ovci ili kozi, primjerak je klasificiran kao „ovi-kaprid". Za svaku svojtu procijenjen je minimalni broj jedinki (MNI).

Skup životinjskih kostiju pronađenih Pod Jarugom vrlo je fragmentiran. Za ukupno 151 ulomak kostiju i zuba (NISP) određena je pripadost razredu sisavaca, što čini 12 % ukupnog uzorka (tab. 3). Stupanj fragmentiranosti je visok, s prosječnom težinom od 1,74 g/ulomku. Valja napomenuti da je uzorak fragmentiraniji u odnosu na većinu

and Zeder[47]. The Number of Fragments (NF) refers to the all the bone and tooth fragments in the assemblage, whereas the Number of Identified Specimens (NISP) refers to bone and tooth fragments that were identified on a firm morphological basis to a taxonomic level of genus or species, requiring the prior identification of the skeletal element.[48] Differentiation between sheep and goat is difficult and species were conservatively identified following criteria outlined in Zeder and Lapham[49] and Zeder and Pilaar[50]. Where identification to either sheep or goat was not possible, a specimen was classified as 'caprine'. The minimum number of individuals (MNI) was estimated for each taxon.

The animal bone assemblage from Pod Jarugom is highly fragmented, and a total of 151 bone and tooth fragments (NISP) were identifiable to mammal species, representing 12% of the assemblage (Table 3).The degree of fragmentation is high, with an



Slika 7. *Relativni postotak NISP-a po taksonomskoj skupini. Podatci sažeti iz tablice 3* (izradila: S. B. McClure)
Figure 7 *Percentage of NISP per taxonomic groups. Data summarised from Table 3* (made by S. B. McClure)

47 ZEDER 2006.
48 LYMAN 1994.
49 ZEDER, LAPHAM 2010.
50 ZEDER, PILAR 2010.

47 ZEDER 2006.
48 LYMAN 1994.
49 ZEDER, LAPHAM 2010.
50 ZEDER, PILAR 2010.

TABLICA 3. *Životinjski ostatci iz sonde A s nalazišta Pod Jarugom po stratigrafskim slojevima* (izradila: S. B. McClure)
TABLE 3 *Animal remains from trial trench A at the Pod Jarugom site according to stratigraphic layers* (made by S. B. McClure)

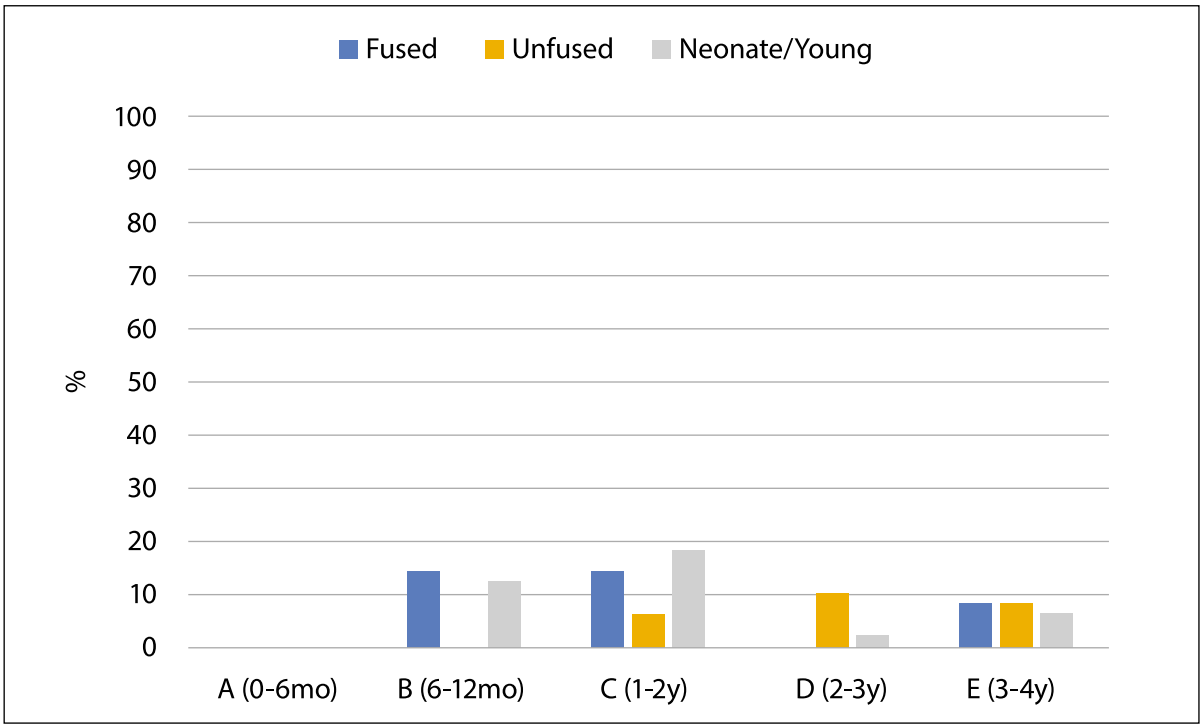
Taxon	**Common name**	***SJ3***													**Total NISP**	**Total MNI**
		PROFILE	***SJ1***	***SJ2***	***SJ3_1***	***SJ3_2***	***SJ3_3***	***Total***	***SJ4***	***SJ3/5***	***SJ5***	***SJ7***	***SJ8***	***SJ9***		
Bos taurus	Cow			1	2	1	4	7	1	1		2	2		14	1
Ovis aries	Sheep	2				1	4	5		1					8	
Capra hircus	Goat	1			1		1	2					1		4	
Caprine	Sheep/															
Goat	7	1	7	4	36	27	67		12	6	1	4	9	114	5	
Canis familiarus	Dog	1													1	1
Lepus europaeus	European hare				2	1	2	5	1	2					8	1
Rodentiae	Rodent									1				1	2	2
Total Number of Identified Specimens (NISP)		**11**	**1**	**8**	**9**	**39**	**38**	**86**	**2**	**17**	**6**	**3**	**7**	**10**	**151**	
Large Mammal			1	12		14	14	28		11		8	19		79	
Medium Mammal		8	4	23	212	187	129	528	30	167	7	9	13	26	815	
Small Mammal		5			5	9	13	27	3	1				3	39	
Unknown Mammal					18	28	35	81	18	34	10			17	160	
Bird						3	17	20		1					21	
Fish							1	1		1				1	3	
Total Number of Fragments (NF)		**24**	**6**	**43**	**244**	**280**	**247**	**771**	**53**	**232**	**23**	**20**	**39**	**57**	**1268**	

drugih neolitičkih nalazišta u Dalmaciji na kojima je prosijavan sediment[51] (prosječno 2,86 g/ulomku; raspon 1,42 – 4,72). Uzorci nisu pokazali značajne tragove modifikacije. Samo 104 fragmenta sisavaca, kost ptice, metatarzalna kost zeca i lakatna kost goveda (0,08 % NF; 0,01 % NISP) pokazuju znakove gorenja, dok 5 fragmenata kostiju sisavaca srednje veličine, jedan radijus koze i jedan humerus koze (< 0,01 % NF; 0,01 % NISP) imaju tragove ureza.

Glavninu uzorka faune činile su domesticirane vrste (sl. 7). Većina (72 %) odredivih životinjskih kostiju i zuba pripada ovikapridima (ovce i/ili koze), a zatim domesticiranom govedu (8 %). Identificiran je samo jedan primjerak psa, dok domaćih svinja nema. I svinje i psi prilično su rijetki u srednjoneolitičkim uzorcima faune u sjevernoj Dalmaciji.[52] Minimalni broj jedinki izračunan je na temelju NISP-a za svaku

average weight of 1.74g/fragment, and the assemblage is more fragmented than those from most other Neolithic sites in Dalmatia where assemblages were screened[51] (average 2.86g/fragment; range 1.42-4.72). The assemblage was not heavily modified and only 104 mammal fragments, a bird bone, a hare metatarsal and a cattle ulna (0.08%NF; 0.01% NISP) showed signs of burning and 5 medium mammal bone fragments, one caprine radius and one caprine humerus (<0.01% NF; 0.01% NISP) had cut marks.

The majority of the faunal assemblage consisted of domesticated species (Figure 7). Most (72%) of identified animal bone and teeth were caprines (sheep and/or goat), followed by domesticated cattle (8%). No domestic pig and only one dog specimen were identified. Both pigs and dogs are quite rare in Danilo Neolithic assemblages throughout northern Dalmatia[52]. The Minimum Num-



Slika 8. *Relativni postotak sraslih, nesraslih i neonatalnih/mladih elemenata u ovaca i koza prema dobnoj kategoriji* (izradila: S. B. McClure)

Figure 8 *Relative percentage of fused, unfused and neonatal/young elements in sheep and goats according to age category (made by S. B. McClure)*

[51] McCLURE et al. 2022.
[52] Isti.

[51] McCLURE et al. 2022.
[52] Ibid.

taksonomsku skupinu (tab. 3): 5 ovaca/koza (predstavljeno distalnim krajem radijusa); 1 pas; 1 zec i 1 govedo. Na temelju MNI-ja, omjer goveda i koza je 1 : 5, slično nalazima na drugim neolitičkim nalazištima istog perioda u regiji.[53]

Dobni profili koza uglavnom se temelje na sraštenosti epifiza. Ostatci ovikaprida na lokalitetu Pod Jarugom uglavnom potječu od mladih životinja, od čega 38,8 % mladih ili neonatalnih, što upućuje na dob ispod 6 mjeseci. Slika 8 prikazuje relativni postotak sraslih, nesraslih i mladih/neonatalnih elemenata u svakoj dobnoj kategoriji. Iako neki primjerci (n = 4) upućuju na prisutnost jedne ili više životinja starijih od 3 godine, velika većina skupine ovikaprida potječe od životinja mlađih od 12 mjeseci. Dvije mandibule sa zubima bilježe prisutnost životinje koja je u vrijeme smrti imala od 12 do 18 mjeseci, dok je druga u vrijeme smrti imala od 2 do 6 mjeseci.

U slučaju goveda, podatci o sraštenosti epifiza dostupni su samo za proksimalni kraj jedne prve falange i jedne druge falange. Budući da su oba spojena i ovi se elementi stapaju rano u razvoju goveda, nisu posebno indikativni za dob u trenutku smrti.

Kada govorimo o uzorcima divljih životinja, najzastupljenije su kosti ptica koje nisu identificirane po vrsti (12 %), zatim slijede europski zečevi (4,6 %), glodavci i ribe. Zanimljivo je da u uzorku nije bilo jelena. To je u suprotnosti s drugim danilskim neolitičkim nalazištima u sjevernoj Dalmaciji, gdje je česta prisutnost kostiju i zuba jelena (osobito srne, *Capreolus capreolus*, ali i običnog jelena, *Cervus elaphus*), koji obično čine 3,5 – 6 % skupa.[54]

Tri riblje kosti (dva kralješka i fragment maksile) identificirane su u uzorku, sve iz ostataka teške frakcije flotacijskih uzoraka. Rijetka je prisutnost ribe u neolitičkim na-

ber of Individuals was calculated based on the NISP for each taxonomic group (Table 3): 5 sheep/goats (represented by the distal end of the radius); 1 dog; 1 European hare and 1 cattle. Based on MNI, the ratio of cattle to caprines is 1:5, similar to findings at other Danilo Neolithic sites in the region.[53]

Age profiles for caprines are largely based on epiphyseal fusion. The remains of caprines in the Pod Jarugom assemblage mostly come from young animals, with 38.8% young or neonatal, suggesting ages well under 6 months old. Figure 2 shows the relative percentage of the fused, unfused, and young/neonatal elements in each age category. Although some specimens (n=4) indicate the presence of one or more animals over the age of 3 years, the vast majority of the assemblage of caprinescome from animals under the age of 12 months.Two mandibles with teeth record the presence of an animal that died at 12-18 months of age, while another died at 2-6 months.

In the case of cattle, epiphyseal fusion data is only available for the proximal end of one first phalanx and one second phalanx. Since both are fused and these elements fuse early in cattle development, they are not particularly indicative of age at death.

Wild animals were primarily represented by bird bone that was not identifiable to species (12%), followed by European hare (4.6%), rodents, and fish. Interestingly, no deer was present in the assemblage. This stands in contrast to other Danilo Neolithic sites in northern Dalmatia, where the presence of deer bone and teeth (particularly roe deer, *Capreolus capreolus*, but also red deer, *Cervus elaphus*) is common, typically contributing 3.5-6% of the assemblage.[54]

Three fish bones (two spines and a maxilla fragment) were identified in the assemblage, all from the heavy fraction residues of the

[53] Isti.
[54] Isti.

[53] Ibid.
[54] Ibid.

seljima, a u Smilčiću je objavljena samo još jedna neidentificirana riblja kost iz vremena ranog neolitika.[55] To je vjerojatno povezano s kombiniranjem tafonomije i skupljačkih praksi. Flotacija tla i prikupljanje životinjskih kostiju iz teške frakcije mogu povećati identifikaciju ribljih ostatka u neolitiku.

Uzorak životinjskih ostataka s lokaliteta Pod Jarugom pruža određeni uvid u prakse preživljavanja u ovoj neolitičkoj zajednici. Raznolikost vrsta zastupljenih u skupu je niska, a naglasak je na pripitomljenim životinjama, posebice ovcama, kozama i govedu, uz samo nekoliko divljih životinjskih vrsta. Iako je uzorak iz sonde A relativno malen i prilično fragmentiran, u skladu je s drugim danilskim neolitičkim nalazištima u regiji u smislu relativnih udjela ovikaprida, nedostatka svinja i tendencije prema mlađim životinjama među ovikapridima. U odnosu na ostala danilska nalazišta zanimljiv je nedostatak jelena (srna, obični jelen), što može biti i posljedica malog uzorka. Proširivanje uzoraka faune u budućim iskapanjima rasvijetlilo bi ovo pitanje. Konačno, prisutnost kostiju ptica, riba i malih sisavaca uvelike je povećana sustavnim uzorkovanjem tla, flotacijom i čuvanjem teške frakcije za daljnju analizu.

Pod Jarugom – prostorni, vremenski i kulturološki položaj nalazišta u odnosu na druga neolitička nalazišta sjeverne Dalmacije

Tijekom posljednjih triju desetljeća na području sjeverne Dalmacije istražen je velik broj neolitičkih nalazišta i višeslojnih nalazišta na kojima su utvrđeni tragovi života iz razdoblja neolitika: Sikovo – Koinka,[56] Polje niže Vrcelja,[57] Barice u Benkovcu,[58] Pakošta-

[55] SCHWARTZ 1988; McCLURE, PODRUG 2016.
[56] ČONDIĆ 2012/2013.
[57] HORVAT 2015.
[58] MARIJANOVIĆ 2012.

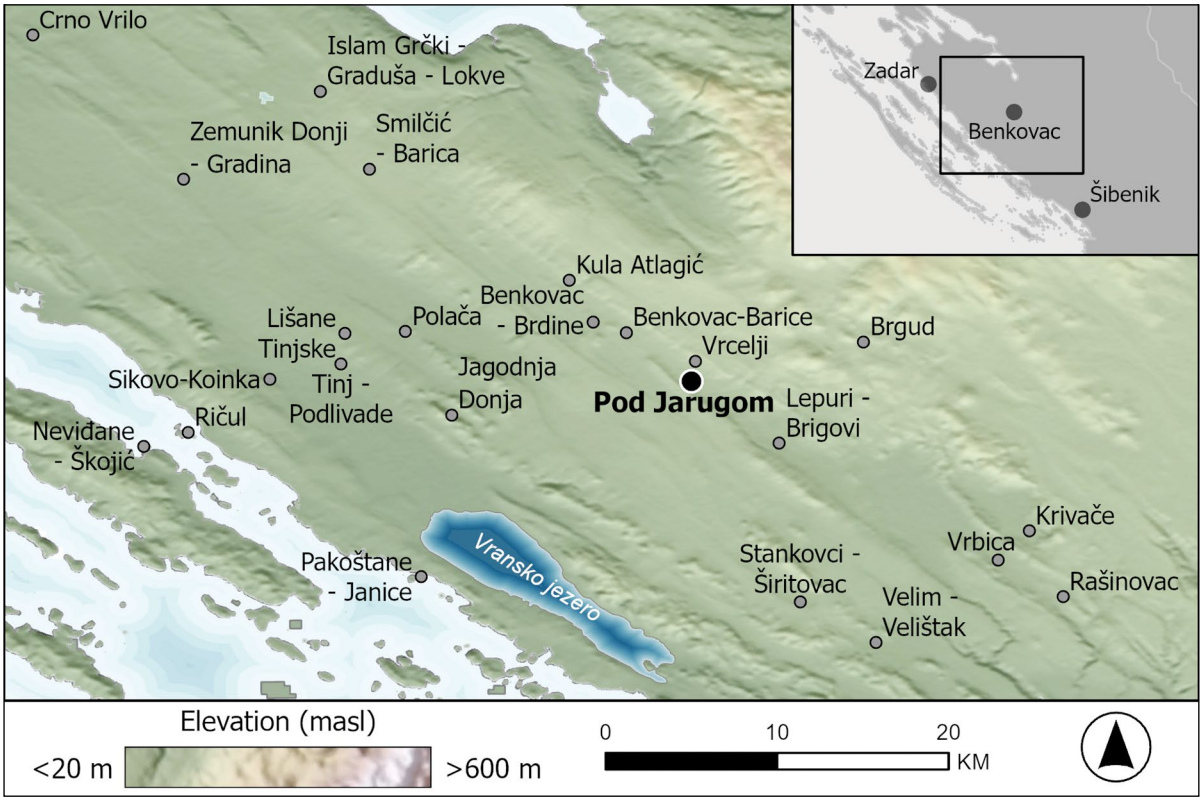
flotation samples. The presence of fish is rare in Neolithic settlements, and only one other unidentified Neolithic fish bone has been published from the early Neolithic levels at Smilčić.[55] This is in part likely due to a combination of taphonomy and collection practices, and more extensive soil flotation and recovery of animal bones from the heavy fraction may increase our identifications of fish remains in the Neolithic.

The archaeofaunal assemblage from Pod Jarugom provides some insight into subsistence practices in this Danilo Neolithic community. The diversity of species represented in this assemblage is low, and emphasis is on domesticated animals, particularly sheep, goat, and cattle, with only few wild animal species. While the assemblage from Sonda A is relatively small and quite fragmented, it is consistent with other Danilo Neolithic sites in the region in terms of the relative proportions of caprines and cattle, the lack of pig, and a tendency towards younger animals among the caprines. It differs in the lack of deer (roe deer, red deer), but it is unclear if this is due to sample bias or if this is indeed a distinction from other sites in the region. Expanding the faunal assemblage in future excavations would illuminate this question. Finally, the presence of bird, fish, and small mammal bone was greatly enhanced through systematic soil sampling, flotation, and reserving the heavy fraction for further analysis.

Pod Jarugom – spatial, temporal and cultural location of the site in relation to other Neolithic sites of northern Dalmatia

Over the past three decades, a large number of Neolithic and multi-layered sites in northern Dalmatia have been explored, at which traces of life from the Neolithic period were

[55] SCHWARTZ 1988; McCLURE, PODRUG 2016.



Slika 9. *Neolitička nalazišta na širemu benkovačkom području* (izradio: N. Triozzi)
Figure 9 *Neolithic sites in the wider Benkovac area* (made by N. Triozzi)

ne – Janice,[59] Rašinovac,[60] Velišak,[61] Zemunik Donji – Gradina,[62] Smilčić – Barica,[63] Graduša – Lokve u Islamu Grčkom,[64] Pod Jarugom u Podgrađu[65] i Pećina u Ždrilu[66]. Uz to, u zadarskom su akvatoriju pronađena dva potopljena neolitička nalazišta: Neviđane – Škojić kod otoka Pašmana i Ričul kod Turnja.[67] Ako se tim nalazištima pribroje ostala prije istražena neolitička nalazišta, poput onog u Ninu,[68] Dračevcu Ninskom (Crno vrilo),[69] Privlaci,[70] Tinju,[71]

found: Sikovo – Koinka,[56] Polje Niže Vrcelja,[57] Barice in Benkovac,[58] Pakoštane – Janice,[59] Rašinovac,[60] Velištak,[61] Zemunik Donji – Gradina,[62] Smilčić – Barica,[63] Graduša – Lokve in Islam Grčki,[64] Pod Jarugom in Podgrađe[65] and Pećina in Ždrilo[66]. In addition, two sunken Neolithic sites were found in the waters off Zadar: Neviđane – Školjić near the island of Pašman and Ričul near Turanj.[67] These and other previously excavated Neolithic sites, such as Nin,[68] Dračevac Ninski

59 BEKIĆ et al. 2015.
60 PODRUG et al. 2018.
61 PODRUG 2010.
62 MARIJANOVIĆ, HORVAT 2016.
63 MARIJANOVIĆ 2022.
64 HORVAT OŠTRIĆ, TRIOZZI 2022a.
65 HORVAT OŠTRIĆ, TRIOZZI 2022b.
66 BODRUŽIĆ, VUJEVIĆ 2023.
67 PARICA 2021: 29–36.
68 BATOVIĆ 1961.
69 MARIJANOVIĆ 2009.
70 BRUSIĆ 1973.
71 CHAPMAN, SHIEL, BATOVIĆ 1996.

56 ČONDIĆ 2012/2013.
57 HORVAT 2015.
58 MARIJANOVIĆ 2012.
59 BEKIĆ et al. 2015.
60 PODRUG et al. 2018.
61 PODRUG 2010.
62 MARIJANOVIĆ, HORVAT 2016.
63 MARIJANOVIĆ 2022.
64 HORVAT OŠTRIĆ, TRIOZZI 2022a.
65 HORVAT OŠTRIĆ, TRIOZZI 2022b.
66 BODRUŽIĆ, VUJEVIĆ 2023.
67 PARICA 2021: 29-36.
68 BATOVIĆ 1961.

Krkoviću,[72] Krivačama,[73] Konjevratima,[74] Pokrovniku,[75] Danilu[76] i Benkovcu (položaj Brdine),[77] ali i brojna neistražena neolitčka nalazišta,[78] prostorno se gledano na spomenutom području stvara slika s vrlo gusto raspoređenim neolitičkim nalazištima, međusobno udaljenim tek koji kilometar. Za kraj bogat plodnim i agrarno visoko iskoristivim površinama ta činjenica nimalo ne iznenađuje, pa i broj dosad otkrivenih nalazišta vrlo vjerojatno još nije ni približno konačan.[79] Potragu za novim neolitičkim nalazištima ponajprije treba orijentirati prema pozicijama nalik na one na kojima su dosad otkrivena nalazišta toga prapovijesnog perioda, najviše uz rubove plodnih ravnokotarskih polja te stalnih izvora pitke vode (sl. 9).

Ako se dosad otkrivena neolitčka nalazišta sjeverne Dalmacije usporede vremenski, slika naseljenosti tog prostora tijekom neolitika postaje posebno zanimljiva. Naime, zahvaljujući radiokarbonskom datiranju i prikupljenomu dijagnostičkom keramičkom materijalu, većina spomenutih nalazišta kulturno je i vremenski dobro definirana. Srednjem neolitiku, kojem pripada nalazište Pod Jarugom, pripadaju nalazišta: Graduša – Lokve u Islamu Grčkom, Barice u Benkovcu, Gradina u Zemuniku Donjem, Smilčić – Barica, Sikovo – Koinka, Lepuri – Brigovi, neolitički slojevi u Pećini u Ždrilu, Škarinu Samogradu te nalazišta u Privlaci, Vrsima, Brgudu, Pokrovniku, Danilu, Mratovu i Krivačama. Od petnaest nabrojenih nalazišta, radiokarbonski nisu datirani Sikovo – Koinka i Škarin Samograd, te neistražena nalazišta u Privlaci, Vrsima, Lepurima, Brgudu i Mratovu. Radiokarbonski

[72] PODRUG et al. 2018.
[73] McCLURE, PODRUG 2016: 123–125.
[74] KORIĆ, HORVAT 2018.
[75] BRUSIĆ 2008; MARIJANOVIĆ 2017; MOORE et al. 2019.
[76] KOROŠEC 1958; 1964; MOORE et al. 2019.
[77] KRIŽ 2015.
[78] BATOVIĆ 1979: 525.
[79] HORVAT, BLAĆE 2017.

(Crno Vrilo),[69] Privlaka,[70] Tinj,[71] Krković,[72] Krivače,[73] Konjevrate,[74] Pokrovnik,[75] Danilo[76] and Benkovac (Brdine site)[77], along with numerous unexplored ones,[78] create a picture of very dense spatial distribution of Neolithic sites only a few kilometres from each other. This comes as no surprise, given the abundance of fertile land easily available for agriculture; the total of sites uncovered so far is therefore probably not even close to final.[79] Any search for new Neolithic sites should focus primarily on locations similar to the ones that have already been confirmed as such, principally along the edges of fertile fields in Ravni Kotari and by permanent potable water springs (Fig. 9).

A chronological comparison of the Neolithic sites of northern Dalmatia that have been unearthed so far sheds a different light on the perception of the habitation of the region during the Neolithic period. Radiocarbon dating and the collected diagnostic ceramic material has made it possible to categorise with certainty most of the sites in terms of their cultural and chronological affiliation. Affiliated to the Middle Neolithic, to which the Pod Jarugom site has been dated, are the following: Graduša – Lokve in Islam Grčki, Barice in Benkovac, Gradina in Zemunik Donji, Smilčić – Barica, Sikovo – Koinka, Lepuri – Brigovi, Neolithic layers in Pećina in Ždrilo, Škarin Samograd, and the sites in Privlaka, Vrsi, Brgud, Pokrovnik, Danilo, Mratovo i Krivače. Of the fifteen listed sites, no carbon dating has been performed for Sikovo – Koinka and Škarin Samograd, as well as the unexplored sites in

[69] MARIJANOVIĆ 2009.
[70] BRUSIĆ 1973.
[71] CHAPMAN, SHIEL, BATOVIĆ 1996.
[72] PODRUG et al. 2018.
[73] McCLURE, PODRUG 2016: 123-125.
[74] KORIĆ, HORVAT, 2018.
[75] BRUSIĆ 2008; MARIJANOVIĆ 2017; MOORE et al. 2019.
[76] KOROŠEC 1958; 1964; MOORE et al. 2019.
[77] KRIŽ 2015.
[78] BATOVIĆ 1979: 525.
[79] HORVAT, BLAĆE 2017.

datumi s ostalih osam spomenutih nalazišta pokrivaju vremenski period od oko 5200 – 5050 BC,[80] kojem pripada i istraženi sloj na nalazištu Pod Jarugom. Taj podatak ne predstavlja samo još jednu potvrdu o gustoj naseljenosti sjeverne Dalmacije u srednjem neolitiku, nego i otvara brojna pitanja u vezi s neolitičkim zajednicama tog prostora. Jesu li i u kojoj mjeri zajednice istovremenih naselja komunicirale i izmjenjivale dobra? Jesu li postojala veća i manja naselja, kakvo je možda bilo baš ono u Podgrađu, bar kako se zasad čini prema prostoru na kojem su otkriveni površinski nalazi? Pitanje je i koja od neistraženih nalazišta sjeverne Dalmacije pripadaju istom periodu? Zašto su se na nekim pozicijama neolitičke zajednice zadržavale duži, a na nekima kraći vremenski period? Jesu li prirodni i/ili ljudski faktori utjecali na dugotrajnost života na svakoj od tih lokacija, odnosno njihovu promjenu? U tom pogledu zanimljivo je osvrnuti se i na neolitičko nalazište u Vrceljima, koje je prostorno najbliže nalazištu Pod Jarugom. Riječ je o nalazištu koje u manjoj mjeri odstupa od „tipičnih" neolitičkih pozicija smještenih na rubovima polja. To je nalazište smješteno na prilično strmoj padini Bukovičke kose, otprilike 1,5 kilometar dalje od nalazišta Pod Jarugom, do kojeg pogled jasno seže. Prema dostupnim datumima, to nalazište pripada samom kraju ranog neolitika, odnosno periodu od oko 5520 – 5350 BC.[81] Među keramičkim nalazima s tog nalazišta, osim onih tipičnih za rani neolitik, poznati su oni koji su više povezani sa srednjim neolitikom, poput visokih šupljih nogu.[82] Uz to, među keramičkim materijalom zabilježena je i metličasta keramika, slična onoj s nalazišta Pod Jarugom, koja nije uobičajena pojava među keramičkim nalazima na neolitičkim nalazištima sjeverne Dalmacije. Je

[80] MARIJANOVIĆ 2012: 27–28; McCLURE, PODRUG 2016: 121–122; TRIOZZI, N. P. 2024.
[81] HORVAT 2015: 14.
[82] HORVAT 2015: T. VI, 2.

Privlaka, Vrsi, Lepuri, Brgud and Mratovo. Radiocarbon dates from the remaining eight sites cover approximately the period 5200–5050 BC,[80] to which the excavated layer at the Pod Jarugom site also belongs. This information is not only another confirmation of the dense population of northern Dalmatia in the Middle Neolithic, but also raises numerous questions related to the Neolithic communities in the region. Did the communities communicate and exchange goods, and if so, to what extent? Were there larger and smaller settlements, the one in Podgrađe rather being the latter, as suggested by the surface area from which the surface finds were obtained? Another question is, which of the unexcavated sites of northern Dalmatia belong to the same period? Why did the Neolithic communities remain longer in some positions and for shorter periods at others? Was the longevity of dwelling at, or relocation of the individual sites, influenced by natural and/or human factors? In this regard, it is interesting to look at the Neolithic site in Vrcelji, which is closest in proximity to the Pod Jarugom site. It is a site that, to a lesser extent, deviates from the 'typical' Neolithic positions located at the edges of fields. The site is located on a rather steep slope of Bukovička Kosa, about 1.5 kilometres away from the Pod Jarugom site and clearly visible with the naked eye. The site is dated to the end of the Early Neolithic, approximately to 5520–5350 BC.[81] Among pottery finds from the site other than those typical of the Early Neolithic are those rather associated with the Middle Neolithic, such as high, hollow feet.[82] In addition, among the pottery finds was also brushed pottery, similar to that from the Pod Jarugom site, which is not a common phenomenon among pottery finds at northern Dalmatian Neolithic sites. Can the Ne-

[80] MARIJANOVIĆ 2012: 27-28; McCLURE, PODRUG 2016: 121-122; TRIOZZI, N. P. 2024.
[81] HORVAT 2015: 14.
[82] HORVAT 2015: Pl. VI/2.

li moguće da neolitička zajednica koja je za životni prostor odabrala padinu Bukovičke kose krajem ranog neolitika taj položaj mijenja i seli se na poziciju na kakvoj istovremeno žive brojne susjedne neolitičke zajednice s kojima dolaze u kontakt? Prema radiokarbonskim datumima i poznatom materijalu, ta ideja ne bi trebala biti isključena, nego uzeta u obzir pri budućim istraživanjima tih nalazišta.

Za stjecanje boljeg uvida u naseobinske i materijalne aspekte nalazišta, potrebna su geofizička istraživanja te potom sustavna arheološka istraživanja uz otvaranje veće istraživačke površine. Geofizička istraživanja u planu su za 2025. godinu. Možda će ona dati odgovor na pitanje koju površinu nalazište Pod Jarugom pokriva.

ZAKLJUČAK

Neolitičko nalazište Pod Jarugom u Podgrađu do probnih je istraživanja provedenih u ožujku 2022. godine bilo jedno od brojnih poznatih, ali neistraženih neolitičkih nalazišta sjeverne Dalmacije. Zahvaljujući probnim arheološkim istraživanjima, danas su poznati podatci o stratigrafskim i kulturnim odnosima na nalazištu, koje zahtijeva i sustavna arheološka istraživanja. Istraženi dio neolitičkog nalazišta pripada srednjem neolitiku, odnosno danilskomu ukrasnom stilu. Osim prikupljene materijalne arheološke građe, to potvrđuje i radiokarbonski datum, prema kojem nalazište pripada kraju srednjeg neolitika. Rezultati provedenih zooarheoloških i arheobotničkih analiza, upućuju na prisutnost vrsta uobičajenih za naselja otvorenog tipa, kakvom vjerojatno pripada i Pod Jarugom. Jasno definiranje djelomično otkrivenih struktura pri probnim istraživanjima zahtijeva sustavna iskopavanja nalazišta na većoj istraživačkoj površini. To je jedini način za stjecanje boljeg uvida u naseobinske i druge aspekte života

olithic community that had chosen to live on the slopes of the Bukovička Kosa be presumed to have left that location at the end of the Early Neolithic period and settled at a position similar to those occupied by many contemporary neighbouring Neolithic communities with which they came into contact? Radiocarbon dates and known material do not exclude such an interpretation, but rather suggest a similar conclusion, to be confirmed by future excavations of these sites.

To gain a better insight into the sites' settlement and material aspects, geophysical explorations and subsequent systematic archaeological excavations over a larger surface area are required. Geophysical excavations are planned for 2025. Perhaps they will reveal the surface area covered by the Pod Jarugom site.

CONCLUSION

Before conducting trial excavations in March 2022, the Neolithic site of Pod Jarugom in Podgrađe was one of the many identified but unexplored Neolithic sites of northern Dalmatia. Trial archaeological excavations disclosed the site's stratigraphic and cultural relations, paving the way for systematic archaeological excavations. The excavated part of the Neolithic site belongs to the Middle Neolithic and the Danilo decoration style. This is confirmed, in addition to the collected archaeological material, by the radiocarbon date, according to which the site belongs to the end of the Middle Neolithic. The results of zooarchaeological and archaeobotanical analyses indicate the presence of species common to open settlements, among which the Pod Jarugom site is presumed to have been. In order to be able to clearly define the structures that were partially disclosed in the course of the trial excavations, systematic excavation of sites over a larger surface area is necessary. That is the

zajednica neolitičkog nalazišta Pod Jarugom, kao i njegovih eventualnih veza s obližnjim neolitičkim nalazištem u Vrceljima.

ZAHVALE

Ovo istraživanje provedeno je na parceli vlasnika Mile Ćurkovića, kojemu zahvaljujemo na dozvoli za iskopavanje. Na pomoći i savjetima pri izradi rada zahvaljujemo kolegi i prijatelju Emilu Podrugu, kustosu Muzeja grada Šibenika.

only way to obtain a better insight into the settlement and other aspects of life of the communities of the Pod Jarugom Neolithic site, as well as its possible links to the nearby Neolithic site in Vrcelji.

ACKNOWLEDGEMENTS

These excavations were conducted on a plot owned by Mile Ćurković, whom we thank for permission to perform the dig. We would like to thank to our colleague and friend Emil Podrug, curator of the Šibenik Town Museum, for his help and advice in the preparation of the paper.

Translation and proof-reading:
ETNOtrend d.o.o.

Literatura / References

ANTOLÍN, F., SCHÄFER, M. 2024, Insect Pests of Pulse Crops and their Management in Neolithic Europe, *Environmental Archaeology*, 29, 20–33, doi: .org/10.1080/14614103.2020.1713602

BATOVIĆ, Š. 1955, Neolitski tragovi u sjevernoj Dalmaciji, *Radovi Instituta Jugoslavenske Akademije u Zadru,* 2, 387–397.

BATOVIĆ, Š. 1961, Solana, Nin – neolitsko naselje, *Arheološki pregled*, 3, Beograd, 12–16.

BATOVIĆ, Š. 1979, Jadranska zona, u/in: *Praistorija jugoslavenskih zemalja*, II, A. Benac (ur./ed.), Sarajevo: Svjetlost – ANUBiH, 473–634.

BATOVIĆ, Š., 1987, Islam Grčki – nalazi od paleolitika do ranog brončanog doba, *Poročilo o raziskovanju paleolita, neolita in eneolita v Sloveniji*, XV, 11–107.

BATOVIĆ, Š. 1990, Benkovački kraj u prapovijesti, *Radovi Filozofskog fakulteta u Zadru, Razdio povijesnih znanosti*, 29 (16), 5–142.

BEKIĆ, L., PEŠIĆ, M., SCHOLZ, R., MEŠTROV, M., 2015, Podvodna arheološka istraživanja na prapovijesnom nalazištu Pakoštane – Janice / Underwater archaeological research at the prehistoric site of Pakoštane – Janice, *Diadora*, 29, 7–22.

BLAĆE, A. 2014, Prilog poznavanju regionalne strukture primorske Hrvatske – regionalizacija ravnokotarskog prostora / Contribution of the study of regional structure of Littoral Croatia – regionalization of Ravni kotari area, *Geoadria*, 19, 129–145.

BODRUŽIĆ, M., VUJEVIĆ, D. 2023, Arheološka istraživanja Pećine u Ždrilu kod Rovanjske, *Subterranea Croatica*, 21 / 2, 45–52.

BRONK RAMSEY, C. 2009, Bayesian Analysis of Radiocarbon Dates. *Radiocarbon*, 51, 337–360.

BRUSIĆ, Z. 1973, Privlaka kod Zadra, arheološko-topografski podatci, *Radovi Instituta Jugoslavenske akademije znanosti i umjetnosti u Zadru*, XX, 419–446.

BRUSIĆ, Z. 2008, *Pokrovnik – naselje iz neolitika*, Šibenik: Muzej grada Šibenika.

CHAPMAN, J., SHIEL, R., BATOVIĆ, Š. 1996, *The Changing Face of Dalmatia, Archaeological and Ecological Studies in Mediterranean Landscape*, London/New York: Leicester University Press/The Society of Antiquaries of London.

COLLEDE, S., CONOLLY, J. W. 2007, *The Origins and Spread of Domestic Plants in Southwest Asia and Europe*, California: Left Coast Press.

COLLEDE, S., CONOLLY, J. W. 2014, Wild plant use in European Neolithic subsistence economies: a formal assessment of preservation bias in archaeobotanical assemblages and the implications for understanding changes in plant diet breadth. *Quaternary Science Reviews*, 101, 193–206.

ČONDIĆ, N. 2012/2013, Neolitičko nalazište u Sikovu / Sikovo Neolithic site, *Diadora*, 26/27, 93–116.

ČUKA, M. 2014, Prapovijesna keramika iz pećine Garbinovice kod Poreča: probno arheološko istraživanje iz 2013. godine / Prehistoric pottery from Garbinovica cave near Poreč: a trial archaeological exploration performed in 2013, *Histria archaeologica*, 45, 5–62.

FORENBAHER, S., VRANJICAN, P. 1985, Vaganačka pećina, *Opuscula archaeologica*, 10, 1–21.

FORENBAHER, S., KAISER, T. 2010, Grapčeva, Nakovana i neolitik istočnog Jadrana, in: *Arheološka istraživanja u Neretvansko – Dubrovačkoj županiji*, Perkić D. (ed.), Zagreb: Hrvatsko arheološko društvo, 25–31.

FORENBAHER, S., KAISER, T., MIRACLE, P. T. 2013., Dating the East Adriatic Neolithic, *European Journal of Archaeology*, 16 (4), 589–609.

FORENBAHER, S., RADIĆ, D., MIRACLE, P. T. 2020, *Špilja Žukovica na Korčuli, rezultati istraživanja 2013. – 2014.*, Vela Luka: Centar za kulturu Vela Luka.

GRANT, A. 1982, The use of tooth wear as a guide to the age of domestic animals, u/in: *Ageing and Sexing Animal Bones from Archaeological Sites*, Wilson, B., Grigson, C., Payne, S. (ur./eds.), Oxford: British Archaeological Reports, 91–108.

HILLSON, S. 2005, *Teeth*. Cambridge: Cambridge University Press.

HORVAT, K. 2015, Polje niže Vrcelja – nalazište ranog neolitika na benkovačkom području / Polje niže Vrcelja – an early Neolithic site in the Benkovac area, *Vjesnik za arheologiju i historiju dalmatinsku*, 108, 1–27.

HORVAT, K. 2017, *Ambijentalne osnove naseljavanja istočnog Jadrana – primjer benkovačkog područja*, neobjavljena disetracija / unpublished PhD thesis, Zadar: Sveučilište u Zadru.

HORVAT, K., BLAĆE, A., 2017, Neolithic communities in correlation to natural environment of Ravni Kotari area (Littoral Croatia), *ESEH conference: Natures in between. Environments in areas of contact among states, economic systems cultures and religions, 28. 6. – 2. 7. 2017.*, Zagreb, poster presentation.

HORVAT OŠTRIĆ, K., TRIOZZI, N. 2022a, Neolitičko nalazište Pod Jarugom / Neolithic site Pod Jarugom, *In situ*, 1, 74–76.

HORVAT OŠTRIĆ, K., TRIOZZI, N. 2022b, Probna istraživanja neolitičkog nalazišta u Islamu Grčkom / Trial excavations of a Neolithic site in Islam Grčki, *In situ*, 1, 46–51.

IVANOVIĆ, A., SAKAČ, K., MARKOVIĆ, K., SOKAČ, B., ŠUŠNJAR, M., NIKLER, L., ŠUŠNJARA, A. 1973, *Osnovna geološka karta SRFJ 1:100 000, List Obrovac L 33 – 140*, Beograd/Zagreb: Institut za geološka istraživanja Zagreb, Savezni geološki zavod Beograd.

JACOMET, S. 2006, *Identification of Cereal Remains from Archaeological Sites. Archaeobotany Laboratory*, Basel: IPAS, Basel University.

KORIĆ, M., HORVAT, K. 2018, Tipološke i stilske karakteristike keramičkih nalaza ranog neolitika iz Konjevrata / The typological and stylistic characteristics of the early Neolithic pottery found in Konjevrate, *Diadora*, 32, 7–34.

KOROŠEC, J. 1958, *Neolitska naseobina u Danilu Bitinju. Rezultati istraživanja u 1953. godini*, Zagreb: Izdavački zavod Jugoslavenske akademije.

KOROŠEC, J. 1964, *Danilo in Danilska kultura*, Ljubljana: Univerza v Ljubljani.

KRIŽ, B. 2015, Privremeno izvješće o sondažnom iskapanju arheološkog nalazišta Brdine kod Benkovca / An interim report on the trial excavations at the archeological site of Brdine near Benkovac, *Asseria*, 13, 131–142.

LYMAN, R. L. 1994, Quantitative units and terminology in zooarchaeology, *American Antiquity*, 59, 36–71.

MARIJANOVIĆ, B. 2009, *Crno vrilo 1*, Zadar: Sveučilište u Zadru.

MARIJANOVIĆ, B. 2012, Barice – naselje danilske kulture u Benkovcu / Barice – settlement oft he Danilo culture in Benkovac, *Archaeologia Adriatica*, 6, 1–30.

MARIJANOVIĆ, B. 2012, Pokrovnik – primjer ograđenoga neolitičkog naselja / Pokrovnik – An Example of an Enclosed Neolithic Settlement, *Prilozi Instituta za arheologiju u Zagrebu*, 34, 5–44.

MARIJANOVIĆ, B. 2022, Neolitičko nalazište Barice u Smilčiću, istraživanje 2016./2017. / The Neolithic site of Barice in Smilčić, excavation 2016/2017, Zadar: Sveučilište u Zadru.

MARIJANOVIĆ, B., HORVAT, K. 2016, Počeci naseljavanja na području Zemunika, u/in: *Zemunik u prostoru i vremenu*, Faričić, J., Dundović, Z. (ur./eds.), Zadar: Sveučilište u Zadru, 48–67.

MARINOVA, E., POPOVA, T. 2008, Cicer Arietinum (Chick pea) in the Neolithic and Chalcolithic of Bulgaria: Implications for Cultural Contacts with the Neighbouring Regions? *Vegetation History and Archaeoabotany*, 17, 73–80.

McCLURE, S. B., PODRUG, E. 2016, Villages, landscapes, and early farming in northern Dalmatia,

u/in: Chazan, M., Lillios, K. T. (ur./eds.), *Fresh Fields and Pastures New: Papers Presented in Honor of Andrew MT Moore*, Leiden: Sidestone Press, 117–144.

McCLURE, S. B., PODRUG, E., JOVIĆ, J., MONROE, S., RADDE, H. D., TRIOZZI, N., WELKER, M. H., ZAVODNY, E. 2022, The zooarchaeology of Neolithic farmers: herding and hunting on the Dalmatian coast of Croatia, *Quaternary International*, 634, 27–37.

MOORE, A., MENĐUŠIĆ, M., BROWN, L., COLLEDGE, S., GIEGENGACK, R., HIGHAM, T., HRŠAK, V., LEGGE, A., MARGUŠ, D., McCLURE, S., PALMER, C., PODRUG, E., KELLY, R., SMITH, J., ZANINOVIĆ, J. 2019, Pokrovnik and Danilo Bitinj: two Neolithic villages in southeast Europe, Oxford: Archaeopress Publishing Ltd

NIKOLIĆ, T. 2018, Flora Croatica Database. Available from: http://hirc.botanic.hr/fcd. Accessed May 2023.

PARICA, M. 2021, *Prapovijesne maritimne konstrukcije na prostoru Dalmacije i Kvarnera / Prehistoric maritime structures in Dalmatia and Kvarner*, Zadar: Sveučilište u Zadru.

PAYNE, S. 1973, Kill-off patterns in sheep and goats: the mandibles from As¸van Kale, *Anatolian Studies*, 23, 281–303.

PODRUG, E. 2010, Čista Mala – Velištak: prve tri istraživačke kampanje na nalazištu Hvarske kulture / Čista Mala – Velištak: the first three excavation campaings at a Hvar culture site, *Diadora*, 24, 7–25.

PODRUG, E., McCLURE, S. B., PERHOČ, Z., KAČAR, S., REED, K., ZAVODNY, E. 2018, Rašinovac kod Ždrapnja (sjeverna Dalmacija) – nalazište ranog neolitka / Rašinovac near Ždrapanj (notrhern Dalmatia) – an erarly Neolithic site, *Archaeologia Adriatica*, 12, 47–97.

REED, K. 2015, From the field to the hearth: plant remains from Neolithic Croatia (ca. 6000–4000 cal BC), *Vegetation History and Archaeobotany*, 24 (5), 601–619.

REED, K., COLLEDGE, S. 2016, Plant economies in the Neolithic Eastern Adriatic: archaeobotanical results from Danilo and Pokrovnik / Biljne ekonomije u neolitiku na istočnom Jadranu: rezultati arheobotaničkih istraživanja u Danilu i Pokrovniku, *Vjesnik za arheologiju i povijest dalmatinsku*, 109, 9–23.

REED, K., PODRUG, E. 2016, Reconstructing late Neolithic plant economies at the Eastern Adriatic site of Velištak (5th millennium cal BC), *Documenta Praehistorica*, 43, 399–412.

REIMER, P. J., AUSTIN, W. E. N., BARD, E., BAYLISS, A., BLACKWELLl, P. G., BRONK RAMMSEY, C., BUTZIN, M., CHENG, H., EDWARDS, R. L., FRIEDRICH, M., GROOTES, P. M., GUILDERSON, T. P., HAJDAS, I., HEATON, T. J., HOGG, A. G., HUGHEN, K. A., KROMER, B., MANNING, S. W., MUSCHELER, R., PALMER, J. G., PEARSON, C., VAN DER PLICHT, J., REIMER, R. W., RICHARDS, D. A., SCOTT, E. M., SOUTHON, J. R., TURNEY, C. S. M., WACKER, L., ADOLPHI, F., BÜNTGEN, U., CAPANO, M., FAHRNI, S. M., FOGTMANN-SCHULZ, A., FRIEDRICH, R., KÖHLER, P., KUDSK, S., MIYAKE, F., OLSEN, J., REINGIN, F., SAKAMOTO, M., SOOKDEO, A., TALAMO, S. (2020). The IntCal20 Northern Hemisphere Radiocarbon Age Calibration Curve (0–55 cal kBP). *Radiocarbon*, 62: 725–757.

SCHMID, E. 1972, *Atlas of Animal Bones*, Amsterdam: Elsevier.

SCHWARTZ, C. 1988, The Neolithic animal husbandry of Smilčić and Nin, u/in: *Recent Developments in Yugoslav Archaeology*, Chapman, J. C., Bintliff, J., Gaffney, V., Slapšak, B. (ur./eds.), Oxford: BAR International Series, 431, 45–76.

TRIOZZI, N. P. 2024, Herding is Risky Business: Agropastoral Strategies in Neolithic Northern Dalmatia. Ph.D. Dissertation, University of California, Santa Barbara.

VON DEN DRIESCH, A. 1976, *A Guide to the Measurement of Animal Bones from Archaeological Sites: as developed by the Institut für Palaeoanatomie, Domestikationsforschung und Geschichte der Tiermedizin of the University of Munich*, Peabody Museum Press.

VUJEVIĆ, D., HORVAT, K. 2012, Kulturna slika danilskog naselja na Baricama / Cultural image the Danilo culture of settlement in Barice, *Archaeologia Adriatica*, 6, 31–65.

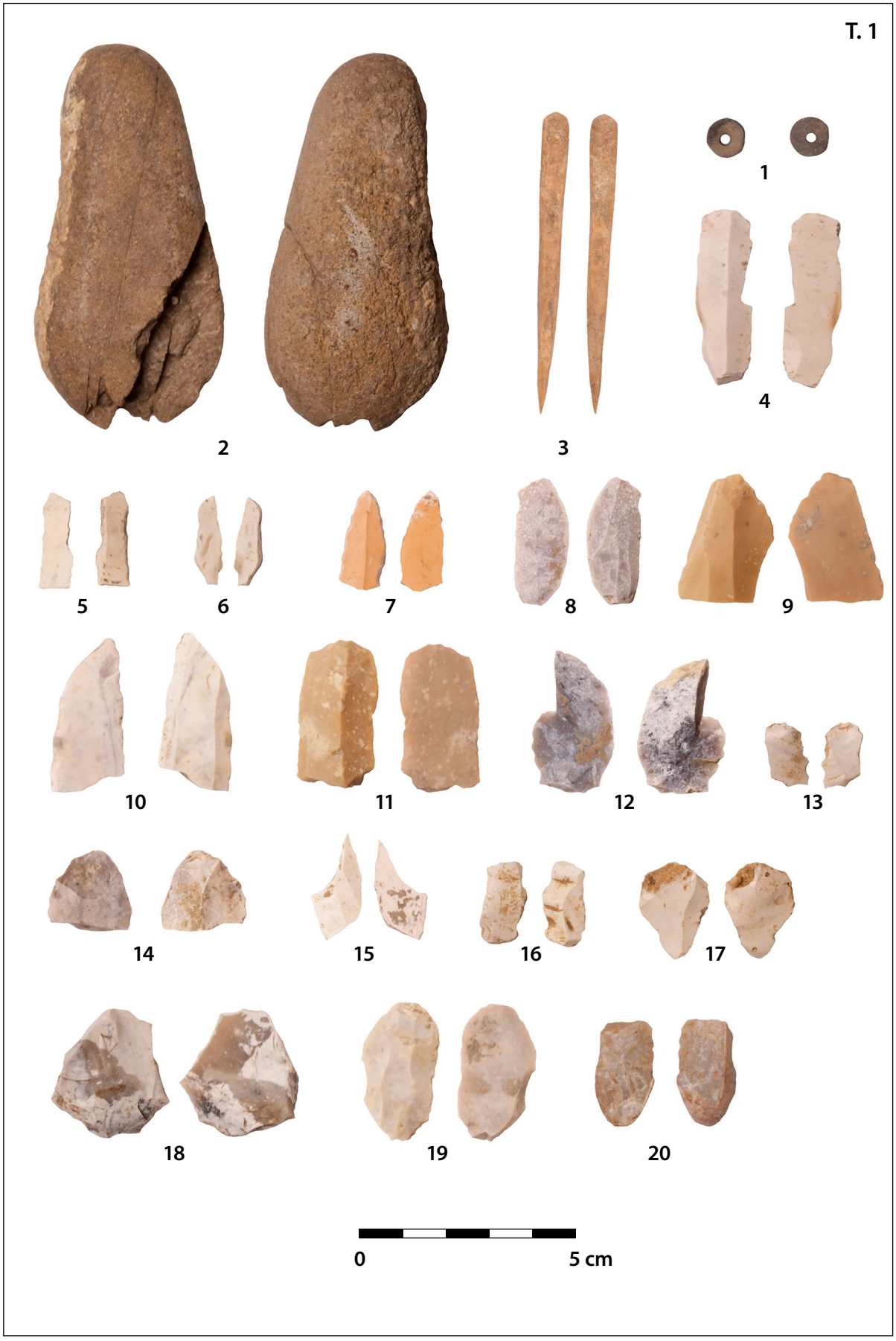
VUJEVIĆ, D., HORVAT, K. 2017, Pokrovnik – materijalna kultura neolitičkog naselja / Pokrovnik – The Material Culture of the Neolithic Settlement, *Prilozi Instituta za arheologiju u Zagrebu*, 34, 45–81.

ZEDER, M. A. 2006, Reconciling rates of long bone fusion and tooth eruption and wear in sheep (Ovis) and goat (Capra), *Recent Advances in Ageing and Sexing Animal Bones*, 9, 87–118.

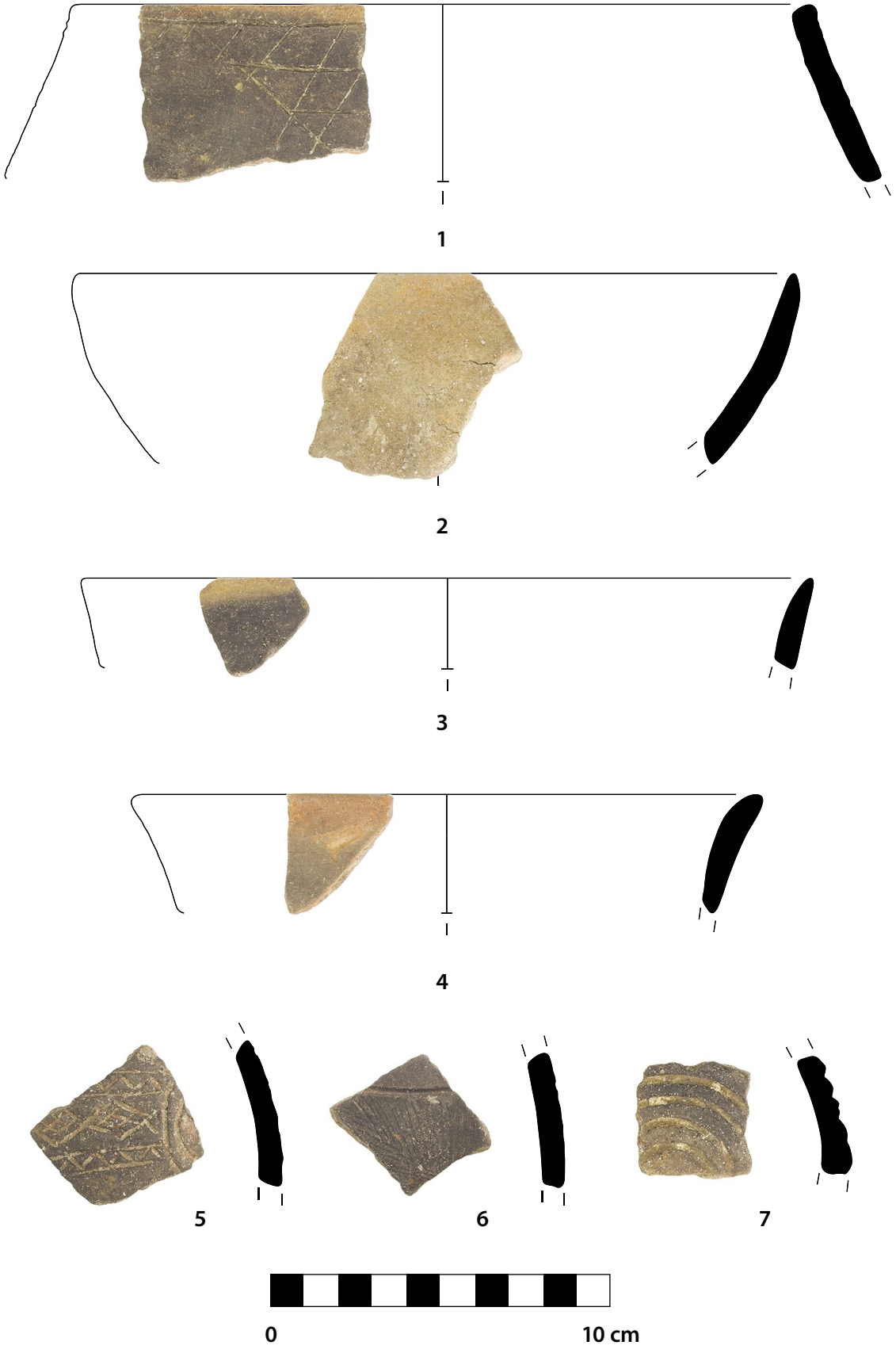
ZEDER, M. A., LAPHAM, H. A. 2010, Assessing the reliability of criteria used to identify postcranial bones in sheep, Ovis, and goats, Capra, *Journal of Archaeological Science*, 37, 2887–2905.

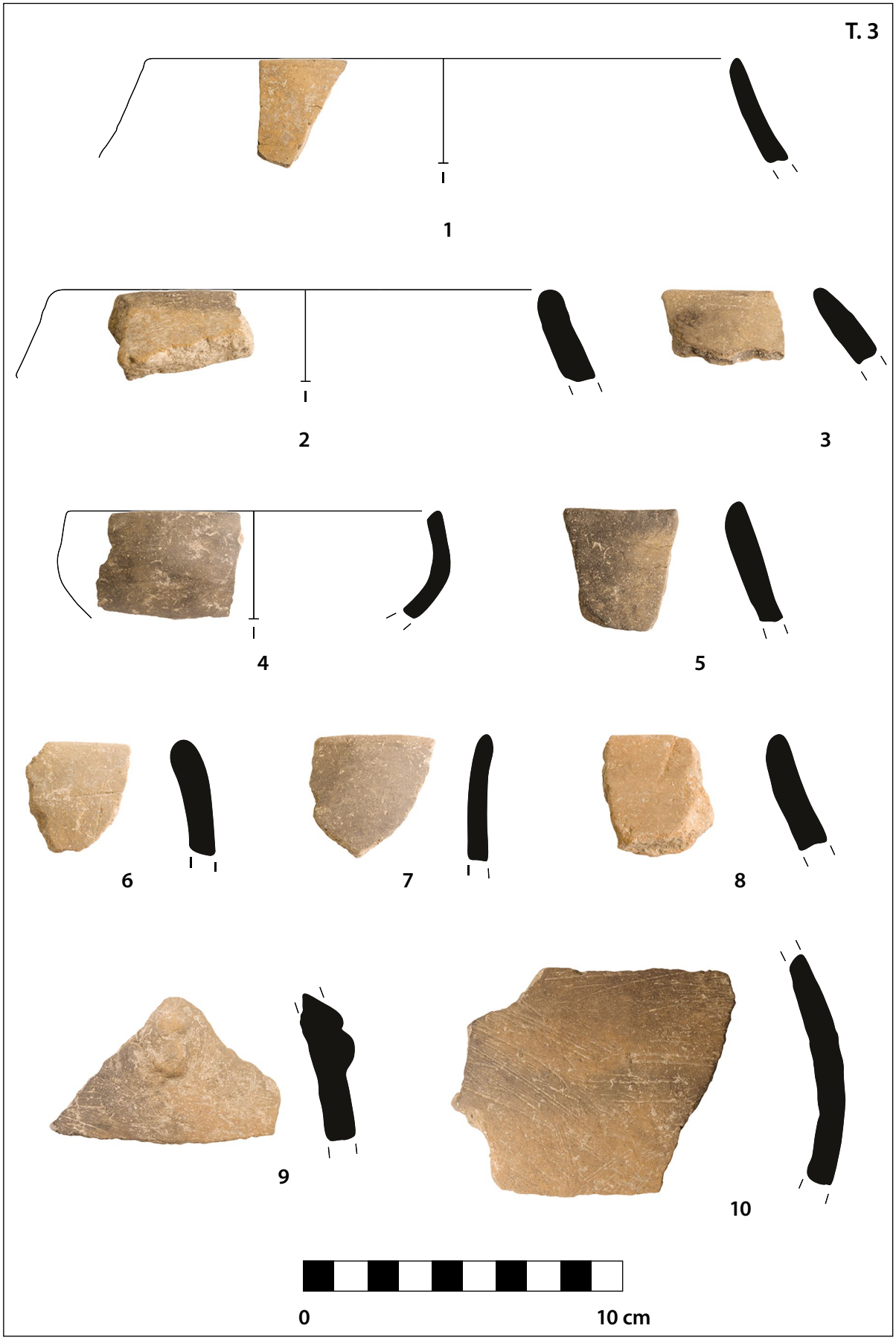
ZEDER, M. A., PILAAR, S. E. 2010, Assessing the reliability of criteria used to identify mandibles and mandibular teeth in sheep, Ovis, and goats, Capra, *Journal of Archaeological Science*, 37, 225–242.

ZOHARY, D., HOPF, M. (ur./eds.) 2012, *Domestication of plants in the Old World: the origin and spread of domesticated plants in south-west Asia, Europe, and the Mediterranean Basin*, Oxford: Oxford University Press.

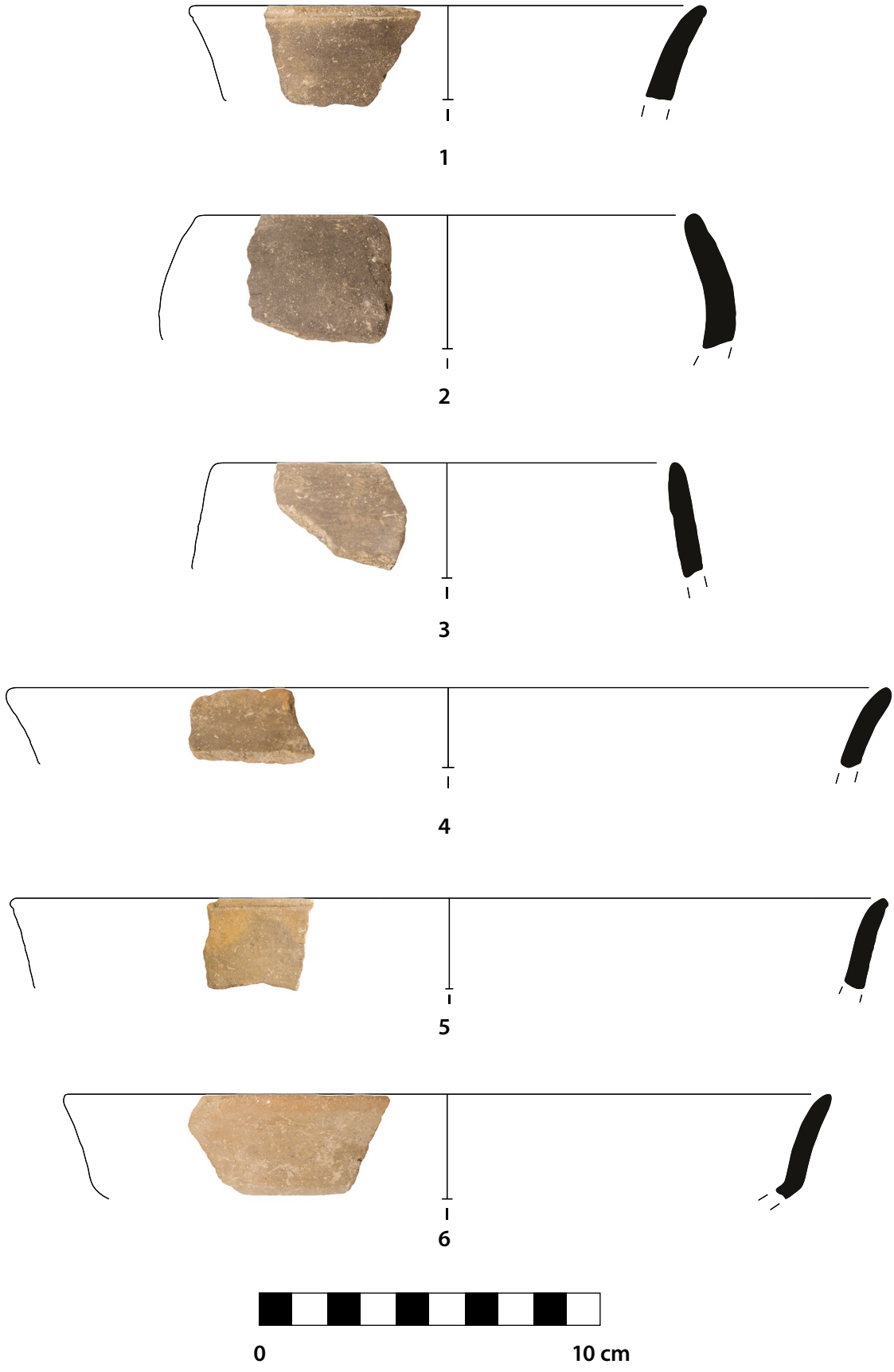

T. 1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
0
5 cm

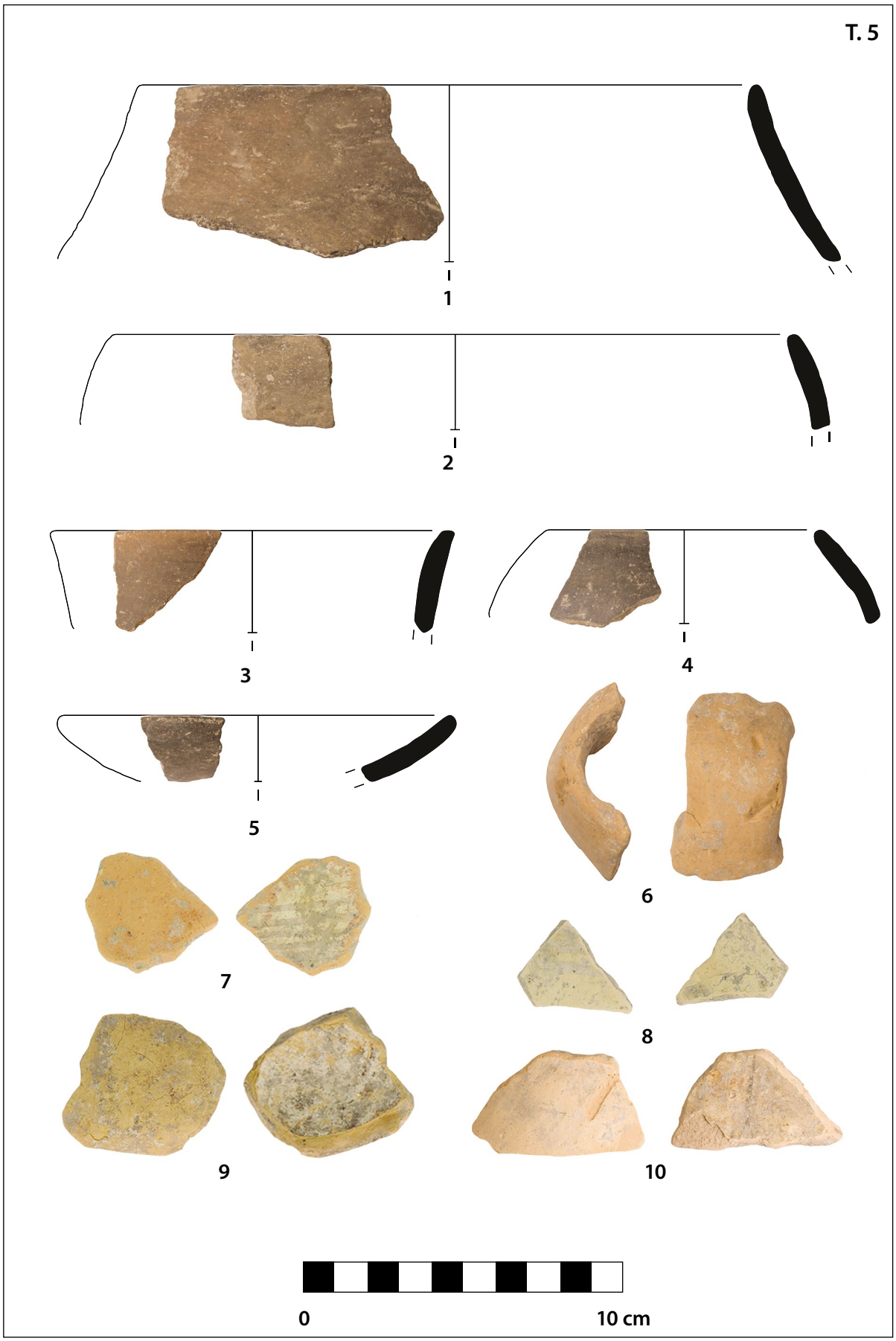
T. 2



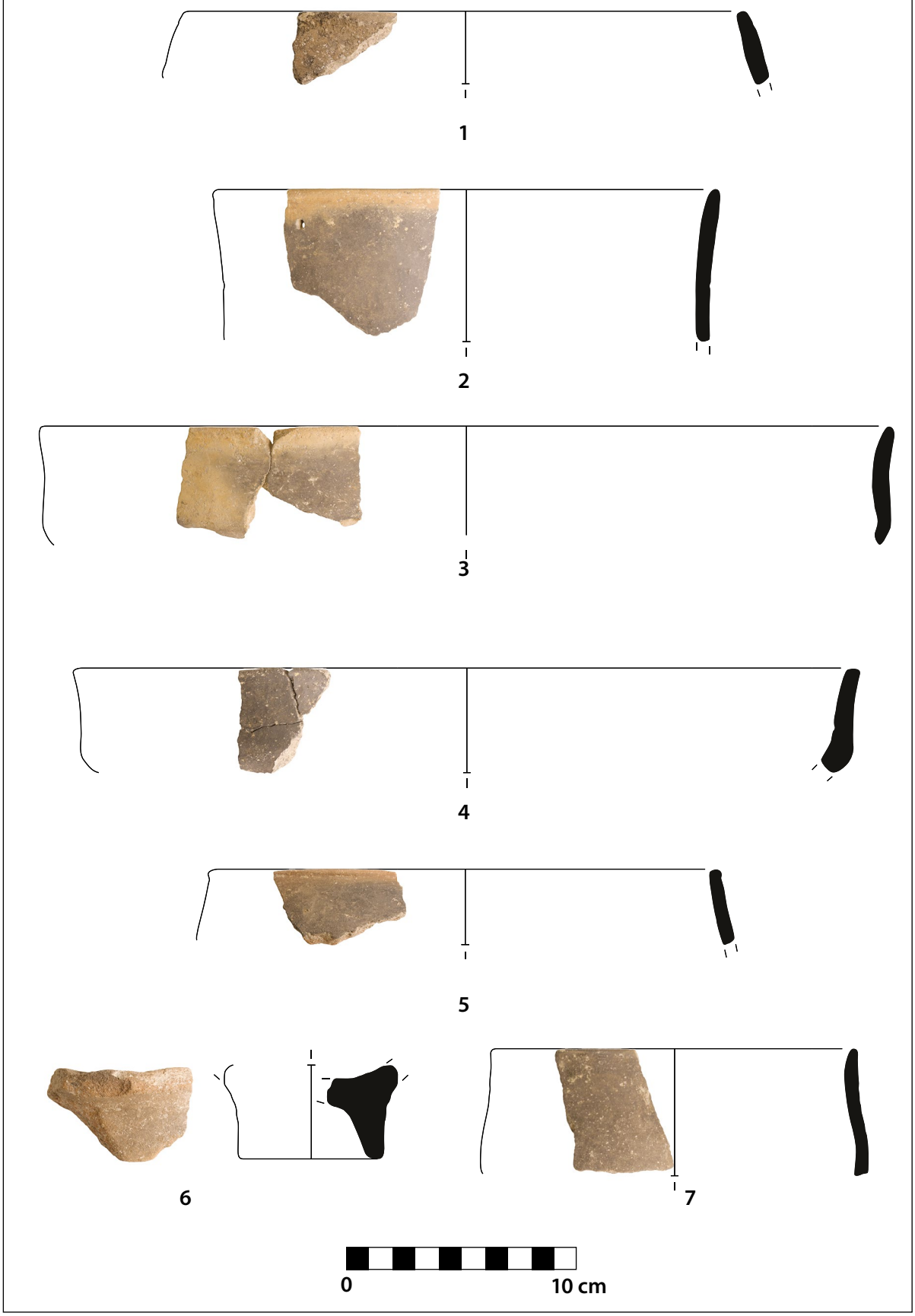

T. 3
1
2
3
4
5
6
7
8
9
10
0
10 cm

T. 4

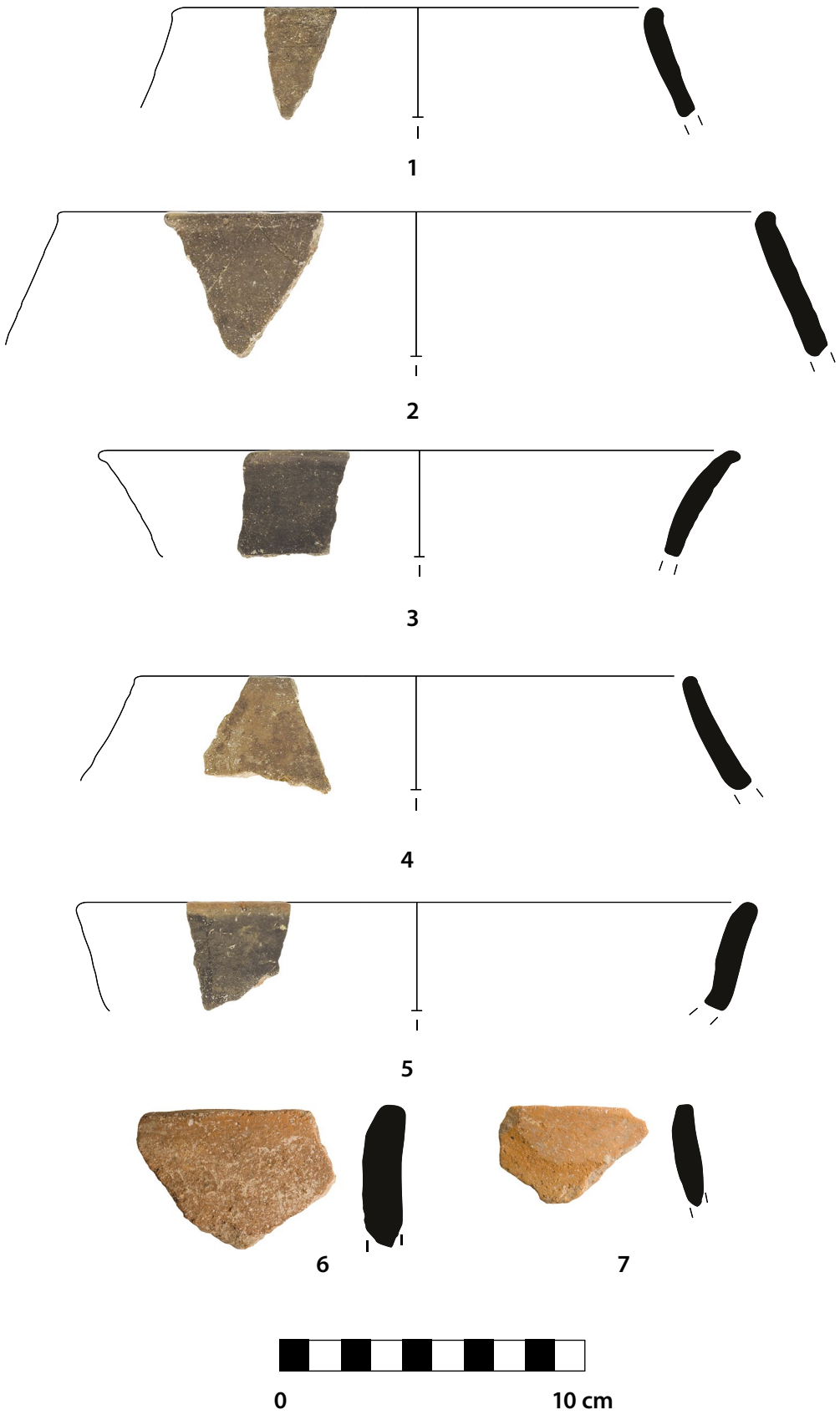



T. 5
1
2
3
4
5
6
7
8
9
10
0
10 cm

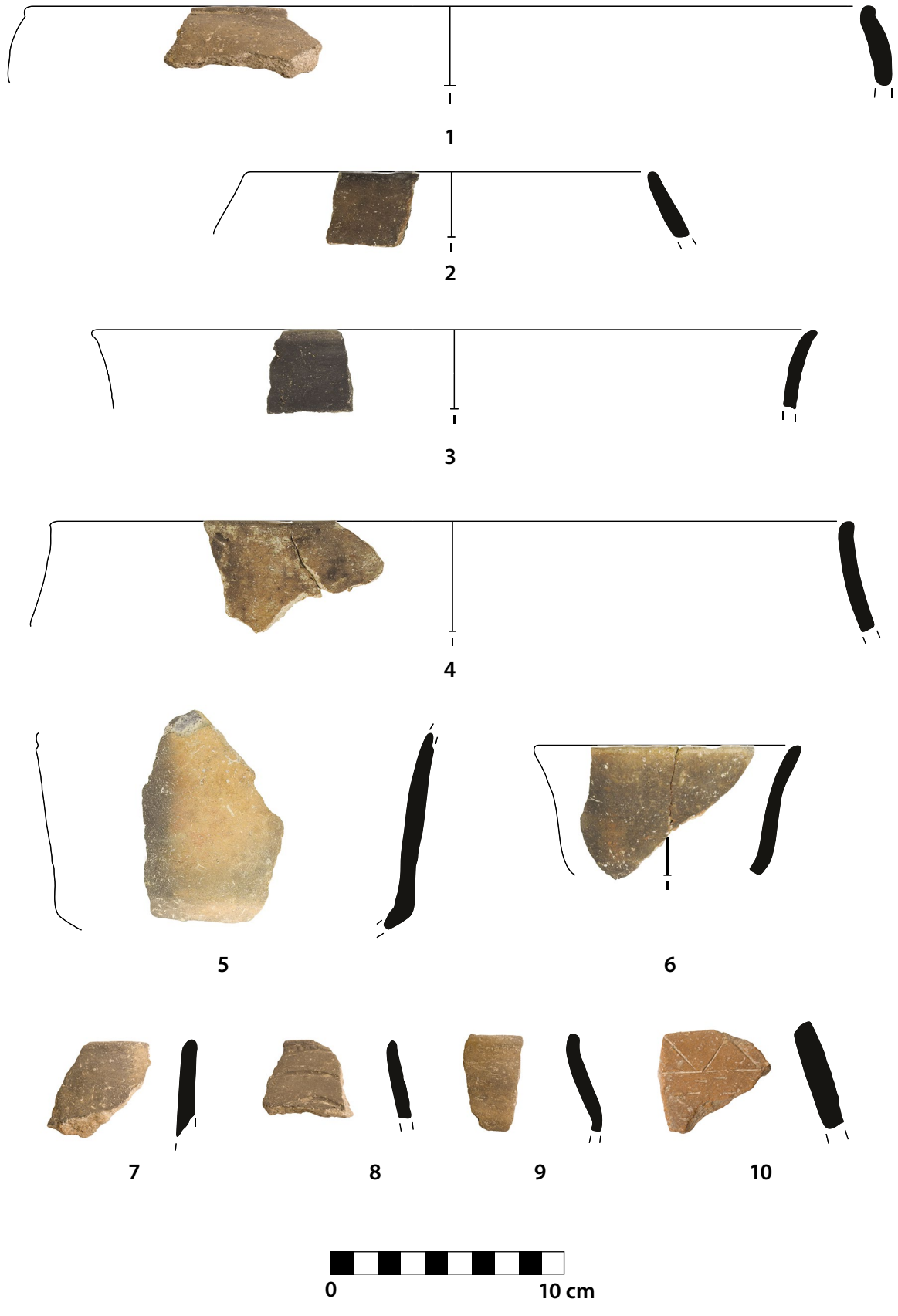
T. 6



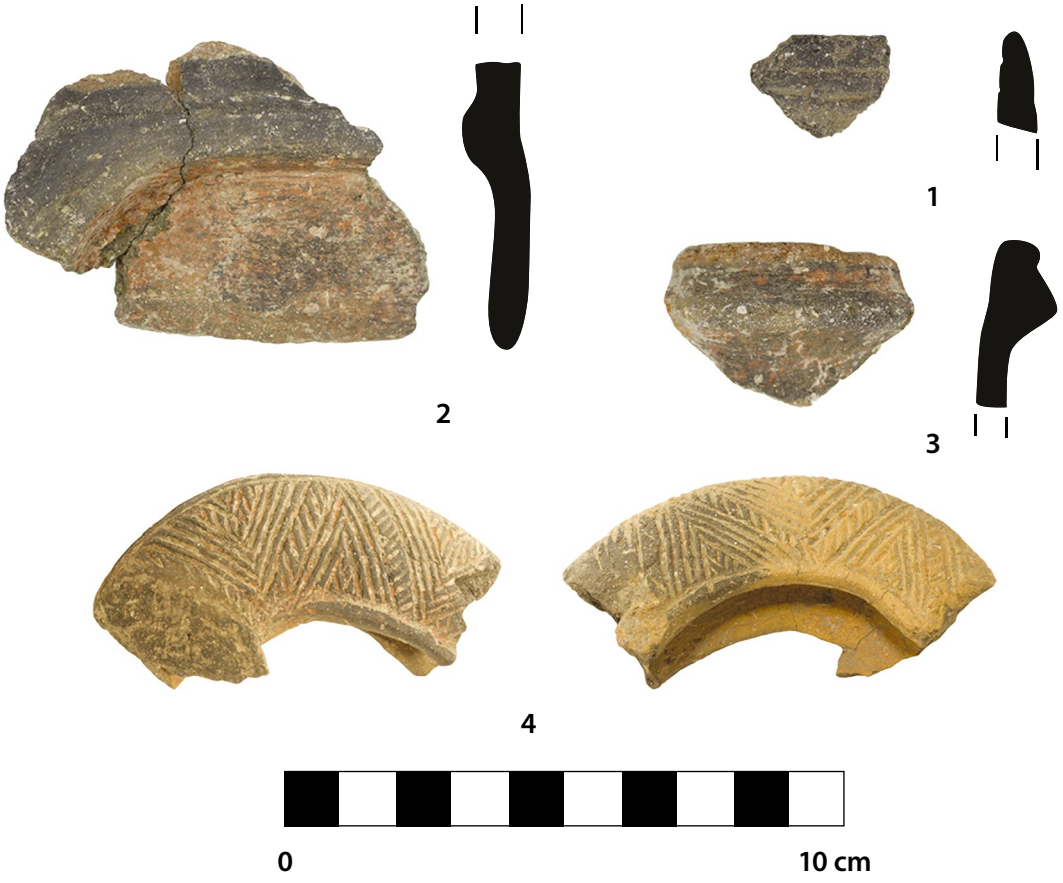
T. 7

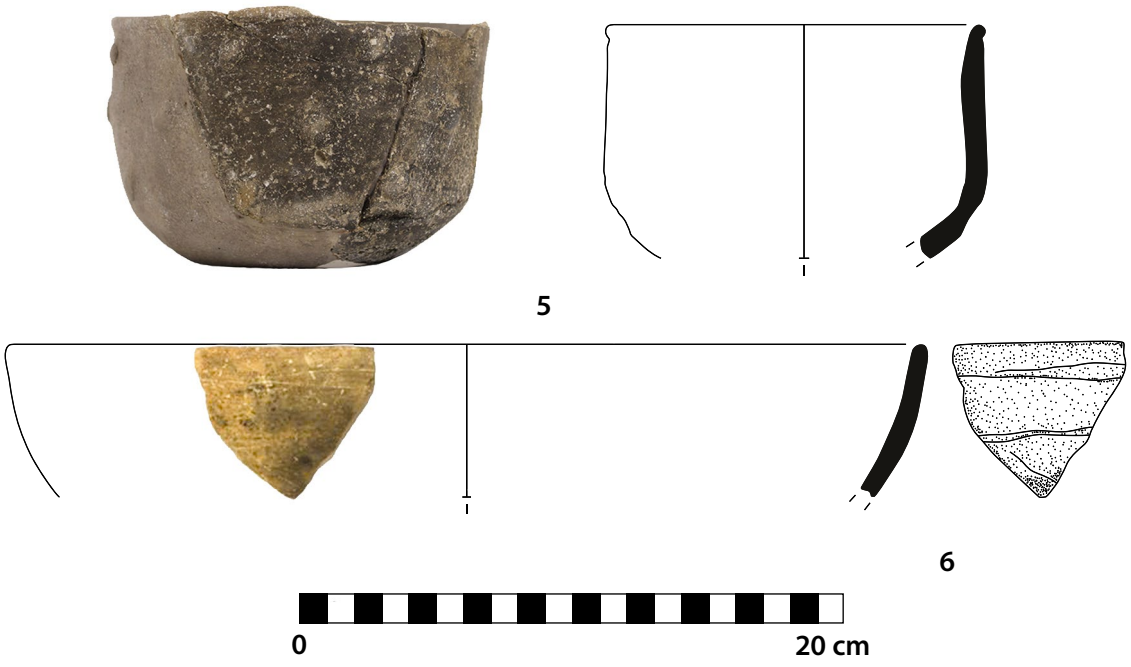


T. 8



T. 9





KAKVE VEZE IMAJU BREZOVLJANI S BUTMIROM?

WHAT DOES BREZOVLJANI HAVE TO DO WITH BUTMIR?

TIHOMILA TEŽAK-GREGL

Šubićeva 27
HR-10000 Zagreb
ttezak.gregl@gmail.com

UDK: "903.23(497.525.1Brezovljani)"634"
DOI: 10.15291/archeo.4680
Prethodno priopćenje / Preliminary report
Primljeno / Received: 2024-5-24
Prihvaćeno / Accepted: 2024-9-1

Ključne riječi:
Brezovljani, horizont lenđelske kulture Brezovljani-Lužianky-Sé, butmirska kultura, neolitik, keramika

Otkriće nekoliko ulomaka keramičkih posuda s karakterističnim stilskim obilježjima butmirske kulture na lokalitetu Brezovljani, nedaleko od Križevaca, koji se kulturno pripisuje protolenđelskom horizontu, potaknulo je ponovna promišljanja o odnosima dviju pojava: lenđelske i butmirske. Tim prije jer je i na lokalitetu Becsehely u južnom dijelu mađarske Transdanubije, koji uglavnom pripada lenđelskomu kulturnom krugu, uočena slična situacija prisutnosti butmirske keramike.

Key words:
Brezovljani, Lengyel cultural horizon of Brezovljani–Lužianky–Sé, Butmir culture, Neolithic, pottery

The unearthing of several fragments of ceramic vessels, with stylistic features characteristic of the Butmir culture, at the Brezovljani site (near Križevci), which has been attributed to the proto-Lengyel horizon, prompted a rethinking of the relations between two cultural phenomena: Lengyel and Butmir. This was reinforced by the fact that at Becsehely site, in the southern part of Hungarian Transdanubia, which pertains mainly to the Lengyel cultural circle, a similar situation – the presence of Butmir pottery – was also observed.

Kada se 1971. godine pri kopanju usjeka za proširenje ceste u selu Gornjim Brezovljanima kod Sv. Ivana Žabna u profilu pojavio niz jamskih objekata ispunjenih keramičkim i kamenim nalazima, nastavnik tamošnje škole o tome je obavijestio nadležni Gradski muzej u Križevcima koji je pokupio i dokumentirao nalaze. Oni su potom stavljeni na raspolaganje prof. Stojanu Dimitrijeviću koji je zaključio da je riječ o jednoj arhaičnijoj fizionomiji sopotske kulture. Smatrajući da je takav jedan oblik sopotske kulture nužno jasnije i potpunije definirati, osobito stoga što je bila riječ o krajnjoj zapadnoj granici rasprostiranja spomenute pojave, proveo je 1973. godine arheološko iskopavanje na površini od 193 m². Tako je otkrio dio jednoslojnoga neolitičkog naselja koje se rasprostiralo u širinu, na principu horizontalne stratigrafije.[1] Svjestan, dakle, da pronađena keramička građa sliči sopotskoj, a opet se dobrim dijelom i razlikuje od nje, odredio ju je kao regionalni, brezovljanski tip sopotske kulture u kojemu je uočio snažne utjecaje lenđelskoga kulturnog kruga, konkretno kulture Lužianky. No, i drugi su autori, mahom mađarski i slovački, ubrzo počeli povezivati Brezovljane s kulturom Lužianky u Slovačkoj i Sé u Mađarskoj pa se danas te pojave definiraju uglavnom kao protolenđelski horizont Lužianky-Sé-Brezovljani, odnosno formativna faza lenđelskoga kulturnog kompleksa.[2] Sustavna arheološka istraživanja u Brezovljanima koja su provođena od 2002. do 2016. (a povremeno se i dalje nastavljaju) sa svakim su novim nalazom potvrđivala prvotne pretpostavke o mjestu i ulozi brezovljanskog tipa i otkrivala sve više lenđelskih elemenata u njemu. No, s druge strane, pojavila se i keramika kakva nije uočena u prvim Dimitrijevićevim iskopavanjima, a koja svojim obilježjima usmjerava pogled i prema jugu. Zasad je pronađeno dvadesetak ulomaka keramike koji svojim oblikom i oso-

[1] DIMITRIJEVIĆ 1978.

[2] BARNA 2017: 26–27.

When in 1971 a number of pit-like structures filled with pottery and stone finds appeared in the dig profile of a cutting for a road extension in the village of Gornji Brezovljani near Sveti Ivan Žabno, a local schoolteacher informed the nearby Town Museum of Križevci, which collected and documented the finds. They were then passed on to Professor Stojan Dimitrijević, who interpreted them as a rather archaic feature of the Sopot culture. Convinced that such a form of Sopot culture needed to be more clearly and completely defined, particularly given that it occurred at the westernmost edge of the distribution of Sopot culture, in 1973 he conducted an archaeological campaign over a surface area of 193 m². He thereby discovered part of a single-layered Neolithic settlement that spread in width, based on horizontal stratigraphy.[1] Recognising that the unearthed pottery material resembled Sopot culture, yet significantly differed from it, he consequently defined it as a regional, Brezovljani variant of Sopot culture. In it, he noticed significant influences of the Lengyel cultural circle, specifically of Lužianky culture. Thereafter, other authors, mostly Hungarian and Slovak, also began to associate Brezovljani with Lužianky culture (in present-day Slovakia) and Sé culture (in present-day Hungary), with the result that nowadays such occurrences are defined mainly as the proto-Lengyel Lužianky–Sé–Brezovljani horizon, or the formative stage of the Lengyel cultural complex.[2] With each and every new find unearthed in the course of systematic archaeological excavations in Brezovljani (conducted from 2002 to 2016, with occasional campaigns still taking place), the Brezovljani-type location and role originally assumed were confirmed, and more Lengyel elements in it discovered. On the other hand, pottery not identified in Dimitrijević's first excavations also came to light, whose features shifted the perspective further south. To date, some twen-

[1] DIMITRIJEVIĆ 1978.

[2] BARNA 2017: 26-27.

bito ukrasom podsjećaju na butmirski keramički stil.[3] Riječ je uglavnom o vrlo finoj keramici tankih stijenki, sive do tamnosive boje uglačane površine. Tek tri primjerka pokazuju nešto grublju fakturu s krupnijim primjesama i svjetliju smećkastosivu boju površine. Ulomci su ukrašeni urezanim (T. I/4; II/1–2, 4, 6) ili udubljenim spiralnim motivima (T. I/2–3, 5–6; II/3, 5, 7–8; III/2–3) ponegdje s tragovima crvene boje. Za istovrsnu keramiku poznatu s lokaliteta Obre II – Gornje polje A. Benac navodi kako se čini da su se ti ukrasi na nekim posudama izvodili nakon pečenja pa su rubovi ornamenta „izgrecani", a zavoji nedovoljno pravilni.[4] Brezovljanski su ulomci vjerojatno bili dijelovi kuglastih posuda s malo naglašenim ili potpuno ravnim dnom, uvučenog i nenaglašenog otvora što je razvidno na nekoliko komada (T. II/3, 5–6, 8; III/1, 3). Takvi su oblici tipični i u butmirskoj keramografiji.[5]

Spomenuti ulomci pronalaženi su u Brezovljanima tijekom istraživačkih kampanja 2005., 2008. i 2012. godine, a jedan je ulomak naknadno uočen među površinskim nalazima prikupljenima tijekom prvih istraživanja. Najveći broj ulomaka bio je u ukopanom objektu radno označenom kao SJ 209, poslije određenom kao zemunica, potom u zemunici SJ 266, radnoj jami SJ 376 te u kulturnom sloju ispod sloja oranja, dakle u različitim kontekstima. Veći dio dosad istraženog dijela naselja u Brezovljanima premrežen je različitim ukopanim, odnosno jamskim objektima, a tek su u jednom slučaju utvrđeni ostatci podnice nekoga nadzemnog objekta.[6] Spomenuta zemunica SJ 209, smještena u sjevernom dijelu naselja, relativno je prostrani

ty potsherds have been found, whose shape and particularly decoration resemble the Butmir pottery style.[3] Mostly they are parts of very fine thin-walled ceramics of grey to dark grey colour with a smoothed surface. Only three specimens display a rather coarse fabric with rather large temper material and a lighter brownish-grey surface colour. The sherds are decorated with incised (Pl. I/4; II/1–2, 4, 6) or recessed spiral motifs (Pl. I/2–3, 5–6; II/3, 5, 7–8; III/2–3) with traces of red colour in places. Of identical pottery known from the Obre II – Gornje Polje site, A. Benac states that on some vessels the decorations seem to have been applied after firing, making the ornament edge margins appear "scratched", and the curves somewhat irregular.[4] The Brezovljani sherds were probably parts of spherical vessels with slightly accentuated or completely flat bottoms, and recessed and unaccentuated mouths, as is evident on several pieces (Pl. II/3, 5–6, 8; III/1, 3). Such forms are also typical of Butmir ceramics.[5]

The sherds were found in Brezovljani in the excavation campaigns of 2005, 2008 and 2012, while a fragment was spotted subsequently among surface finds collected during the first excavations. The largest number of sherds were found in a buried structure marked as SU 209 and subsequently identified as a pit dwelling, followed by pit dwelling SU 266, the work pit SU 376 and in the cultural stratum below the ploughed layer – thus, in different contexts. A major part of the excavated settlement in Brezovljani has a network of various sunken structures or pit dwellings; there has only been one isolated find of the base remains of an aboveground structure.[6] The pit dwelling SU 209, located in the northern part of the settlement,

[3] MARKOVIĆ, OKROŠA ROŽIĆ 2017. Uvid u materijal i dokumentaciju omogućila mi je mr. sc. Lana Okroša Rožić, muzejska savjetnica Gradskog muzeja u Križevcima na čemu joj najsrdačnije zahvaljujem. Također joj zahvaljujem na svim dodatnim podatcima kao i fotografijama.

[4] BENAC 1971: 126.

[5] BENAC 1979: 126; HOFMANN 2013: 171–179, 181, Abb 86.

[6] OKROŠA ROŽIĆ 2002: 9, sl. 3; 2015: 400.

[3] MARKOVIĆ, OKROŠA ROŽIĆ 2017. Most cordial thanks to the museum adviser of the Križevci Town Museum Lana Okroša Rožić, MSc, for providing me access to material and documentation, as well as for all additional information, and for the photos.

[4] BENAC 1971: 126.

[5] BENAC 1979: 126; HOFMANN 2013: 171-179, 181, Abb. 86.

[6] OKROŠA ROŽIĆ 2002: 9, Fig. 3; 2015: 400.

ukopani objekt (5,40 x 5,10 m) koji čine dva kružna prostora, jedan promjera 1,90 m, a drugi 1,80 m, dubine između 1,48 i 1,80 m, odvojena pregradnim zidom. Uz zapadni dio objekta nalazi se manji, pliće ukopani prostor, dok se u sjeveroistočnom dijelu ističe povišeni plato.[7] Osim veličinom, tlorisom i unutarnjom organizacijom prostora, ovaj je naseobinski objekt bio izniman i po svojem sadržaju te je očito zauzimao osobito mjesto u naselju. Kao većina ostalih ukopanih objekata nije imao nikakvih tragova gornje konstrukcije, tj. tragova stupova, ali profilacija njegovih rubova možda je omogućavala i drukčiji tip gornje konstrukcije.[8] Naime, već kod prvih istraživanja S. Dimitrijević pokušao je riješiti rekonstrukciju gornjih dijelova ukopanih objekata na dva moguća načina oslanjanjem drvenih greda ili stupova o stepenasto profilirane rubove jama (ili kako ih je on nazvao „bankove").[9]

Među građom otkrivenom u objektu posebnu je pozornost privukla osebujno stilizirana figurica koja ima malu, čepasto oblikovanu glavu, plosnato, gotovo četverokutno poprsje s plastično naznačenim grudima i izdignutim širokim ramenima.[10] Plastično naglašeno vodoravno rebro ispod grudi možda prikazuje ruke. U sačuvanom donjem dijelu figure uočava se pravilno probušena rupa. Prema tome, kao i prema načinu kako je oblikovan stražnji donji dio figure, moglo bi se pretpostaviti da je ona bila dio ručke neke posebne posude. Površina figurice nejednolike je boje, dijelom oker, dijelom gotovo crne, a naziru se i tragovi crvene boje. Osim ove figurice, u navedenom je objektu bilo i fino obrađeno sječivo od crvenosmeđeg rožnjaka duljine 11,5 cm, glačani kalupasti klin duljine 10 cm, crna, dobro uglačana minijaturna trape-

was a relatively spacious sunken structure (5.40 x 5.10 m) consisting of two circular rooms with diameters of 1.90 m and 1.80 m respectively, between 1.48 and 1.80 m deep, and separated by a partition wall. Adjoining the western part of the structure is a smaller, shallower buried room, while in the north-eastern part there is an elevated platform.[7] The structure was exceptional not only in terms of its size, groundplan and interior spatial plan, but also of its content, as it clearly occupied a special place in the settlement. As is the case with most other sunken structures, there were no traces of any upper construction (that is, traces of piles), but the profile of its margins possibly allowed also a different type of upper construction.[8] Even during the first excavation campaigns, S. Dimitrijević addressed the reconstruction of the upper parts of the sunken structures in two possible ways: with wooden beams or with piles resting on stepped profiles of the pit margins (which he called "banks").[9]

Among the material unearthed in the structure, particularly interesting is a peculiarly stylised figurine with a small, cork-shaped head, a flat, almost square bust with an outlined plastic chest and raised wide shoulders.[10] The accentuated plastic horizontal rib under the chest might represent arms. The preserved lower part of the figurine has a regularly pierced hole. This, in addition to the way the back lower part of the figurine was formed, suggests part of a handle of a special vessel. The figurine surface colour is uneven, partly ochre, partly almost black, with traces of red colour also visible. In addition to this figurine, also found in the structure were a finely worked 11.5-cm-long blade made of red-brown chert; a 10-cm-long iron shoe-last celt; a black, well-smoothed miniature trape-

7 OKROŠA ROŽIĆ 2006: 109.

8 Ipak valja naglasiti da je 2002. otkriven poveći jamski objekt u kojemu je bilo moguće uočiti tragove većeg broja ukopanih stupova koji su mogli nositi nadzemnu konstrukciju (MARKOVIĆ, OKROŠA 2003: 31, sl. 1).

9 DIMITRIJEVIĆ 1978: 82–83, sl. 8–9.

10 OKROŠA ROŽIĆ 2006: 110.

7 OKROŠA ROŽIĆ 2006: 109.

8 However, it should be noted that in 2002 a comparatively large pit structure was uncovered in which traces of a large number of buried piles were identified that might have carried the above-ground construction (MARKOVIĆ, OKROŠA 2003: 31, Fig. 1).

9 DIMITRIJEVIĆ 1978: 82-83, Figs. 8-9.

10 OKROŠA ROŽIĆ 2006: 110.

zasta sjekirica, keramička šaka s pet urezanih prstiju, vjerojatno također dio ručke neke posude, fragmentirana figurica tipa Sé, ulomak antropomorfne posude kakve su također poznate s lokaliteta Sé, zoomorfno oblikovane ručke posuda, te više ulomaka fine, crveno-žuto oslikane keramike.[11] Navedeni keramički predmeti savršeno se uklapaju u stilska obilježja protolenđelske keramike i najviše paralela imaju upravo u naselju Sé, nedaleko od Sombathelya u zapadnoj Mađarskoj.[12]

Slična situacija poznata je i na lokalitetu Becsehely u Transdanubiji pripisanom transdanubijskoj linearnotrakastoj keramici u ranijoj fazi te sopotskoj kulturi u kasnijoj.[13] No, tamošnja sopotska keramika znatno je bliža brezovljanskom tipu negoli klasičnoj sopotskoj. Među tom keramikom uočeno je i nekoliko ulomaka ukrašenih udubljenim spiralnim motivima s tragovima boje sasvim u butmirskom stilu, te ulomak jedne, očito piriformne posude, u gornjem dijelu također ukrašene urezanim spiralnim motivima.[14] Za spomenute ulomke autori pretpostavljaju butmirsko ili danilsko podrijetlo, navodeći neke paralele s lokaliteta Obre II i Danilo.[15]

Zanimljivo je napomenuti kako Dimitrijevića u njegovoj prvoj objavi brezovljanske građe jedan oblik posude, tzv. kupa na niskoj prstenastoj nozi, podsjeća na kakanjske kupe na nozi, ali zaključuje „da s kakanjskom kulturom brezovljanski tip u vremenskom smislu ni u kojem slučaju neće moći korespondirati".[16] Ipak, u bilješci koja slijedi ustanovljuje da se taj oblik nastavlja i u ranoj fazi butmirske kulture.[17] To je bio prvi spomen nekakve veze brezovljanskog tipa sopotske kulture s prostorom srednje Bosne iako Dimitrijević u svojim detaljnim analizama

[11] OKROŠA ROŽIĆ 2013: kat. jedinice 52, 43, 45, 32; OKROŠA ROŽIĆ, MARKOVIĆ 2017: 6–7, Sl. 4, 7-15.
[12] KAROLYI 2011.
[13] KALICZ, KREITER, TOKAI 2007: 33–40.
[14] KALICZ, KREITER, TOKAI 2007: Abb. 5/14, 16–17.
[15] KALICZ, KREITER, TOKAI 2007: 36.
[16] DIMITRIJEVIĆ 1978: 88.
[17] DIMITRIJEVIĆ 1978: bilj. 23.

zoidal axe; a ceramic fist with five carved fingers, probably another part of a vessel handle; a fragmented Sé-type figurine; a fragment of an anthropomorphic vessel of the type also known from the Sé site; zoomorphic vessel handles; and several sherds of fine painted red-yellow pottery.[11] The ceramic artefacts perfectly fit into the stylistic features of proto-Lengyel pottery and have most analogies in the settlement of Sé in the vicinity of Szombathely in western Hungary.[12]

A similar situation is attested to at the Becsehely site in Transdanubia, attributed to the earlier phase of Transdanubian Linear Band Ware and later phase of Sopot culture.[13] However, the local Sopot pottery is much closer to that of Brezovljani than to the classical Sopot type. Also identified among the pottery were several sherds decorated with deep spiral motifs with traces of colour, completely in Butmir style, and a sherd of a clearly pear-shaped vessel, its upper part also decorated with incised spiral motifs.[14] The authors assume that the sherds are of Butmir or Danilo origin, quoting some analogies from the Obre II and Danilo sites.[15]

It is interesting to note that, in his first publication of the Brezovljani material, Dimitrijević found a particular vessel form – a drinking cup on a low ring-shaped foot – reminiscent of Kakanj drinking cups, but concluded that *the Brezovljani type by no means corresponds with Kakanj culture in terms of chronology.*[16] However, in a subsequent note, he stated that this form continued also in the early stage of Butmir culture.[17] This was the first mention of any links between the Brezovljani type of Sopot culture and the area of Central Bosnia, although, in his detailed analysis of the stylistic characteristics of Brezovljani pottery, while seeking analogies

[11] OKROŠA ROŽIĆ 2013: cat. units 52, 43, 45, 32; OKROŠA ROŽIĆ, MARKOVIĆ 2017: 6-7, Figs. 4, 7-15.
[12] KAROLYI 2011.
[13] KALICZ, KREITER, TOKAI 2007: 33-40.
[14] KALICZ, KREITER, TOKAI 2007: Abb. 5/14, 16-17.
[15] KALICZ, KREITER, TOKAI 2007: 36.
[16] DIMITRIJEVIĆ 1978: 88.
[17] DIMITRIJEVIĆ 1978: n. 23.

stilskih karakteristika brezovljanske keramike, tražeći analogije i sličnosti u suvremenim kulturnim pojavama, nigdje više ne spominje butmirsku kulturu.

Arheološki nalazi koji povezuju lenđelski i butmirski kulturni krug zapravo nisu ništa neobično. Određene veze između Butmira i Lengyela odavno su uočene. Podsjetimo samo na to da je Alojz Benac 1967. godine sudjelovao na simpoziju o lenđelskoj kulturi u Nitri. Svoje je izlaganje, naslovljeno *Entwicklungsphase der Butmir-Kultur*, poslije objavljeno u časopisu *Študijne zvesti*, započeo konstatacijom da se područje rasprostiranja butmirske kulture nalazilo daleko od Dunava gdje je ishodišno područje lenđelskih kultura.[18] Smatrao je da bi se, stoga, moglo postaviti pitanje opravdanosti teme o butmirskoj kulturi na simpoziju o lenđelskim kulturama. No, odmah potom zaključuje da je to samo prvi dojam, a sudjelovanje na spomenutom skupu bilo je opravdano iz dvaju razloga: prvo, jer su već tada mnogi autori raspravljali o odnosima dviju kultura, i drugo, jer su doista u objema kulturama prisutni neki kulturni elementi koji se moraju uzeti u obzir kad se razmatra neolitički svijet Podunavlja i Balkana. Ishodište za raspravu pružili su mu u prvom redu lokaliteti Obre II – Gornje polje u dolini rijeke Trstionice i Okolište u dolini Bosne. Važno je naglasiti kako najvažniji lokaliteti butmirske kulture leže upravo u dolini rijeke Bosne, njezina gornjeg i srednjeg toka te njezinih pritoka.

U svojoj opsežnoj objavi rezultata istraživanja i arheoloških nalaza s lokaliteta Obre II – Gornje polje, Benac se ponovno dotaknuo utjecaja panonsko-lenđelskih kultura na butmirsku.[19] Analizirajući keramičke nalaze iz I. faze, tj. faze nastanka samog naselja, u kategoriji fine keramike uočava kakanjske keramičke elemente, danilske, lenđelsko-panon-

[18] BENAC 1969: 19.
[19] BENAC 1971: 113–114.

and similarities in contemporary cultural phenomena, Dimitrijević made no more mentions of Butmir culture.

Archaeological finds linking the Lengyel and Butmir cultural circles are, in fact, not unusual, specific links between the two having long been observed. It should be recalled that Alojz Benac participated in a Lengyel culture symposium in Nitra in 1967. His presentation, entitled *Entwicklungsphase der Butmir-Kultur*, later published in the journal *Študijne zvesti*, began with the observation that the Butmir-culture distribution area was far from the Danube, where the Lengyel cultures originated.[18] This, he thought, might raise the question of the validity of Butmir culture being discussed at a Lengyel culture symposium. However, he immediately pointed out that this was merely a preliminary impression, and participating in the symposium was justified for two reasons: firstly, many authors had already discussed the relations between the two cultures, and secondly, present in both cultures were some cultural elements that certainly had to be taken into account in a consideration of the Neolithic world of the Danube Region and the Balkans. As a starting point for the discussion, he chose in the first place the sites of Obre II – Gornje Polje in the Trstionica river valley, and Okolište in the Bosna valley. It is important to emphasise that the most important Butmir culture sites are situated precisely in the valley of the River Bosna – its upper and middle course, and its tributaries.

In an extensive publication of excavation results and archaeological finds from Obre II – Gornje Polje, Benac again touched upon the influence of Pannonian-Lengyel cultures on Butmir culture.[19] Analysing pottery finds from stage I (in which the settlement was established), in the fine-ware category he identified elements of Kakanj, Danilo, Lengyel-Panno-

[18] BENAC 1969: 19.
[19] BENAC 1971: 113-114.

ske, crnoglačane i butmiroidne.[20] Danilskim keramičkim elementima prije svega smatra slikanu keramiku koja je prema njemu rađena tehnikom potpuno stranom keramičkim izrađevinama u Kaknju, pa stoga ne može činiti autohtonu bazu.[21] Drugi važan danilski element jesu udubljeni spiralni ornamenti koji se po njemu kompozicijom približavaju pravim butmirskim ornamentima. Lenđelsko-panonskom smatra crveno-žuto bojenu keramiku, crnu i tamnosivu keramiku s crvenim trakastim ornamentima i tamnosivu, dobro uglačanu keramiku ukrašenu posebnim trakastim ukrasom.[22] U kategoriju koju je nazvao butmiroidnim keramičkim elementima uvrstio je pojavu zatvorenih kuglastih oblika posuda, prve piriformne posude te udubljene spiralne i spiraloidne motive koji se pojavljuju samostalno ili u kombinaciji s nekim drugim ukrasima. U II. fazi naselja, međutim, ne uočava više tako izražene pojedine strane elemente u keramici, nego su oni uključeni u prepoznatljivi butmirski spiralno-trakasti stil: „U ovoj keramičkoj vrsti (spiralno-trakasta keramika) sublimirana je prava suština umjetničkog izraza butmirske kulture."[23] Prema Bencu dodiri između butmirske i lenđelske keramike ponajprije se očituju u oblicima. U oba slučaja prevladavaju kuglasti i piriformni oblici, a prisutne su i kuglaste posude s visokim cilindričnim vratom. Zajednički im je i spiralni ornament koji je, međutim, u lenđelskim kulturama uglavnom slikan, a u butmirskoj urezan ili udubljen. I, konačno, povezuje ih i postupak oslikavanja posuda nakon pečenja crvenom i žutom bojom. Benac vidi kronološku vezu butmirske s posljednjom fazom Želiezovce (Zseliz) grupe i ranom fazom lenđelske (Lengyel I).[24] Nekim oblicima bikoničnih crnoglačanih zdjela paralele vidi i u materijalu s lokaliteta Bicske.

[20] BENAC 1971: 108.
[21] BENAC 1971: 109.
[22] BENAC 1971: T. XXXVI 13–14.
[23] BENAC 1971: 126.
[24] BENAC 1971: 154.

nian, black smoothed and Butmir-like wares.[20] According to Benac, characteristic Danilo ware was, in the first place, painted ware, in his opinion manufactured using a technique completely foreign to pottery artefacts from Kakanj and not capable of forming an autochthonous base.[21] Another important characteristic of Danilo culture was recessed spiral ornaments whose composition, in his view, came closer to authentic Butmir ornaments. Lengyel-Pannonian was red-yellow coloured ware, black and dark grey ware with red banded ornaments, and dark grey, well-smoothed ware decorated with a special banded ornament.[22] He categorised the forms of closed spherical vessel and of the first pear-shaped vessels, as well as the recessed spiral and spiraloid motifs (which appear independently or in combination with other ornaments) as Butmir-like pottery elements. However, in the settlement's stage II he identified no more obvious individual foreign elements in the ceramics; on the contrary, they were rather part of the recognisable Butmir spiral-banded style: *This pottery type (spiral-banded ware) sublimates the essence of Butmir-culture artistic expression.*[23] According to Benac, the common features of Butmir and Lengyel wares are primarily manifested in their forms. In both cases, spherical and pear-shaped forms prevail, while also represented are spherical vessels with a high cylindrical neck. Another common characteristic is a spiral ornament; however, in Lengyel cultures this is mostly painted, while in Butmir culture it is incised or recessed. Lastly, both applied the same process of painting the vessels red and yellow after firing. Benac identified a chronological link of Butmir culture with the last phase of Želiezovce (Zselíz) and the early phase of Lengyel (Lengyel I) groups.[24] He compared some forms of biconical black smoothed bowls with their analogies

[20] BENAC 1971: 108.
[21] BENAC 1971: 109.
[22] BENAC 1971: Pl. XXXVI 13-14.
[23] BENAC 1971: 126.
[24] BENAC 1971: 154.

No, dok Makkay za te nalaze smatra da su nastali pod utjecajem vinčanske keramike, Benac drži da je to dio istog procesa odnosno tzv. metalizirajućeg šoka koji je takve oblike donio i u butmirsku keramografiju.[25] Na kraju postavlja pitanje odakle proizlaze takve formalne veze: iz određene genetske podudarnosti ili međusobnih kulturnih dodira? Odgovor je dao u sljedećem zaključku: „… lengyelski elementi uopće nisu brojni i kreću se u okviru vrlo umjerenih kulturnih dodira i međusobnih utjecaja između centralne Bosne i Panonije", dakle lenđelske keramičke elemente iz I. faze Obra II treba promatrati u svjetlu povremenih odnosa.[26]

No, može se postaviti još jedno pitanje. Je li keramika s lenđelskim obilježjima doista importirana iz panonskog područja ili tek stilom ukrasa oponaša takvu keramiku? Kako navodi Benac, dio crveno-žuto slikane keramike oblikom i ukrasom bliži je panonskom prostoru, ali fakturom je sličan ili identičan lokalnoj keramici pa ne bi moglo biti govora o uvozu gotovih proizvoda. Osim toga, pastozno slikanje koje se lako otire ne bi bilo prikladno za dulji transport. No, s druge strane, pojedini primjerci i tehnički, odnosno fakturom odudaraju od domaće robe.[27] U kontekstu ovakvih razmišljanja mogli bismo Brezovljane vidjeti kao posrednika ili svojevrsnu postaju između lenđelskoga i butmirskoga neolitičkog svijeta.

Slična pitanja možemo ponoviti u vezi s nalazima keramike s butmirskim stilskim obilježjima u Brezovljanima. Naravno, i ovdje bi trebalo prvo točno utvrditi je li riječ o stvarnom importu pristiglom odnekud iz središnje Bosne ili samo o imitacijama stranoga keramičkog stila proizvedenima lokalno. Za to bi trebalo provesti detaljne analize lončarske sirovine (gline i primjesa) od koje su posude izrađene, ali i glinovitih sedime-

from the Bicske site. However, while Makkay believed that these finds were created under the influence of Vinča pottery, Benac believed that they were part of the same process, the so-called metallising shock that brought such forms also into Butmir ware.[25] Eventually, the question arises as to the origin of common formal features: were they a result of a certain genetic interaction, or rather of cultural interrelations? He offered an answer to this question in the following conclusion: *There are not many Lengyel elements, and they range within very moderate cultural touches and mutual influences between central Bosnia and Pannonia*; it follows that Lengyel ware elements from Obra II phase I are to be considered a result of occasional relations.[26]

Nevertheless, one more question arises: is the pottery with Lengyel characteristics really an import from the Pannonian area, or is it just an imitation of the latter's decorative style? According to Benac, the forms and decorations of a part of the red-yellow painted ware come closer to that of the Pannonian region; however, given that the ware fabric is similar or identical to local ware, it was definitely not imported finished ware. What is more, a paste painting that can easily be wiped off would not be suitable for long-distance transportation. On the other hand, individual specimens stand out in terms of technology and fabric compared to local ware.[27] In this context, we might interpret Brezovljani as being a sort of halfway house between the Lengyel and Butmir Neolithic worlds.

Similar questions re-emerge regarding finds of pottery with Butmir stylistic features in Brezovljani. Of course, here, too, it should first be determined whether they were an actual import from central Bosnia, or rather locally produced imitations of foreign pottery. This would require detailed analyses of raw material (clay and

[25] BENAC 1971: 154.
[26] BENAC 1971: 165.
[27] BENAC 1971: 156.

[25] BENAC 1971: 154.
[26] BENAC 1971: 165.
[27] BENAC 1971: 156.

nata s potencijalnih izvorišta u okolici samih lokaliteta te proučiti tehnike oblikovanja i procese pečenja. No, bilo da je riječ o stvarnom importu ili tek imitacijama, ono što je nedvojbeno jest činjenica da promatrani nalazi upućuju na povezanost između neolitičkih zajednica na daleko širem prostoru nego što to često predmnijevamo, u konkretnom slučaju između prostora središnje Hrvatske i srednje Bosne. Trgovina i razmjena i u pradavnim su vremenima uvijek pronalazile putove komunikacije, svladavajući teritorijalne, ali i vremenske prepreke. Kad je riječ o neolitiku, onda prvo mislimo na trgovinu određenim sirovinama, poglavito kamenim. I u tom nam se smislu veze južnih panonskih prostora, koji ne obiluju kvalitetnim kamenim sirovinama, s područjem sjeverne i srednje Bosne nameću same od sebe. Uostalom, one su već i jasno potvrđene, primjerice analizama kamenih izrađevina pronađenih na slavonskim lokalitetima starčevačke kulture koje su pokazale da je glavna sirovina dolazila iz primarnih ležišta južno od Save, a tek su se u manjoj mjeri rabili oblutci iz korita rijeke Save ili s ušća njezinih bosanskih pritoka.[28] U Brezovljanima je pronađena znatna količina lomljene, pa i glačane litike. Nažalost, detaljnije mineraloško-petrografske analize tih artefakata još nisu provedene pa zasad ne možemo ništa određenije reći o izvorištu sirovina od kojih su izrađeni. Kvalitetni crvenkastosmeđi rožnjak od kojega je bilo načinjeno sječivo iz zemuničkog objekta SJ 209 sasvim sigurno ne potječe iz bliže okolice naselja, ni od riječnih oblutaka, a vjerojatno ni kamen od kojega je izrađeno glačano dlijeto. Stoga mi se čini mogućim izvorišta spomenutih kamenih sirovina tražiti upravo na području sjeverne ili srednje Bosne, iako se strategija nabave sirovina u kasnom neolitiku, tj. u okvirima sopotske kulture mijenja u odnosu na onu povezanu sa starčevačkom kulturom pa se sve više rabe oblutci radiolarita pronatempering) used in vessel production, but also of clay sediments from potential sources in the vicinity of the sites, as well as a study of modelling techniques and firing processes. Anyway, the observed finds – whether actual imports or merely imitations – undoubtedly suggest connections between Neolithic communities over a far wider land area than generally assumed, specifically between central Croatia and central Bosnia. Trade and exchange have always found routes of communication, even in ancient times, overcoming both territorial and weather barriers. When it comes to the Neolithic, we first think of the trade of certain raw materials, especially stone. This, too, presupposes that there must have existed links between southern Pannonian areas (that do not abound in quality stone raw materials), with northern and central Bosnia areas. In fact, this has already been clearly confirmed: for example, by the analysis of stone artefacts found at Slavonian Starčevo culture sites, which demonstrated that the main raw material came from primary deposits south of the River Sava, while pebbles from the riverbed of the Sava or from the mouths of its Bosnian tributaries were used only to a lesser extent.[28] In Brezovljani, a considerable amount of cut and even smoothed lithic material was unearthed. Unfortunately, no detailed mineralogical and petrographic analyses of the artefacts have been carried out, and thus far we cannot state anything more specific about the source of the raw materials from which they were made. The high-quality reddish-brown chert used to make the blade found in pit dwelling SU 209 certainly does not originate from the settlement's closer surroundings or a riverbed nearby, and probably neither does the stone from which the burnished chisel was made. Therefore, possible sources of stone raw materials should probably be sought precisely in present-day northern or central Bosnia (although in the Late Neolithic, in Sopot culture, the strategy of sourcing raw materials changed

[28] ŠOŠIĆ KLINDŽIĆ 2010: 200.

[28] ŠOŠIĆ KLINDŽIĆ 2010: 200.

laženi u koritu Save.[29] No, čini se da su se stare tradicije korištenja i nabave crvenih stijena ponegdje ipak još zadržale što je izvjesno na nekim kasnostarčevačkim lokalitetima u Podravini i Transdanubiji, ali i ranim lenđelskim kulturama u Transdanubiji.[30]

Povezanost među prapovijesnim zajednicama nije uvijek morala imati gospodarska obilježja, odnosno biti rezultat trgovine. Ona je mogla biti posljedica složenog sustava razmjena među populacijama, bilo pozitivnih u vidu darivanja, bratimljenja, „ženidbenih veza", prijenosa ideja, znanja i tehnologija, pa i vjerovanja, bilo negativnih poput krađa i pljački. U tom bih smislu skrenula pozornost na još jednu važnu činjenicu, a to su okolnosti nalaza butmirske keramike u Brezovljanima. Najviše ih je pronađeno u jednoj jami, bolje rečeno, ukopanom objektu, sudeći i po veličini i po nalazima u njemu, od posebnog značenja za tadašnju brezovljansku zajednicu. I figurice i nestandardne posude u njoj govore da nije riječ o predmetima kojima su se koristili svakodnevno u različite praktične svrhe. Je li riječ o nekome svetom/ritualnom prostoru – objektu? I kakvo bi onda značenje imali „strani" predmeti u njemu? No, tu već ulazimo u sferu složenih razmatranja o tzv. obrednim predmetima, njihovu određenju, obilježjima, značenjima, ali i o ljudima, odnosno članovima prapovijesne zajednice koji su sudjelovali u svetim ritualima.

Kad je riječ o mogućim vezama i odnosima pojedinih neolitičkih zajednica, vrijedi istaknuti kako je Z. Marković, govoreći o Brezovljanima, naglasio da „ove prostore stalno moramo promatrati ne samo smjerom istok-zapad, nego i smjerom sjever-jug te obrnuto (često realnije smjerom sjeverozapad-jugoistok)."[31] Ovomu bih samo dodala da taj jug, odnosno jugoistok valja povući prema sjevernoj i srednjoj Bosni. Kojim su se putem

[29] ŠOŠIĆ KLINDŽIĆ 2010: 201.
[30] ŠOŠIĆ KLINDŽIĆ 2010: 201; BIRO, BARNA 2017: 381–383.
[31] MARKOVIĆ 1994: 79.

compared to that of Starčevo culture, with an increased use of radiolarite pebbles from the Sava riverbed).[29] Nevertheless, in some places, old traditions of using and sourcing red rocks seem to have been retained, which has been confirmed at some late Starčevo sites in Podravina and Transdanubia, as well as early Lengyel cultures in Transdanubia.[30]

Connections between prehistoric communities did not necessarily have a mercantile and economic character. They could be the result of complex systems of exchange between populations, whether positive (in the form of giving, fraternities, "marriage bonds", transfer of ideas, knowledge and technologies, even of beliefs), or negative (such as theft and robbery). In this regard, another important fact is the find circumstances of Butmir pottery in Brezovljani. Most finds were unearthed in one single pit, or rather sunken structure, its size and finds suggesting its exceptional significance for the Brezovljani community of the time. Both the figurines and the non-standard vessels unearthed in it would appear not to be artefacts used daily for various practical purposes. The question of whether it was a sacred/ritual space or structure arises and, if so, how the "foreign" artefacts found therein should be interpreted. However, this opens complex considerations, not only about ritual objects, their determination, characteristics and meanings, but also about the people who were members of the prehistoric community participating in sacred rituals.

When it comes to possible connections and relations between individual Neolithic communities, it is worth pointing out to what Z. Marković wrote about Brezovljani: *we must constantly observe this region not only in the orientation of east-west, but also in that of north-south and vice versa (often in the more realistic orientation of northwest-southeast)*.[31] It should be added that this south, or southeast, should extend

[29] ŠOŠIĆ KLINDŽIĆ 2010: 201.
[30] ŠOŠIĆ KLINDŽIĆ 2010: 201; BIRO, BARNA 2017: 381-383
[31] MARKOVIĆ 1994: 79.

te veze odvijale? Vrlo vjerojatno dolinom rijeke Bosne prema nizini uz rijeku Savu, odakle su se mogle širiti lijevim pritokama Save dalje prema sjeveru i panonskom prostoru. Zasad je teško preciznije odrediti te putove jer je još uvijek premalo poznatih i istraženih lokaliteta iz vremena srednjeg/kasnog neolitika u prostorima koji spajaju srednju Bosnu i križevačko područje u središnjoj Hrvatskoj. Brezovljani kod Križevaca na karti kasnoneolitičkih lokaliteta sjeverne Hrvatske stoje prilično po strani, no dobro se mogu povezati s lokalitetima oko Virovitice, a preko njih s lenđelskim nalazištima u Transdanubiji.[32] S druge strane, pojava određenih protolenđelskih, tj. brezovljanskih elemenata na lokalitetima u Požeškoj kotlini, na Slavči u Novoj Gradiški, trasira nam i put prema sjevernoj i srednjoj Bosni.[33] U prilog tomu ide i činjenica reciprociteta, tj. da na loklitetu Obre II nalazimo keramiku protolenđelskih obilježja.

Na kraju se možemo zapitati zašto ove ulomke iz Brezovljana, ukrašene udubljenim spiralnim motivima, povezivati s butmirskom kulturom, a ne s danilskom? Naime, neki su autori vidjeli upravo jadranske, danilske elemente kao jedan od čimbenika formiranja lenđelskoga keramičkog stila.[34] Uostalom, i Benac podrijetlo butmirskoga spiralnog stila vidi u jadranskom prostoru, odnosno u danilskoj keramici.[35] Osim maloprije navedenih mogućih veza između područja butmirske kulture i promatranog prostora središnje Hrvatske, valja podsjetiti i na još jedno zapažanje B. Čovića, u vezi sa spiralnom ornamentikom. Iako i on drži da taj ukrasni stil svoje podrijetlo ima na jadranskom područ-

[32] BOTIĆ 2023: 121, Fig. 1. Katarina Botić Međurječje Save-Drave i Dunava u arheološkom pogledu dijeli na tri zone; zapadnu (Moslavina-Bilogora), središnju (Požeška kotlina) i istočnu (istočna Slavonija) pri čemu kasnoneolitičku kronologiju sagledava kroz klasičnu sopotsku kulturu u istočnoj zoni, Ražište-stil u središnjoj i istočnoj, te Ražište i brezovljanski stil u zapadnoj zoni (BOTIĆ 2023: 120).

[33] MIHALJEVIĆ 2013; BOTIĆ 2023.

[34] BREGANT 1974; KOROŠEC 1975; KAROLY 2020.

[35] BENAC 1971: 162–163.

to northern and central Bosnia. Which routes were used? Very probably they went along the River Bosna valley toward the valley of the Sava and thereafter possibly along the left tributaries of the Sava further north, and into the Pannonian area. For the time being, it is difficult to determine these routes more precisely given the small number of known and excavated sites from the period of the Middle/Late Neolithic in the areas connecting Central Bosnia and Križevci region in Central Croatia. Brezovljani near Križevci occupies a relatively marginal position on the map of late Neolithic sites of northern Croatia, but it can be associated with the sites around Virovitica, and through them also with Lengyel sites in Transdanubia.[32] On the other hand, the occurrence of specific proto-Lengyel (Brezovljani) elements at the sites in Požega Basin, at Slavča in Nova Gradiška, also traces the route to northern and central Bosnia.[33] In favour of this is also the fact of reciprocity: at the Obre II site we find wares with proto-Lengyel characteristics.

A final question that arises is why the sherds from Brezovljani, decorated with recessed spiral motifs, should be associated with the Butmir, and not Danilo culture? The fact is that some authors interpreted precisely the Adriatic, Danilo elements as one of the factors contributing to the formation of the Lengyel pottery style.[34] After all, Benac also saw the origin of the Butmir spiral style in the Adriatic area: that is, in Danilo pottery.[35] In addition to the possible aforementioned links between the distribution area of Butmir culture and the observed area of central Croatia, it is worth recalling B. Čović's observation about spiral ornamenta-

[32] BOTIĆ 2023: 121, Fig. 1. Katarina Botić divided the Sava, Drava and Danube rivers interfluvial area into three archaeological zones: western (Moslavina–Bilogora), central (Požega Basin) and eastern (eastern Slavonia), at the same time associating classical Sopot culture in the eastern zone, Ražište style in the central and eastern zones, and Ražište and Brezovljani-style in the western zone with the Late Neolithic (BOTIĆ 2023: 120).

[33] MIHALJEVIĆ 2013; BOTIĆ 2023.

[34] BREGANT 1974; KOROŠEC 1975; KAROLY 2020.

[35] BENAC 1971: 162-163.

ju, smatra da je on u butmirskoj keramografiji razvijen na drukčiji način te da je odbacivanjem ispunjavanja međuprostora šrafiranjem postao profinjeniji i samostalniji.[36] Primjerci iz Brezovljana upravo su takvi, s iznimkom jednog ulomka (T. III/1), ukrašeni su isključivo spiralnim motivima, bez ispunjavanja međuprostora.

Za lokalitet Brezovljani zasad raspolažemo samo dvama radiokarbonskim datumima, ali oni, nažalost, ne potječu iz konteksta s keramikom butmirskoga stilskog obilježja te nam mogu poslužiti samo u smislu okvirnog datiranja lokaliteta između 4945. i 4550. g. pr. Kr. što se okvirno uklapa u apsolutnu kronologiju ranih lenđelskih i butmirskih lokaliteta.[37]

tion. Although he also believed that this decoration style originated from the Adriatic region, he considered that this was not the case with Butmir ware, which – by abandoning the technique of filling the interspace by hatching – had become more refined and independent.[36] That is what the specimens from Brezovljani are like: with the exception of a single sherd (Pl. III/1), they are decorated solely with spiral motifs, without filling of the interspace.

We only have two radiocarbon dates for the Brezovljani site, but they do not, unfortunately, originate from Butmir-style pottery contexts, and can only be used to approximately date the site: to between 4945 and 4550 BC, which roughly overlaps with the absolute dating of early Lengyel and Butmir sites.[37]

Translation and proof-reading:
ETNOtrend d. o. o.

[36] ČOVIĆ 1976: 44–47.
[37] BOTIĆ 2017: 230–231; BARNA 2017: 355–365; HOFMANN 2013: 429–433.

[36] ČOVIĆ 1976: 44-47.
[37] BOTIĆ 2017: 230-231; BARNA 2017: 355-365; HOFMANN 2013: 429-433.

Literatura / References

BARNA, P. J. 2017, *The formation of the Lengyel Culture in South-Western Transdanubia*, Budapest: Archaeolingua.

BENAC, A. 1969, Die Etwicklungsphasse der Butmir-Kultur, Symposium über den Lengyel-Kompleks und die benahbarten Kulturen, Nitra – Male Vozokany 1967, *Študijne zvesti*, 17, 19–31.

BENAC, A. 1971, Obre II – Neolitsko naselje butmirske grupe na Gornjem polju, *Glasnik Zemaljskog muzeja u Sarajevu*, n. s., XXVI, 5–300.

BIRO, T. K., BARNA, P. J. 2017, Stone artefacts and raw materials, u/in: *The formation of the Lengyel Culture in South-Western Transdanubia*, Barna, J. (ur./ed.), Budapest: Archaeolingua, 377–385.

BOTIĆ, K. 2023, North Croatian Late Neolithic relative and absolute chronologies: current state of research, u/in: *Relatively Absolute. Relative and Absolute Chronologies in the Neolithic of Southeast Europe*, Marić, M., Bulatović,J., Marković, N. (ur./eds.), Beograd: Institute for Balkan Studies, Serbian Academy for Sciences and Arts, Special editions, 156, 119–135.

BREGANT, T. 1974, Elementi jadransko-mediteranske kulturne skupine v alpskem faciesu lengyelske kulture, *Situla*, 14–15.

ČOVIĆ, B. 1976, *Od Butmira do Ilira*, Sarajevo: Veselin Masleša.

DIMITRIJEVIĆ, S. 1978, Neolit u sjeverozapadnoj Hrvatskoj (pregled stanja istraživanja do 1975. godine), u/in: *Arheološka istraživanja u sjeverozapadnoj Hrvatskoj*, Rapanić, Ž. (ur./ed.), Izdanja Hrvatskog arheološkog društva, 2, Zagreb, 71–129.

DIMITRIJEVIĆ, S. 1979, Sjeverna zona, u/in: *Praistorija jugoslavenskih zemalja, Neolit*, Benac, A. (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 219–363.

HOFMANN, R. 2013, *Okolište 2. Spätneolithische Keramik und Siedlungsentwicklung in Zentralbosnien*, Bonn Universitätsforschungen zu prähistorischen Archäologie, Band 234,.

KALICZ, N., KREITER, E., TOKAI, Z. M. 2007, Die Rolle der Sopot-Kultur in der Entstehung der Lengyel-Kultur auf Grund der neuen Ausgrabungen in Südwestungarn, u/in: *The Lengyel, Polgár and related cultures in the Middle/Late Neolithic in Central Europe*, Kozłowski, J. K., Raczky, P. (ur./eds.), Kraków: Polish Academy of Arts and Sciences, 29–47.

KÁROLYI, M. 2011, A Sé-Malomi dűlői neolitikus település festett kerámiájának díszítési rendszerei, *Savaria*, 34(1), 123–172.

KÁROLYI, M. 2020, A boat on the meadow – data to the signs and long-distance connections of the Late Neolithic Lengyel Culture, u/in: *Homo universalis*, *Zbornik radova posvećen Zorku Markoviću povodom 65. obljetnice života*, Dizdar, M., Botić, K., Kalafatić, H. (ur./eds.), Zbornik Instituta za arheologiju, 15, Zagreb, 115–127.

KOROŠEC, P. 1975, Poročilo o raziskovanju v Ajdovski jami 1967. leta, *Poročilo o raziskovanju neolita in eneolita v Sloveniji*, 4, 170–209.

MARKOVIĆ, Z. 1994, *Sjeverna Hrvatska od neolita do brončanog doba. Problem kontinuiteta stanovništva i kultura sjeverne Hrvatske od ranog neolita do početka brončanog doba*, Koprivnica: Muzej grada Koprivnice.

MARKOVIĆ, Z., OKROŠA, L. 2003, Nastavak istraživanja nalazišta Brezovljani, *Obavijesti Hrvatskog arheološkog društva*, 35(1), 29–36.

MARKOVIĆ, Z., OKROŠA ROŽIĆ, L. 2017, *Multikulturalni aspekt neolitičkog nalazišta Brezovljani*, Katalog izložbe, Križevci: Gradski muzej Križevci.

MIHALJEVIĆ, M. 2013, Sopotska kultura u zapadnoj Slavoniji s posebnim osvrtom na nalazište Slavča-Nova Gradiška, neobjavljena disertacija / unpublished PhD thesis, Zagreb: Sveučilište u Zagrebu, Filozofski fakultet.

OKROŠA, L. 2002, Nastavak arheološkog istraživanja prapovijesnog nalazišta u Brezovljanima, *Cris*, 2, 7–10.

OKROŠA ROŽIĆ, L. 2006, Brezovljani, *Hrvatski arheološki godišnjak*, 2 (2005), 109–110.

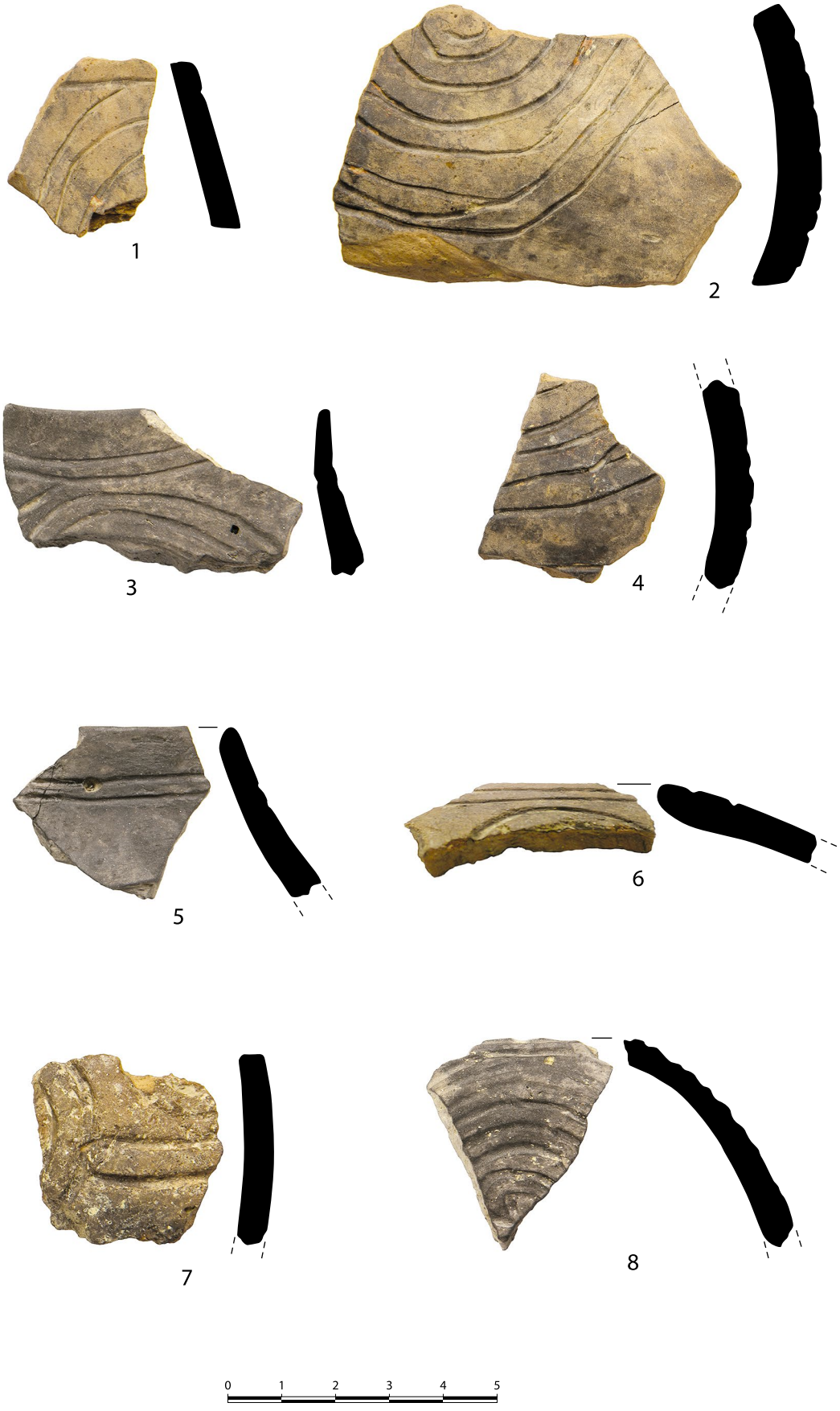
OKROŠA ROŽIĆ, L. 2013, *Regionalni tipovi sopotske kulture na križevačkom području*, Katalog izložbe, Križevci, Virovitica: Gradski muzej Križevci, Gradski muzej Virovitica.

OKROŠA ROŽIĆ, L. 2015, Brezovljani, *Opuscula archaeologica*, 37/38, 397–405.

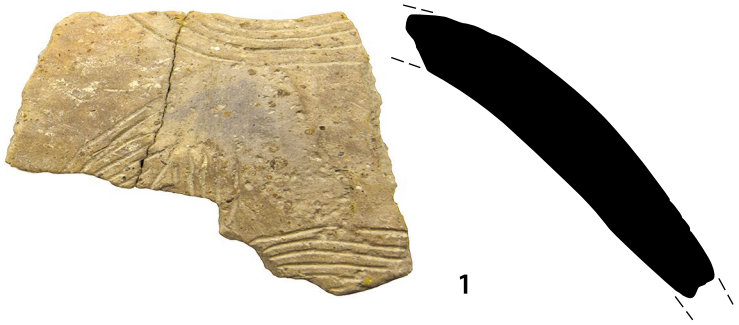
ŠOŠIĆ KLINDŽIĆ, R. 2010. *Proizvodnja cijepanih kamenih artefakata ranih poljodjelskih zajednica na prostoru istočne Hrvatske*, neobjavljena disertacija / unpublished PhD thesis, Zagreb: Sveučilište u Zagrebu, Filozofski fakultet.


T. 1
1
2
3
4
5
6
0 1 2 3 4 5

T. 2



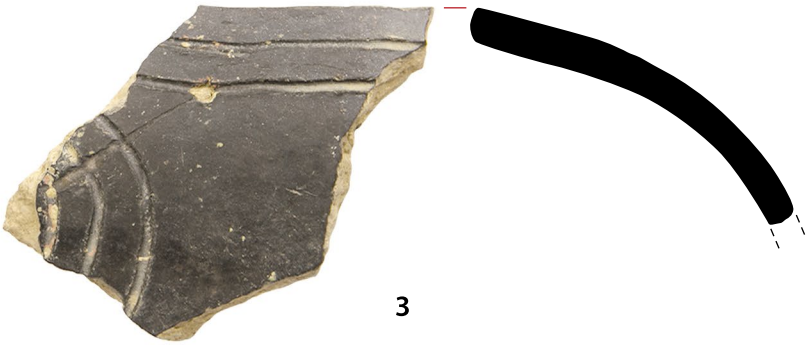
T. 3



1



2



3



4



PROSTORNA DISTRIBUCIJA I UNUTARNJA ORGANIZACIJA NASELJA SOPOTSKE KULTURE NA VINKOVAČKOM PODRUČJU

THE SPATIAL DISTRIBUTION AND INTERNAL ORGANISATION OF SOPOT-CULTURE SETTLEMENTS IN THE VINKOVCI AREA

MAJA KRZNARIĆ ŠKRIVANKO

Gradski muzej Vinkovci, Arheološki odjel
Vinkovci Municipal Museum, Archaeology Department
Trg bana J. Šokčevića 16
HR-32100 Vinkovci
maja@muzejvk.hr

UDK: 903.4(497.544)"634"
DOI: 10.15291/archeo.4698
Prethodno priopćenje / Preliminary report
Primljeno / Received: 2024-7-22
Prihvaćeno / Accepted: 2024-10-15

Ključne riječi:
višeslojna naselja zatvorenog/utvrđenog tipa, ravničarska naselja otvorenog tipa, sopotska kultura, vinkovačko područje

Key words:
closed/fortified multi-layered settlements, lowland settlements, Sopot culture, Vinkovci area

Na temelju prikupljenih podataka u posljednjih tridesetak godina daje se topografska slika jednog geografskog područja (vinkovačkog kraja) tijekom trajanja sopotske kulture. Nalazišta/naselja su topografski sagledana s ciljem dobivanja obrasca korištenja prostora u krajoliku u navedenom razdoblju te određivanja i opisivanja njihove veličine, arhitekture i organizacije prostora. Rezultati arheoloških istraživanja pokazuju složenu mrežu gusto naseljenih mjesta, te je ovaj prostor iznimno važan za poznavanje infrastrukturne i materijalne ostavštine sopotske kulture tijekom njezina trajanja od kraja 6. i tijekom 5. tisućljeća pr. Kr.

Based on data collected over the past three decades, the paper presents a topographic picture of the geographical area of Vinkovci during the course of the Sopot culture. With the aim of obtaining land-use patterns in the landscape for this period, sites/settlements have been topographically analysed to determine and describe their size, architecture and spatial organisation. The results of archaeological excavations reveal a complex network of densely populated places. The area is extremely important for an understanding of the infrastructural and material heritage of the Sopot culture over the course of its duration from the late 6th and during the 5th millennia BC.

UVOD

Vinkovački kraj (1022 km^2 bivše Općine Vinkovci) smjestio se unutar geografskog područja Bosutske nizine, koja je južni dio Panonske nizine koju su formirali vodotoci s lijeve strane Save, otječući s rubnih viših terena. Vinkovački kraj sa sjeverne strane zatvaraju Đakovačko-vinkovački ravnjak, Vukovarski ravnjak i Fruška gora, a s juga rijeka Sava. Kraj je izrazito ravan s najzastupljenijim visinskim rasponom nadmorske visine 80 – 90 m n. v. i ispresijecan krivudavim rijekama (Bosut, Ervenica i Vuka) i mnogobrojnim potocima (paleopotocima – potocima aktivnim u holocenu) koji su danas uglavnom pretvoreni u kanale.[1] Budući da je riječ o niskom području, sopotska naselja nastaju na povišenim riječnim terasama na obalama Bosuta i Vuke, uz manje vodotoke i na svojevrsnim „otocima" u močvarnom području. Faktori koji su bitni za osnivanje naselja jesu izvor pitke vode i obradiva površina oko naselja za bavljenje poljoprivredom, raznovrsna vegetacija i životinjski svijet.

Topografske odrednice imale su važnu ulogu u formiranju naselja koja su se prilagođavala krajoliku u ekonomskom i organizacijskom smislu. Strateška je komponenta faktor koji se očituje u višeslojnim naseljima – telovima utvrđenim jarcima i palisadnom ogradom. Drugi su tip naselja jednoslojna ravničarska naselja, koja nisu ograničena nekom preprekom koja bi usporila njihovu prostornu ekspanziju, te se ovisno o veličini zajednice ili dužine naseljavanja mogu rasprostirati i na nekoliko (desetaka) hektara površine. Danas se potvrđuje da se oko utvrđenih telova mogu nalaziti i pridružena ravna naselja. Posljednjih godina daljinskom prospekcijom arheoloških struktura prepoznaju se ograđeni prostori s više krugova, koji se ničim ne ističu u okolnom prostoru. Neki bi se od njih na osnovi površinskih nalaza i blizine drugih

[1] MARIČIĆ, ŠRENG 2016: 2.

INTRODUCTION

The Vinkovci Region (1,022 km^2 of the former Vinkovci Municipality) is located in the geographical territory of the Bosut Plain, the southern part of the Pannonian Basin formed by watercourses on the left banks of the River Sava, running from the peripheral higher terrain. From the north, it is enclosed by the Đakovo-Vinkovci Plateau, the Vukovar Plateau and the Fruška Gora mountain, and from the south by the River Sava. The area is extremely flat (with the most common altitude range being 80–90 metres above sea level) and intersected by winding rivers (the Bosut, Ervenica and Vuka) and numerous brooks (palaeo-streams – streams active in the Holocene) which in the present day have mostly been converted into channels.[1] In these lowlands, the Sopot settlements were formed on elevated plateaus on the river banks of the Bosut and the Vuka, along smaller watercourses, and on islands in the wetlands. Factors crucial for the establishment of settlements were potable water springs and arable land around those to be used for agriculture, as well as diverse flora and fauna.

Topographical determinants played an important role in the formation of settlements that adapted to the landscape in economic and organisational terms. A strategic component is a factor manifested in multi-layered settlements – tells – fortified by ditches and palisade fences. Another type is the single-layered flat (lowland) settlement. These were not limited by natural barriers that would curtail their spatial expansion; hence, depending on the size of the community or the duration of settlement, they extended to up to several (dozens of) hectares of land. It is now confirmed that around fortified tells were found associated flat settlements. In recent years, remote prospecting of archaeological structures has brought to light fenced sections that include several circles and have no other distinctive features in their respective environments. On the basis of surface finds and the vicinity of

[1] MARIČIĆ, ŠRENG 2016: 2.

sopotskih naselja mogli pripisati sopotskoj kulturi.[2]

MATERIJALI I METODE

Topografija naseljavanja napravljena je na osnovi sustavnih arheoloških, zaštitnih i probnih iskopavanja, terenskih pregleda, daljinskom prospekcijom i geofizičkim istraživanjima. Tragovi u tlu (*soil marks*) i tragovi u usjevima (*crop marks*) otkrivaju lokalitete metodom daljinske prospekcije.[3] Za vidljivost arheoloških lokaliteta upotrebljavane su zračne, satelitske, ortofoto i lidarske snimke Državne geodetske uprave RH s mrežnih stranica Geoportal te GoogleEarthPro.

U istraživanju su korišteni i povijesni kartografski prikazi Habsburške Monarhije:[4] prva vojna izmjera (1763. – 1787.) i druga vojna izmjera (1806. – 1869.), koje prikazuju izgled krajolika prije melioracije, odnosno krčenja šuma, isušivanja močvara, iskopavanja kanala i dr. Na povijesnim vojnim izmjerama prikazana su uzvišenja koja se danas prepoznaju kao višeslojna naselja.

Tijekom ožujka 2024.[5] dronom su snimljeni neki lokaliteti sopotske kulture, kada se dron pokazao vrlo korisnim za pojedine lokalitete gdje su uz telove vidljiva i ravna kružna naselja ili ograde (npr. Ivankovo/Križin stan).

Cilj svih provedenih istraživanja jest dobivanje uvida u dugoročnu dinamiku sopotskih naselja širokom primjenom interdisciplinarnih metoda na području od 1022 km², odnosno analiza prostorne distribucije kasnoneolitičkih naselja i njihova unutarnja struktura na području dužine oko 45 i širine oko 33 km tijekom 5. tisućljeća pr. Kr., odnosno skoro 1000 godina.

[2] KALAFATIĆ, ŠILJEG 2018: 92–94; ŠOŠIĆ KLINDŽIĆ et al. 2023: 1–3.
[3] KALAFATIĆ, ŠILJEG 2018: 92–94.
[4] https://maps.arcanum.com/en/synchron/
[5] Zračno snimanje dronom u ožujku 2024. proveo je Ivan Sokola, viši muzejski tehničar u Arheološkom odjelu Gradskog muzeja Vinkovci.

other Sopot-culture settlements, some of them could be attributed to the Sopot culture.[2]

MATERIALS AND METHODS

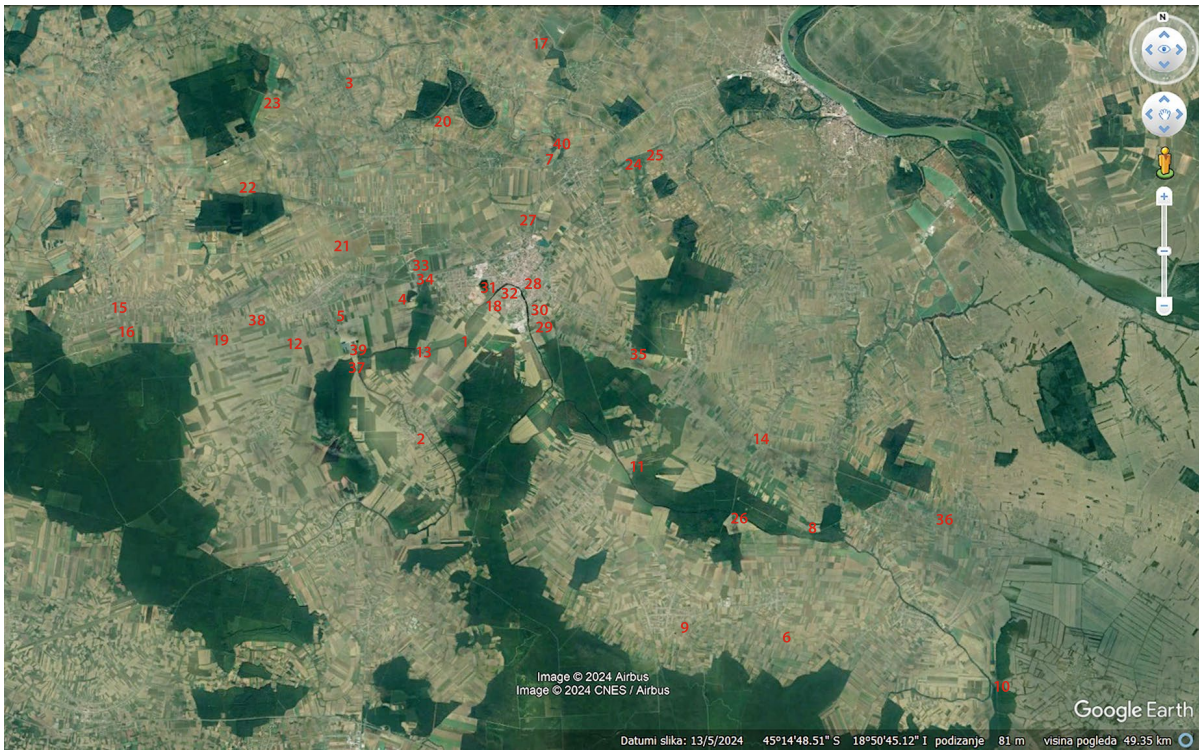
The topography of settlement was defined through systematic archaeological, rescue and trial excavations, field surveys, remote prospecting,[3] and geophysical surveys. The remote-prospecting method enables site detection based on soil marks and crop marks. To identify archaeological sites, aerial, satellite, orthophoto and LIDAR images of the State Geodetic Administration of the Republic of Croatia (DGU) from the Geoportal website and GoogleEarthPro were used.

Also used in the research were historical cartographic representations made by the Habsburg Monarchy[4]: the First Military Survey (1763–1787) and Second Military Survey (1806–1869), which show the appearance of the landscape before reclamation, deforestation, drainage of wetlands, digging of channels and the like. The historical military surveys show elevations presently identified as multi-layered settlements.

In March 2024,[5] some Sopot-culture sites were recorded using drones. Drone videography proved to be very useful at sites – such as Ivankovo / Križin Stan – where flat round settlements or enclosures were visible along with tells.

The aim of the conducted research was to gain insight into the long-term dynamics of Sopot settlements, using a wide application of interdisciplinary methods over a surface area of 1,022 km² and to analyse spatial distribution of late Neolithic settlements and their internal structure in a 45 x 33 km area over the course of the 5th millennium BC: a timespan of almost 1,000 years.

[2] KALAFATIĆ, ŠILJEG 2018: 92-94; ŠOŠIĆ KLINDŽIĆ et al. 2023: 1-3.
[3] KALAFATIĆ, ŠILJEG 2018: 92-94.
[4] https://maps.arcanum.com/en/synchron/
[5] The aerial drone footage in March 2024 was conducted by Ivan Sokola, Senior Museum Technician in the Archaeological Department of the Vinkovci Municipal Museum.



Slika 1. *Karta distribucije naselja sopotske kulture na vinkovačkom području* (https://earth.google.com/web; 13. 5. 2024.)
Figure 1 *Distribution map of Sopot-culture settlements in the Vinkovci area* (https://earth.google.com/web; 13/05/2024)

Naselja su analizirana u sklopu nekoliko kategorija: višeslojna/utvrđena naselja zatvorenog tipa (telovi) i ograđena naselja nalik na tel (naselja tipa Obrovac), ravna jednoslojna naselja otvorenog tipa, ograđeni prostori, te pretpostavljeni/uništeni lokaliteti.

REGIONALNA DISTRIBUCIJA NASELJA I GEOGRAFSKI POLOŽAJ

Višeslojna utvrđena naselja (telovi) i ograđena naselja nalik na tel

SOPOT (sl. 1/1) (45°15'52.86"S 18°46'5.52"I)

Eponimni lokalitet Sopot[6] nalazi se 3,5 km jugozapadno od Vinkovaca, na desnoj obali rijeke Bosuta. Sopot je umjetno na-

[6] Sopot je upisan u Registar kulturnih dobara pod brojem Z-4914. Registriran je 1974., a izuzet od daljnje obrade 1994. Sustavna arheološka iskopavanja trajala su od 1996. do 2008. godine.

Settlements were analysed within several categories: multi-layered/fortified settlements of the closed type (tells) and fenced settlement resembling tels (Obrovac-type settlements), flat single-layered settlements of the open type, fenced areas, and presumed/destroyed sites.

REGIONAL DISTRIBUTION OF SETTLEMENTS AND THEIR GEOGRAPHIC LOCATIONS

Tells – Multi-layered Fortified Settlements and Fenced Settlement Resembling Tells

SOPOT (Fig. 1/1) (45°15'52.86"N 18°46'5.52"E)

The eponym site of Sopot[6] is located 3.5 kilometres southwest of Vinkovci, on the right bank

[6] Sopot was listed in the Register of Cultural Property under the number Z-4914. It was registered in 1974 and protected from further disturbance in 1994. Systematic archaeological excavations lasted from 1996 to 2008.

stalo uzvišenje eliptičnog oblika dimenzija 113 x 98 m, relativne visine oko 3 m. Sopot prvi spominje J. Brunšmid 1902.,[7] amatersko iskopavanje proveo je 1939. i 1940. M. Klajn,[8] a sondažno arheološko iskopavanje 1957. proveo je S. Dimitrijević na površini od 44 m^2 do dubine 2,50 (3,00) m.[9]

Sustavna arheološka iskopavanja trajala su od 1996. do 2008. godine. Tijekom trinaest godina otkriveno je nešto manje od 400 m^2 površine naselja. Oko jarka i unutar njega nalazila se ograda koja je kružno obrubljivala naselje. Podnice nekih kuća nekoliko su puta obnavljane, građene su jedna iznad druge s malim pomakom po horizontali, a udaljenost između kuća iznosila je 2,5 m. U dijelu naselja prema središtu tela nije bilo ruševina kuća i ostataka gorenih podnica ili podnica od ilovače, već se pojavljuju kanali, rupe od stupova smjera sjeverozapad-jugoistok i manje jame.[10] Na najvišem dijelu naseobinskog platoa istraženo je 12 kućnih osnova u više naseobinskih horizonata. Gustoća u prostornom rasporedu stambenih objekata povećava se od rubova prema središtu naselja. Najmlađi horizont kuća uništen je mlađim ukopima kanala, manjih jama i rupa, a keramički materijal iz objekata svojim tipološkim osobinama, ali i AMS datumima upućuje na razdoblje eneolitika.[11] Zanimljivo je to što je sopotskom naselju prethodilo najstarije naselje starčevačke kulture na vinkovačkom području datirano u 6060. – 5900. kal. g. pr. Kr.

Vremenski okvir života na Sopotu zatvaraju nalazi iz zatvorenih cjelina, najstarija kuća datirana je analizom drvenog ugljena

of the Bosut river. Sopot is an artificial elevation of elliptical shape measuring 113 x 98 m and with a relative height of approximately three metres. Sopot was first mentioned by J. Brunšmid in 1902[7]; amateur excavations were conducted in 1939 and 1940 by M. Klajn,[8] and archaeological trial trenching was carried out in 1957 by S. Dimitrijević over an area of 44 m^2 to a depth of 2.50 (3.00) metres.[9]

Systematic archaeological excavations lasted from 1996 to 2008. Somewhat less than 400 m^2 of the settlement's surface was uncovered over the course of thirteen years. Around the ditch and inside it was a fence that surrounded the settlement. The floors of some houses were restored several times; they were built on top of each other with a small horizontal shift, and the distance between the houses was 2.5 metres. In a part of the settlement, towards the centre of the tell, were no ruins of houses or remains of burned floors or floors made of clay; however, channels, pillars holes oriented northwest-southeast, and smaller pits were found.[10] In the highest part of the plateau used for the settlement, 12 house bases were excavated in several residential horizons. The density in the spatial distribution of residential buildings increased from the periphery towards the centre of the settlement. The most recent house horizon had been destroyed by the construction of subsequent channels, smaller pits and holes, while the typological characteristics and AMS dates of the ceramic material recovered from the structures suggest the Aeneolithic period.[11] It is interesting that the Sopot settlement was preceded by the oldest Starčevo-culture settlement in the Vinkovci area, dated to 6060–5900 cal BC.

7 BRUNŠMID 1902: 120.
8 KLAJN 1961: 22.
9 DIMITRIJEVIĆ 1966: 39.
10 ISKRA-JANOŠIĆ, KRZNARIĆ ŠKRIVANKO 1997: 20–24; KRZNARIĆ ŠKRIVANKO 1998a: 30–34; 1998b: 71–74; 2000: 49–53; 2015a: 375–377.
11 BALEN 2004: 27; BALEN, KRZNARIĆ ŠKRIVANKO 2006: 51–60; KRZNARIĆ ŠKRIVANKO 2005a: 30–31; 2006c: 11–19; 2007b: 45–46; 2008b: 60–62; 2009a: 89–92; 2011a: 209–229; 2011b: 93–106; 2014a: 85–88; 2015a: 371–395.

7 BRUNŠMID 1902: 120.
8 KLAJN 1961: 22.
9 DIMITRIJEVIĆ 1966: 39.
10 ISKRA-JANOŠIĆ, KRZNARIĆ ŠKRIVANKO 1997: 20-24; KRZNARIĆ ŠKRIVANKO 1998a: 30-34; 1998b: 71-74; 2000: 49-53; 2015a: 375-377.
11 BALEN 2004: 27; BALEN, KRZNARIĆ ŠKRIVANKO 2006: 51-60; KRZNARIĆ ŠKRIVANKO 2005a: 30-31; 2006c: 11-19; 2007b: 45-46; 2008b: 60-62; 2009a: 89-92; 2011a: 209-229; 2011b: 93-106; 2014a: 85-88; 2015a: 371-395.

u 5050. – 4780. kal. g. pr. Kr., a analizom kosti u 4840. – 4690. kal. g. pr. Kr. Najmlađi datirani objekt na Sopotu, kanal SJ 222 datiran je analizom kosti u 4250. – 4030. kal. g. pr. Kr., koji bi već predstavljao eneolitički horizont. Do vremena kada je naselje bilo napušteno, zbog manjeg opsega i gušće zbijenih kuća na telovima, nakupilo se više od 3 m kulturnih slojeva. Možemo govoriti o kontinuitetu pojedinačnih kuća koje su se po vertikali gradile na istom mjestu. Teško je za sada sa sigurnošću reći slijede li kuće na prostoru cijelog tela liniju jarka u paralelnim redovima, jer se zbog kontinuiteta kuća u više faza naselja u magnetometru vide velike mrlje (anomalije), a samo se na nekim mjestima vide pojedinačne kuće, različitih orijentacija.

Lokalitet je u tri navrata magnetometrijski snimljen, 2010., 2016. i 2020. Prvi je put snimljen samo tel, drugi put manja površina zapadno od tela, a snimanje obavljeno 2020. s južne, jugoistočne i zapadne strane tela potvrdilo je da se ravno naselje oko tela širi na sve tri strane, osim sjeverne gdje se nalazi Bosut. Ukupna površina tela i podgradinskog naselja iznosila bi više od 40 000 m^2.[12]

Jarak je zatvarao površinu naselja 100 x 80 m, dok je vanjski jarak, otkriven magnetnom prospekcijom tela, iskopan 10 m dalje, zatvarao površinu od 120 x 100 m.[13] Rezultate magnetnih snimanja potvrdilo je i geološko bušenje provedeno 2010.[14] Geomagnetno snimanje pokazalo je da su kuće bile različitih orijentacija što su potvrdila i arheološka iskopavanja. Kuće prate liniju jarka. I na prostoru između unutarnjeg i vanjskog jarka postoje objekti. Magnetometrijsko snimanje horizontalnog naselja provedeno 2020. pokazalo je da oko tela postoje još dva jarka

[12] MUŠIČ et al. 2011a; 2011b; KRZNARIĆ ŠKRIVANKO 2002a: 43; 2006c: 12; 2011b: 93, 96, 97; 2015a: 371, 372, 381; BOTIĆ 2017a; MAYER 2020.

[13] MUŠIČ et al. 2011a; 2011b; KRZNARIĆ ŠKRIVANKO 2002a: 43; 2011b: 96, 97; 2015a: 381.

[14] KRZNARIĆ ŠKRIVANKO 2011b: 102; BAKRAČ et al. 2015: 303–311.

The time frame of habitation at Sopot was determined by finds from closed units: the oldest house was dated to 5050–4780 cal BC on the basis of charcoal analysis, and to 4840–4690 cal BC on that of bone analysis. The newest-dated structure at Sopot, channel SU 222, was dated on the basis of bone analysis to 4250–4030 cal BC, which already represents the Aeneolithic horizon. By the time the settlement was abandoned, due to its smaller size and the denser distribution of houses on the tells, more than three metres of cultural layers had accumulated. It is possible to talk about the continuity of individual houses that were built vertically in the same place. Currently it is difficult to assess with certainty whether houses throughout the tell followed the line of the ditch in parallel rows, because (due to the continuity of the houses throughout several phases of the settlement) the magnetometer displayed large spots (anomalies); only in some places were individual houses of different orientations visible.

Magnetometric measuring of the site was performed on three occasions: in 2010, 2016 and 2020. At first only the tell was measured; secondly, a smaller area west of the tell; while the 2020 measuring performed from the south, south-east and west sides of the tell confirmed that the flat settlement around it used to expand in every direction except the north, where the River Bosut ran. The presumed total surface area of the tell and the surrounding suburban settlement was over 40,000 m^2.[12]

A ditch enclosed the surface area of the settlement (100 x 80 m), while another, dug on the outside, 10 metres away, and discovered by magnetic prospecting of the tell, enclosed a surface area of 120 x 100 m.[13] The magnetic surveying results were also confirmed by geology drilling conducted in 2010.[14] Geomagnetic monitoring showed that the houses had different orienta-

[12] MUŠIČ et al. 2011a; 2011b; KRZNARIĆ ŠKRIVANKO 2002a: 43; 2006c: 12; 2011b: 93, 96, 97; 2015a: 371, 372, 381; BOTIĆ 2017a; MAYER 2020.

[13] MUŠIČ et al. 2011a; 2011b; KRZNARIĆ ŠKRIVANKO 2002a: 43; 2011b: 96, 97; 2015a: 381.

[14] KRZNARIĆ ŠKRIVANKO 2011b: 102; BAKRAČ et al. 2015: 303-311.

koja se slabije vide.[15]

Sopot je datiran sa 17 konvencionalnih i 16 AMS datuma. Naselje je egzistiralo najmanje 800 godina, od oko 5000./4800. do 4200./4000. kal. g. pr. Kr.[16] Na Sopotu nisu vidljivi tragovi nasilne okupacije, invazije ili razaranja, a to uglavnom možemo primijeniti na sve do sada istraživane sopotske lokalitete.

Nakon početnog postupnog horizontalnog širenja sopotsko je naselje raslo okomito (vertikalno). Niz uzastopnih razina naselja, sastavljenih od gusto raspoređenih kuća od drveta/šiblja i lijepa, formirao je umjetno brdo – tel visine veće od 3 m i promjera oko 100 m. Dug i kontinuiran život na jednom mjestu bio je olakšan prirodnim okruženjem na obali Bosuta. Arheobotaničke, zooarheološke i peludne analize govore o povoljnim uvjetima za život za ono doba.[17]

U svjetlu novih istraživanja, postavlja se pitanje je li horizontalno naselje na Sopotu prvotno bilo okruženo dvama jarcima, te je podizanjem tela i povećanjem stanovništva unutarnji jarak zatrpan, gdje se nastavila urbanizacija, a za zaštitu je ostao samo vanjski jarak. Ova pitanja mogu riješiti samo daljnja iskopavanja otvorenog dijela naselja i datiranje nalaza.

tions, as confirmed also by archaeological excavations. The houses follow the line of the ditch. There are structures also in the space between the inner and outer ditches. Magnetometric measuring of the horizontal settlement conducted in 2020 showed that there were two other (less apparent) ditches around the tell.[15]

For Sopot, 17 conventional and 16 AMS dates were obtained. The settlement existed for at least 800 years, from c. 5000/4800 to 4200/4000 cal BC.[16] There are no traces of violent occupation, invasion or destruction at Sopot, and the same can mostly be said of all the Sopot sites that have been investigated.

After an initial gradual horizontal expansion, the Sopot settlement grew vertically. A series of successive settlement levels, composed of densely arranged houses made of wood/wicker and daub, formed an artificial hill – a tell over three metres high and approximately 100 metres in diameter. Long-lasting and uninterrupted habitation in one place was facilitated by the natural environment on the banks of the Bosut. Archaeobotanical, zooarchaeological and pollen data suggest living conditions favourable for that period.[17]

In the light of new research, the question arises of whether the horizontal settlement at Sopot was initially surrounded by two ditches, and by the erection of the tell and an increase of the population, the inner ditch was filled, and the urbanisation continued, only the outer ditch remaining for protection. These questions can only be answered by further excavations of the open part of the settlement and the dating of the finds.

15 MAYER 2020.

16 Datumi su dobiveni iz drvenog ugljena na Institutu R. Bošković u Zagrebu i 19 AMS datuma dobivenih u Beta Analytic Inc. u Miamiju i Oxfordu (OBELIĆ et al. 2004: 245–258; KRZNARIĆ ŠKRIVANKO 2011a: 209–227). Drvene strukture kuća konvencionalnim datumima datirane su između 5050. – 4780. kal. g. pr. Kr. (kuća SJ 23) i 4170. – 3950. kal. g. pr. Kr. (kuća SJ 20). AMS datumi dobiveni iz životinjskih kostiju trajanje Sopota smještaju od 4840. – 4690. kal. g. pr. Kr. (kuća SJ 23) do 4250. – 4030. kal. g. pr. Kr. (kanal SJ 222).

17 BAKRAČ et al. 2015: 303–311; KRZNARIĆ ŠKRIVANKO 2011a: 102; REED et al. 2017: 326–337.

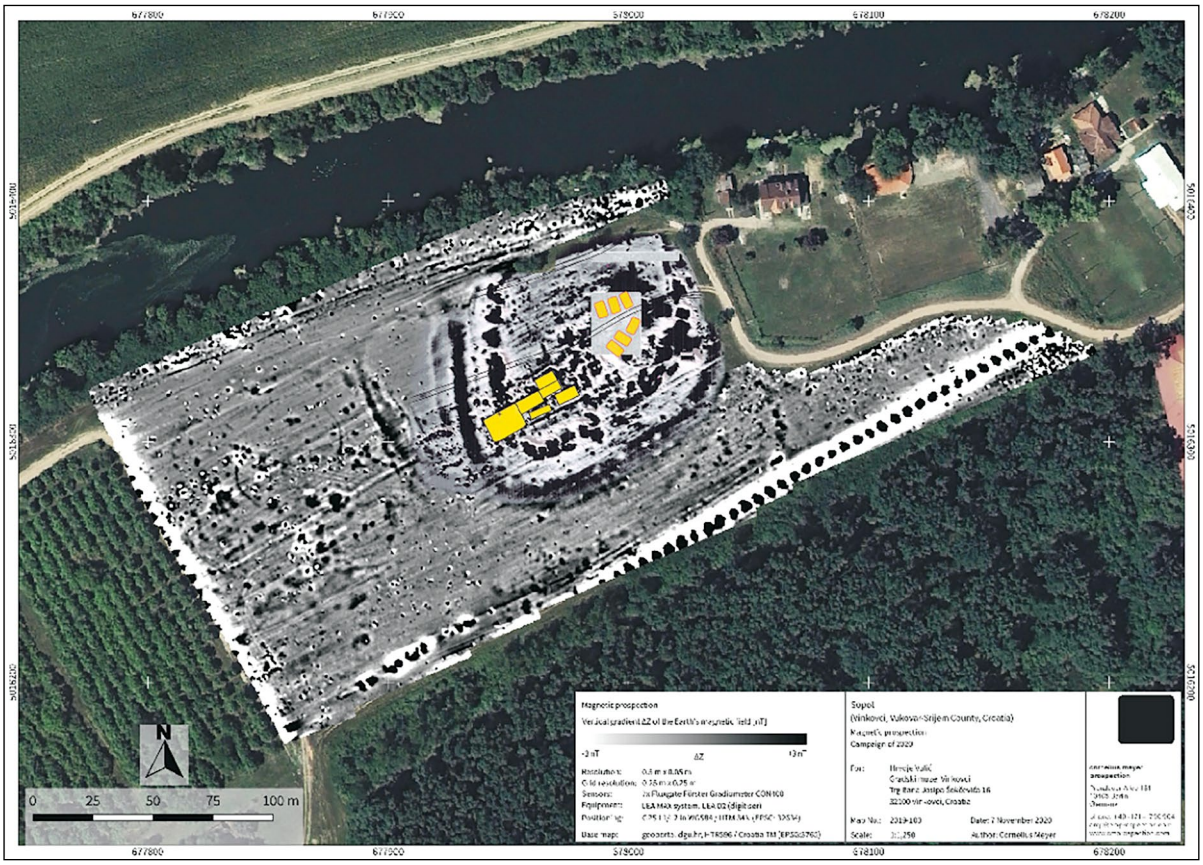
15 MAYER 2020.

16 The dates were obtained (from charcoal) at the Ruđer Bošković Institute in Zagreb; subsequently, 19 AMS dates were obtained at Beta Analytic Inc. in Miami and Oxford (OBELIĆ et al. 2004: 245-258; KRZNARIĆ ŠKRIVANKO 2011a: 209-227). Wooden house structures were dated (by conventional dates) to between 5050–4780 cal BC (House SU 20) and 4170–3950 cal BC (House SU 23). AMS dates obtained from animal bones date the duration of Sopot to the period from 4840–4690 cal BC (House SU 23) to 4250–4030 cal BC (Channel SU 222).

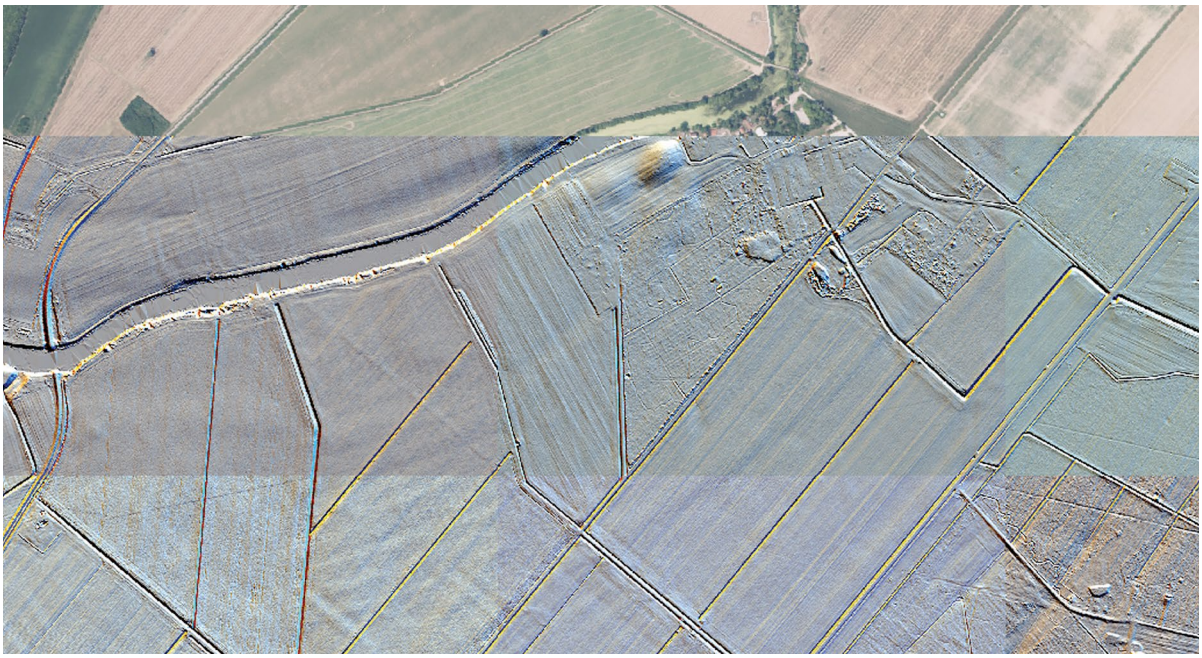
17 BAKRAČ et al. 2015: 303-311; KRZNARIĆ ŠKRIVANKO 2011a: 102; REED et al. 2017: 326-337.



Slika 2a. *Zračna snimka Sopota* (ožujak 2024., foto: I. Sokola)
Figure 2a *Aerial photo of Sopot* (March 2024, photo by I. Sokola)



Slika 2b. *Rezultati magnetnog snimanja* (Mušič et al. 2011a; 2011b; Mayer 2020)
Figure 2b *Magnetic surveying results* (Mušič et al. 2011a; 2011b; Mayer 2020)



Slika 2c. *DGU LIDAR Sopota* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 2c *DGU LIDAR of Sopot* (2024, modified by N. Ostović and I. Sokola)

ANDRIJAŠEVCI – GORIČICA
naselje nalik na tel (sl. 1/2)
(45°13'21.52"S 18°44'49.20"I)

Petstotinjak metara jugoistočno od centra Andrijaševaca, na blago povišenoj gredi koja prati lijevi tok Bosuta u pravcu jugoistoka nalazi se malo uzvišenje promjera oko 50 m i relativne visine oko 1 m. Po površini lokaliteta koji se obrađuje i na kojem je sagrađena kuća nalaze se ulomci sopotske keramike, kameni i koštani artefakti, te nakit od školjke *spondylus*.[18]

Prostorno rasprostiranje potvrđeno je terenskim pregledom, zračnim snimkama i lidarom gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima.

[18] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2012b: 30.

ANDRIJAŠEVCI – GORIČICA
tell-like settlement (Fig. 1/2)
(45°13'21.52"N 18°44'49.20"E)

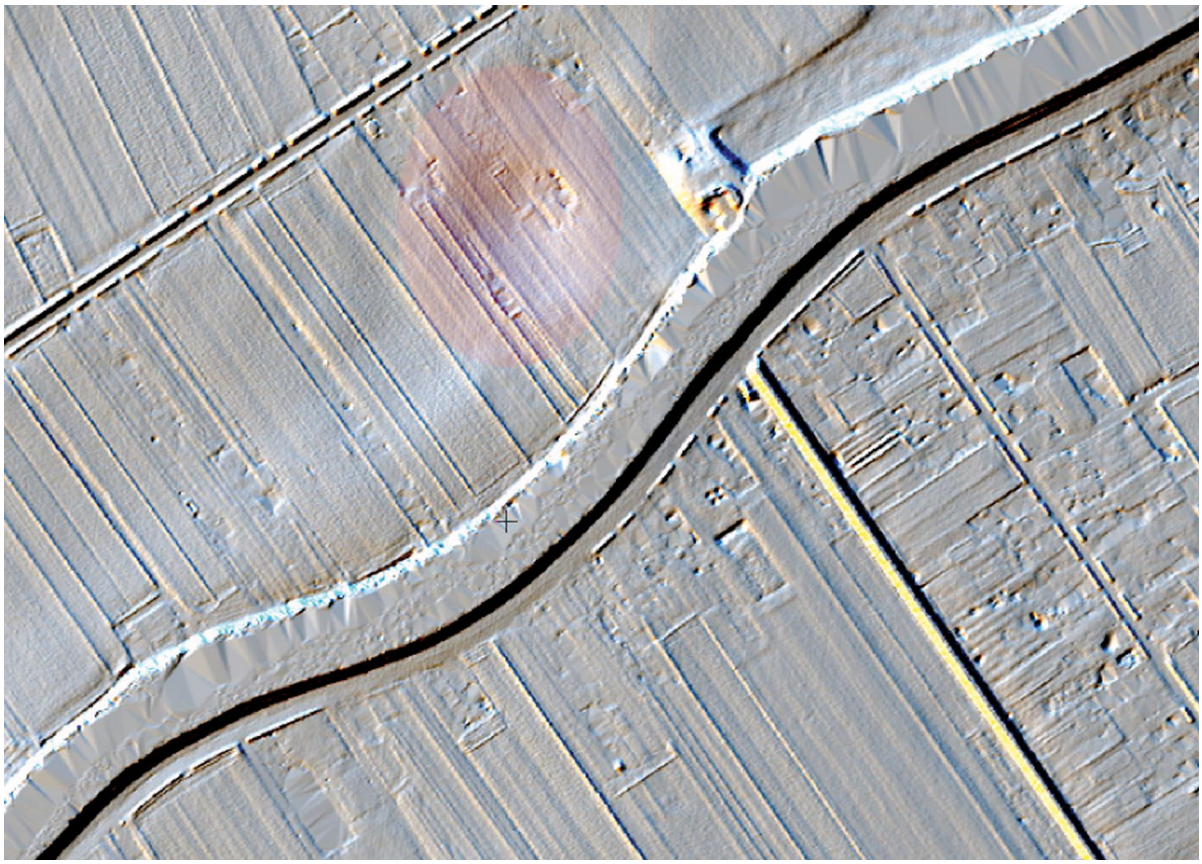
Approximately half a kilometre southeast of the centre of Andrijaševci, on a slightly elevated ridge that follows the left course of the Bosut towards the southeast, is a small elevation with a diameter of c. 50 metres and relative height of c. one metre. On the surface of the site (that is in cultivation and on which the house has been built) are Sopot pottery fragments, stone and bone artefacts, and jewellery made of the spondylus sea shell.[18]

The spatial distribution was confirmed by field surveys, aerial photographs and LIDAR showing visible remains of circular settlements enclosed by moats.

[18] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2012b: 30.



Slika 3a. *Zračna snimka Andrijaševci – Goričica* (ožujak 2024., foto: I. Sokola)
Figure 3a *Aerial photo of Andrijaševci – Goričica* (March 2024, photo by I. Sokola)



Slika 3b. *DGU LIDAR Andrijaševci – Goričica* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 3b *DGU LIDAR Andrijaševci – Goričica* (2024, modified by N. Ostović and I. Sokola)

ANTIN – BAĆINO (ĆILIJE/CELJE) (sl. 1/3) (45°22'59.00"S 18°42'21.27"I)

Tri i pol kilometra zapadno od sela Antina na lijevoj obali Vuke, u predjelu Baćino, nalazi se umjetno uzvišenje eliptična oblika, s triju strana okruženo jarkom, a sa sjeverne se strane nalazi rijeka Vuka. Današnji oblik dobiva u srednjem vijeku.[19] Terenskim pregledom podgradinskog dijela s istočne i južne strane po površini oranice nalaze se ulomci prapovijesne keramike sopotske kulture i mikrolita.[20] Kosim snimkama iz zrakoplova iz 2015. uočeno je da postoje dva kruga. Dimenzije manjeg tela su 93 x 80 m, sa širinom opkopa oko 12 m i visine oko 4,8 m. Jugoistočno od manjeg tela prepoznaje se još jedan krug dimenzija 87 x 91 m i visine oko 1 metar. Prema Kalafatiću i Šiljegu, riječ je o

ANTIN – BAĆINO (ĆILIJE/CELJE) (Fig. 1/3) (45°22'59.00"N 18°42'21.27"E)

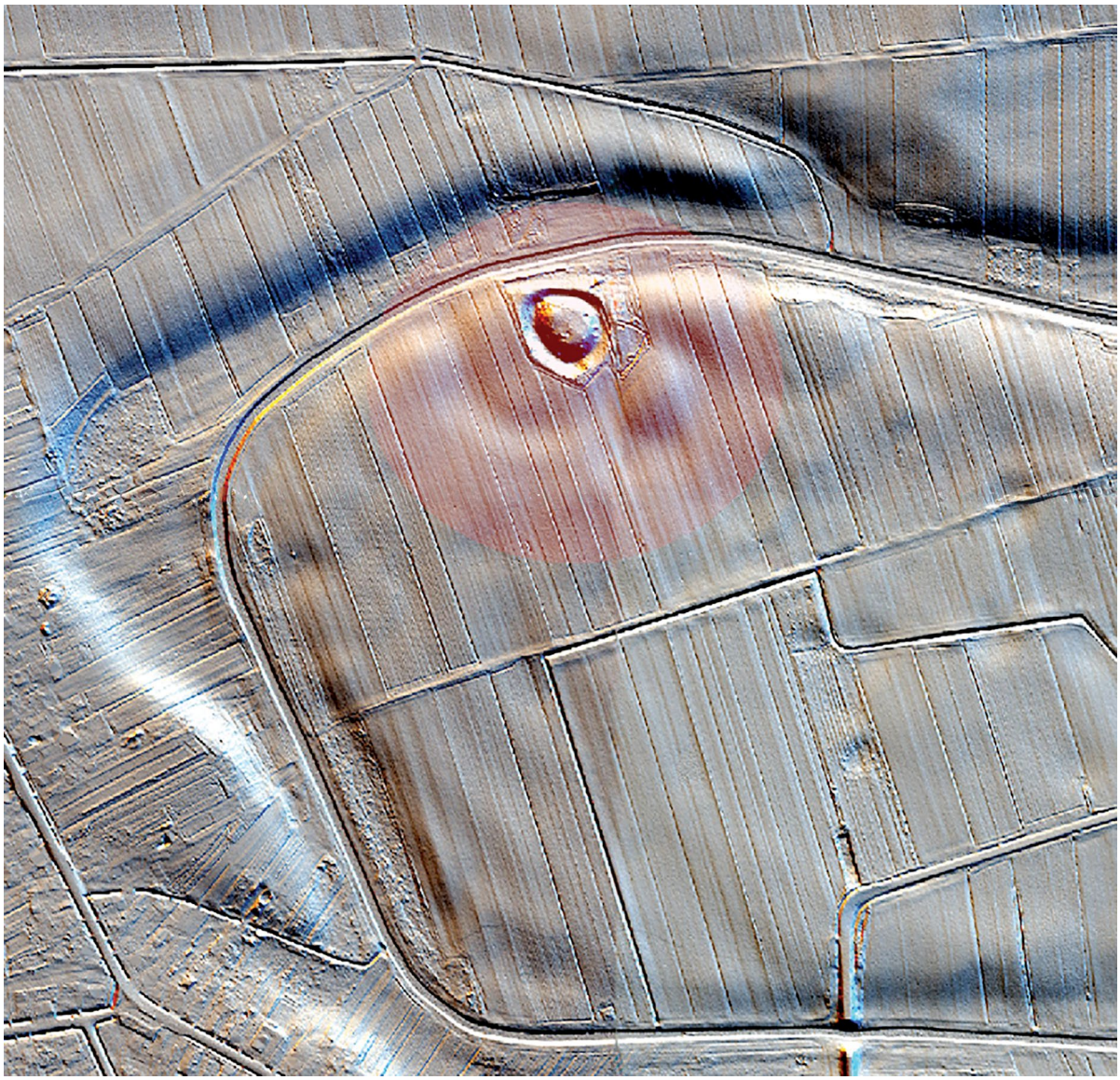
Three and a half kilometres west of the village of Antin, situated on the left bank of the Vuka, in the area of Baćino, is an artificial elevation of elliptical shape, surrounded by a ditch on three sides; on the north side is the River Vuka. It acquired its present-day shape in the Middle Ages.[19] In a field survey of the suburban part, on the east and south side of the surface of the ploughland, prehistoric Sopot-culture pottery fragments and microliths were identified.[20] Oblique aerial photographs from 2015 showed two circles. The dimensions of the smaller tell were 93 x 80 m, with a c. 12-metre-wide and c. 4.8-metre-deep ditch. Southeast of the smaller tell, another circle is visible, measuring 87 x 91 m, and c. one metre high. According to Kala-



Slika 4a. *Zračna snimka lokaliteta Antin – Baćino iz 1968.* (GDU Geoportal)
Figure 4a *Aerial photo of the Antin – Baćino site from 1968* (GDU Geoportal)

19 PETKOVIĆ 2006: 150 (smatra da je riječ o srednjovjekovnom toponimu, iako se nigdje ne spominje utvrda ili kaštel, nego selo s crkvom).
20 KRZNARIĆ ŠKRIVANKO 2005b: 41; 2012b: 34.

19 PETKOVIĆ 2006: 150 (the author believes it to be a medieval toponym, although there is no mention of a fortress or a castle, but a village with a church).
20 KRZNARIĆ ŠKRIVANKO 2005b: 41; 2012b: 34.



Slika 4b. *DGU LIDAR Antin – Baćino* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 4b *DGU LIDAR Antin – Baćino* (2024, modified by N. Ostović and I. Sokola)

krugovima parnjacima.[21]

Prostorno rasprostiranje potvrđeno je terenskim pregledom, zračnim snimkama i lidarom gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima.

fatić and Šiljeg, the circles are paired.[21]

The spatial distribution was confirmed in a field survey, as well as by aerial photographs and LIDAR, displaying the remains of circular settlements enclosed by moats.

[21] KALAFATIĆ, ŠILJEG 2018: 88–90.

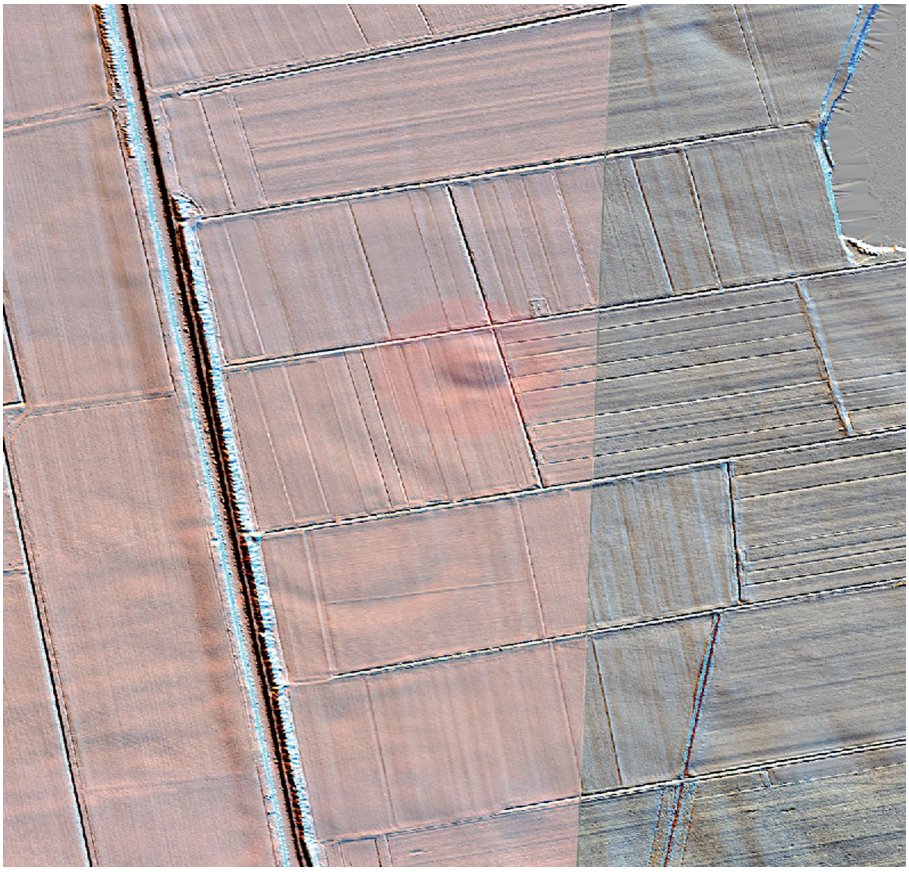
[21] KALAFATIĆ, ŠILJEG 2018: 88-90.

IVANKOVO – DREN
naselje nalik na tel (sl. 1/4)
(45°16'47.63"S 18°43'51.59"I)

Oko 2,5 km jugoistočno od središta Ivankova, na toponimu Dren, uzdiže se 1 m nad okolnom ravnicom malo uzvišenje promjera oko 100 m. Po površini su nađeni ulomci sopotske keramike, glineni utezi, kameni i koštani artefakti, te kućni lijep i životinjske kosti.[22] Na zračnoj snimci iz 2011. vide se dva kruga, veći, sjeverni promjera oko 100 m i manji, južni promjera oko 80 m.[23] Zanimljivo je da se i ovdje nalazi samo jedno uzvišenje čije je prostorno rasprostiranje potvrđeno terenskim pregledom. Očito je riječ o telu koji je imao kratku fazu okupacije i malo naseobinskog taloženja.

IVANKOVO – DREN –
settlement resembling tell (Fig. 1/4)
(45°16'47.63"N 18°43'51.59"E)

About 2.5 kilometres southeast of the centre of Ivankovo, at the toponym of Dren, is a small elevation, standing one metre above the surrounding plain, and with a diameter of c. 100 metres. Collected on the surface were fragments of Sopot pottery, clay weights, stone and bone artefacts, as well as house daub and animal bones.[22] A 2011 aerial photo shows two circles: a larger, northern circle with a diameter of c. 100 metres and a smaller, southern circle with a diameter of c. 80 metres.[23] Interestingly, at this site, too, there is only one elevation whose spatial distribution has been confirmed in a field survey. It is obviously a tell with a short habitation phase and a shallow settlement deposit.



Slika 5. *DGU LIDAR Ivankovo – Dren* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 5 *DGU LIDAR Ivankovo – Dren* (2024, modified by N. Ostović and I. Sokola)

[22] KRZNARIĆ ŠKRIVANKO 2006a: 48; 2012b: 31.
[23] Geoportal DGU 2011. (https://geoportal.dgu.hr/; 15. 3. 2024.)

[22] KRZNARIĆ ŠKRIVANKO 2006a: 48; 2012b: 31.
[23] Geoportal DGU 2011 (https://geoportal.dgu.hr/; 15/03/2024.)

IVANKOVO – KRIŽIN STAN (sl. 1/5) (45°16'32.90"S 18°41'40.81"I)

U Ulici Slatine u selu Ivankovu, iza šokačkog stana Križinih nalazi se umjetno nastalo uzvišenje dimenzija oko 160 x 130 m, koje se oko 2 metra uzdiže nad okolicom. Otkriveno je terenskim pregledom 2000. godine, a po površini su nađeni ulomci sopotske keramike.[24]

Na satelitskim snimkama iz 2011. s istočne strane tela vidi se ograđeni prostor koji se ne izdiže iznad okolnog prostora.[25] Potvrdu da se pored tela nalazi i ravni ograđeni prostor dalo je i zračno snimanje provedeno u ožujku 2024. Po površini uzvišenja prikupljeni su mnogobrojni ulomci sopotske keramike.

Prostorno rasprostiranje potvrđeno je terenskim pregledom, satelitskim i zračnim

IVANKOVO – KRIŽIN STAN (Fig. 1/5) (45°16'32.90"N 18°41'40.81"E)

In Ulica Slatine in the village of Ivankovo, behind Križin Stan (homestead of the Križin family, typical of the region, *šokački stan* – translator's note), there is an artificially created elevation measuring c. 160 x 130 m, which rises c. two metres above the surrounding area. It was discovered in a field survey conducted in 2000, and fragments of Sopot pottery were collected from the surface.[24]

Satellite images from 2011 show an enclosed area on the east side of the tell, which is not elevated above the surrounding area.[25] The fact that next to the tell there was a flat enclosed area was confirmed by aerial imagery from March 2024. On the surface of the elevation, numerous fragments of Sopot ceramics were collected.

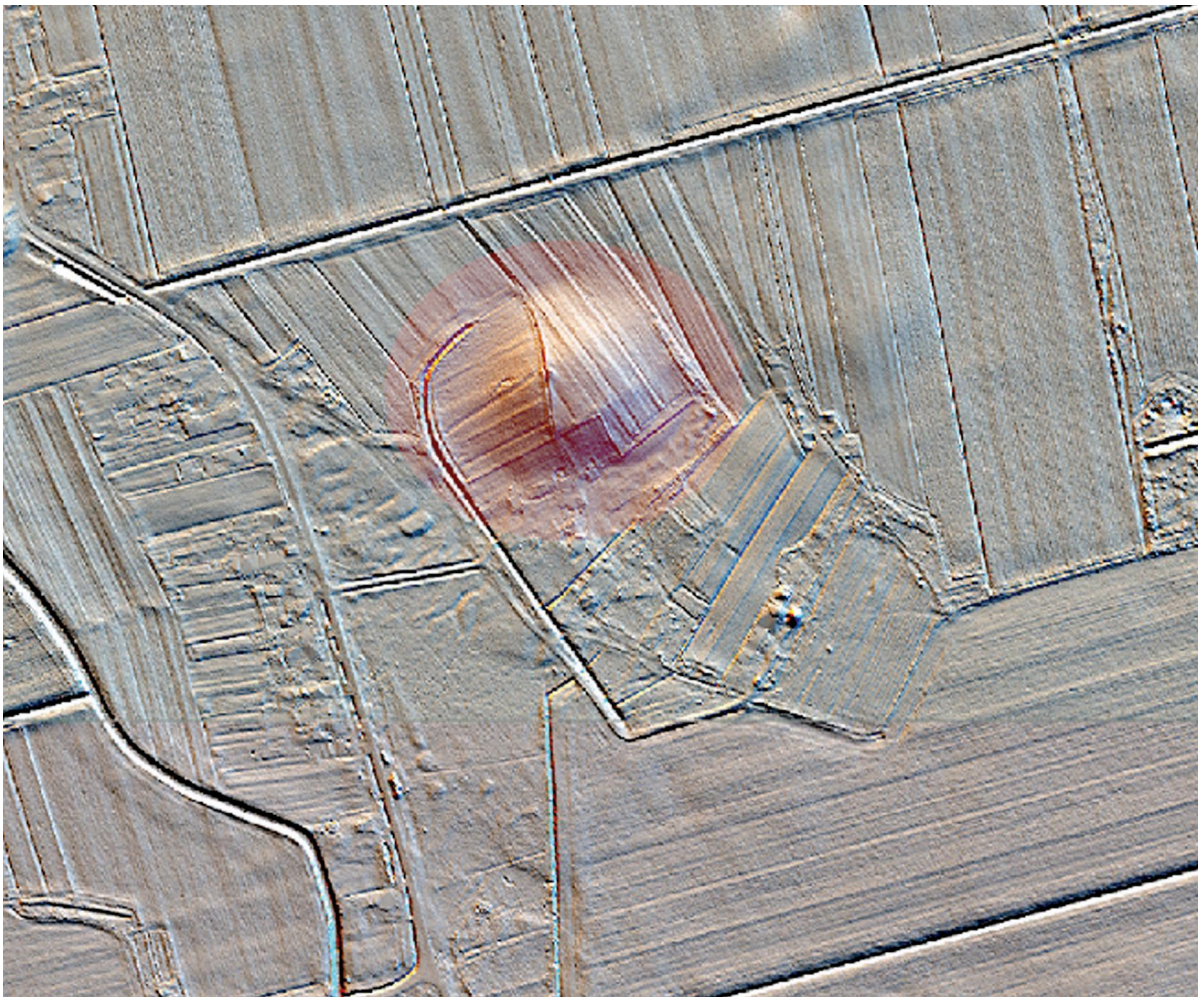
The spatial distribution has been confirmed



Slika 6a. *Zračna snimka Križina stana* (ožujak 2024., foto: I. Sokola)
Figure 6a *Aerial photo of Križin Stan* (March 2024, photo by I. Sokola)

[24] KRZNARIĆ ŠKRIVANKO 2003b: 16; 2012b: 24.
[25] Geoportal DGU 2011. (https://geoportal.dgu.hr/; 15. 3. 2024.)

[24] KRZNARIĆ ŠKRIVANKO 2003b: 16; 2012b: 24.
[25] Geoportal DGU 2011 (https://geoportal.dgu.hr/; 15/03/2024.)



Slika 6b. *DGU LIDAR Ivankovo – Križin stan* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 6b *DGU LIDAR Ivankovo – Križin Stan* (2024, modified by N. Ostović and I. Sokola)

snimkama te lidarom gdje su vidljivi ostatci dvaju kružnih naselja utvrđenih opkopima, od kojih je jedno uzvišenje, a drugo ravno.

KOMLETINCI – GRADINA (RKT GROBLJE) (sl. 1/6) (45° 8'3.78"S 18°56'52.19"I)

Oko 1,5 km južno od sela Komletinaca nad okolicom se uzdiže još jedan veći sopotski tel elipsoidnog oblika, dimenzija oko 100 x 85 m i visine oko 3 m. Ovaj prapovijesni lokalitet prvi put spominje 1960. J. Korda.[26] Upravo zbog izdignutosti u močvarnom po-

[26] KORDA 1960: 93.

by field survey, satellite and aerial photographs, and LIDAR, where the remains of two circular settlements enclosed by moats are visible, of which one is elevated, and the other flat.

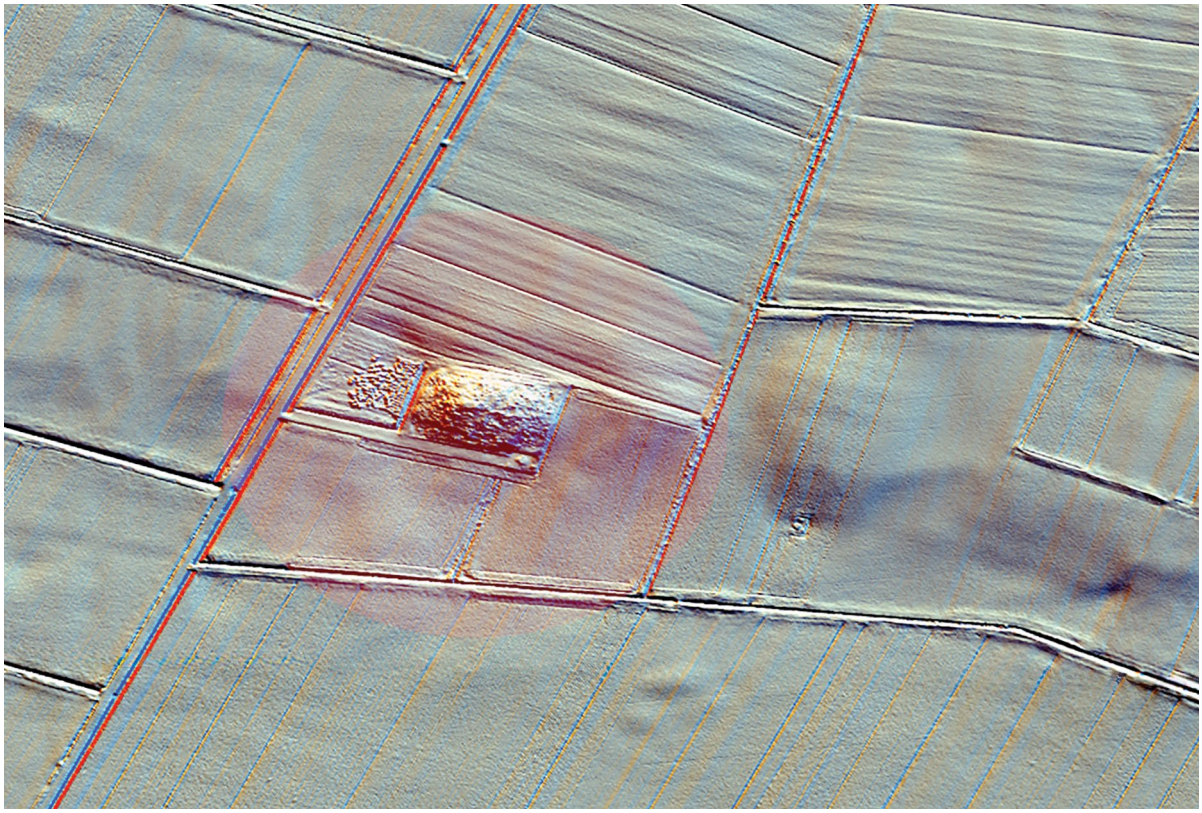
KOMLETINCI – GRADINA (ROMAN-CATHOLIC CEMETERY) (Fig. 1/6) (45°8'3.78"N 18°56'52.19"E)

About 1.5 kilometres south of the village of Komletinci, another larger Sopot tell of ellipsoid shape rises above the surrounding area, measuring c. 100 x 85 m and c. three metres in height. This prehistoric site was first mentioned in 1960 by J. Korda.[26] Precisely because of their elevated

[26] KORDA 1960: 93.



Slika 7a. *Zračna snimka Komletinaca (rkt groblje)* (ožujak 2024., foto: I. Sokola)
Figure 7a *Aerial photo of Komletinci (Catholic cemetery)* (March 2024, photo by I. Sokola)



Slika 7b. *DGU LIDAR Komletinci – Gradina* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 7b *DGU LIDAR Komletinci – Gradina* (2024, modified by N. Ostović and I. Sokola)

području, na dvama sopotskim telovima, od kojih je jedan u Komletincima, sagrađeno je seosko groblje koje se rasprostire na području cijelog naseobinskog platoa. Po površini tela pronađeni su ulomci keramike sopotske kulture, litičke alatke, kućni lijep, a u profilima iskopanih raka vide se ostatci gorenih kuća. I južno od tela, u iskopanom odvodnom kanalu nalaze se ulomci sopotske keramike.[27] Nažalost, ovaj je lokalitet uništen za buduće istraživače zbog dubine grobnih raka veće od 2 m.

Prostorno rasprostiranje potvrđeno je terenskim pregledom, satelitskim, zračnim snimkama i lidarom. Čini se da bi se s istočne strane mogao nalaziti ograđeni prostor, ali vremenski uvjeti nisu dopustili fotografiranje.

NUŠTAR – ZVERINJAK (sl. 1/7) (45°20'17.94"S 18°49'24.91"I)

Oko 1,5 km sjeverozapadno od Nuštra na toponimu Zverinjak nalazi se elipsoidno uzvišenje okruženo starim isušenim rukavcem Vuke. Dimenzije naselja vidljivog na satelitskim snimkama su oko 90 x 100 m, te je relativne visine oko 1,50 m. Ovaj lokalitet prvi put spominje Korda,[28] a poliranu kamenu sjekiru s ovog lokaliteta spominje i Z. Tomičić.[29] Kao i mnogi lokaliteti oko Vinkovaca, i ovaj je otkriven 2005., nakon što je područje razminirano. Po površini obrađenog uzvišenja pronađeni su nalazi sopotske kulture.[30] Pri rekognosciranju 2005. po površini izoranih polja pronađeni su ulomci keramike sopotske kulture. Probno arheološko istraživanje na lokalitetu provedeno je 2012. godine, kada je otkopan rov dužine 50 m u kojem je otkriveno 16 ukopanih objekata, a na najvi-

[27] KRZNARIĆ ŠKRIVANKO 2002b: 208; 2006a: 50; 2012b: 26.
[28] KORDA 1954: 84.
[29] TOMIČIĆ 1996: 27, 28, sl. 4 i 6.
[30] KRZNARIĆ ŠKRIVANKO 2005b: 40; 2012b: 29.

position in wetland terrain, over this and another Sopot tell, which the village itself was built on, the Komletinci cemetery was constructed, which spreads over the entire settlement plateau. Fragments of Sopot pottery, lithic tools and house daub were found on the surface of the tell, while in the profiles of excavated graves, remains of burned houses can be seen. South of the tell, in the excavated drainage channel, are also Sopot pottery sherds.[27] Unfortunately, the site has been destroyed for future researchers, given that the depth of graves is more than two metres.

The spatial distribution was confirmed in a field survey, by satellite and aerial imagery, and LIDAR. Seemingly, there might have been an enclosed zone on the east side, but the weather was unfavourable for photography.

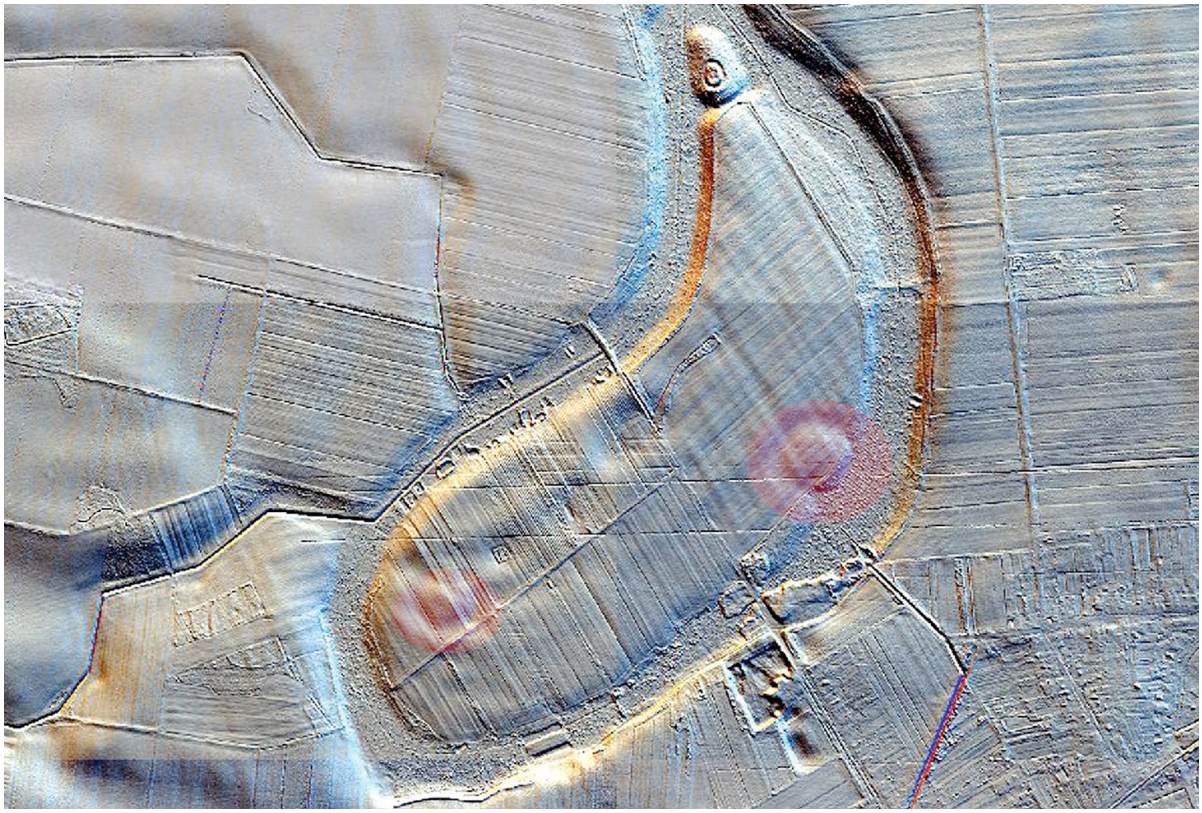
NUŠTAR – ZVERINJAK (Fig. 1/7) (45°20'17.94"N 18°49'24.91"E)

About 1.5 kilometres northwest of Nuštar, at the Zverinjak toponym, there is an ellipsoidal elevation surrounded by an old, dried-out channel of the River Vuka. The size of the settlement visible in satellite images is c. 90 x 100 m, and its relative height is c. 1.50 metres. The site was first mentioned by Korda,[28] and the burnished stone axe from the site also by Ž. Tomičić.[29] As with many sites around Vinkovci, this one was discovered in 2005, after the area had been cleared of mines. On the surface of the cultivated elevation, Sopot-culture finds were collected.[30] During the 2005 archaeological prospecting, on the surface of ploughed fields, fragments of Sopot-culture pottery were found. Archaeological trial excavations of the site were conducted in 2012, when a 50-metre-long trench was dug, in which 16 buried structures were recovered; in the highest part of the settlement plateau, the remains of a house

[27] KRZNARIĆ ŠKRIVANKO 2002b: 208; 2006a: 50; 2012b: 26.
[28] KORDA 1954: 84.
[29] TOMIČIĆ 1996: 27, 28, Figs. 4 and 6.
[30] KRZNARIĆ ŠKRIVANKO 2005b: 40; 2012b: 29.



Slika 8a. *Zračna snimka Nuštar – Zverinjak* (ožujak 2024., foto: I. Sokola)
Figure 8a *Aerial photo of Nuštar – Zverinjak* (March 2024, photo by I. Sokola)



Slika 8b. *DGU LIDAR Nuštar – Zverinjak* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 8b *DGU LIDAR Nuštar – Zverinjak* (2024, modified by N. Ostović and I. Sokola)

šem dijelu naseobinskog platoa istraženi su i ostatci poda jedne kuće. Uz rub naselja nalazio se kanal koji je okruživao naselje što se vidi na satelitskoj snimci. Naselje je datirano analizom dvaju uzoraka životinjskih kostiju u 4820. – 4690. kal. g. pr. Kr. (Beta Analytic Inc., Miami).[31]

Prostorno rasprostiranje potvrđeno je terenskim pregledom, satelitskim, zračnim snimkama i lidarom, te probnim arheološkim iskopavanjem, koje je potvrdilo da je višeslojno naselje bilo okruženo jarkom, bez obzira na to što se nalazi u okruženju rijeke Vuke. Zračno snimanje provedeno 2024. pokazalo je da se 500 metara istočno od tela vidi još jedan ograđeni prostor, koji se ne uzdiže od okolnog prostora.

OROLIK – GRADINA (sl. 1/8) (45°10'35.93"S 18°58'8.47"I)

Gradina u Oroliku nalazi se 4 km južno od sela. Višeslojno naselje nalazi se na prirodnom uzvišenju na lijevoj obali Bosuta, na ušću potoka Kosanovice. Naselje je s juga i istoka imalo prirodnu zaštitu, dok se sa zapadne i sjeverne strane nalazio zemljani bedem i opkop dubine 15 m koji se punio vodom iz Bosuta i zatvarao površinu veličine 120 x 160 m. Visina naselja u odnosu na Bosut je 15 do 20 m. Naselje je naseljeno od kasnog neolitika i sopotske kulture, što su pokazala arheološka iskopavanja provedena 1968.[32]

Drugo naselje na lijevoj obali utoka Kosanovice u Bosut spominje 1967. godine tadašnja kustosica u Gradskom muzeju u Vinkovcima Vesna Šaranović Svetek,[33] a naselje je potvrđeno i pri praćenju trase naftovoda 1984.[34]

[31] KRZNARIĆ ŠKRIVANKO 2012a: 47–49.
[32] MAJNARIĆ-PANDŽIĆ 1969: 79–81.
[33] ŠARANOVIĆ SVETEK 1967: 110.
[34] ISKRA-JANOŠIĆ 1985: 40–41; KRZNARIĆ ŠKRIVANKO 2012b: 17.

floor were also excavated. Along the settlement's periphery was a channel that enclosed it, as seen in the satellite image. On the basis of an analysis of two animal bone samples, the settlement was dated to 4820–4690 cal BC (Beta Analytic Inc., Miami).[31]

The spatial distribution was testified in a field survey, by satellite and aerial imagery, and LIDAR, as well as in archaeological trial excavations, which confirmed that the multi-layered settlement was surrounded by a ditch, notwithstanding its location in the vicinity of the River Vuka. In 2024, aerial photography pointed to another enclosed zone (which was not raised) 500 metres east of the tell.

OROLIK – GRADINA (Fig. 1/8) (45°10'35.93"N 18°58'8.47"E)

Gradina in Orolik is located four kilometres south of the village. The multi-layered settlement is located on a natural elevation on the left bank of the Bosut, at the mouth of the Kosanovica brook. To the south and east the settlement was naturally protected, while on its west and north sides there was an earthen rampart and a 15-metre-deep moat filled with water from the Bosut, enclosing a surface area of 120 x 160 m. The height of the settlement in relation to the Bosut was 15 to 20 metres. The settlement was inhabited from the late Neolithic and the Sopot culture on, as suggested by the 1968 archaeological excavations.[32]

Another settlement on the left bank of the Kosanovica brook where it joins the River Bosut was mentioned in 1967 by Vesna Šaranović Svetek (at that time the Curator at the Vinkovci Municipal Museum),[33] and the settlement was also confirmed in the course of the tracing of a pipeline route in 1984.[34]

[31] KRZNARIĆ ŠKRIVANKO 2012a: 47-49.
[32] MAJNARIĆ-PANDŽIĆ 1969: 79-81.
[33] ŠARANOVIĆ SVETEK 1967: 110.
[34] ISKRA-JANOŠIĆ 1985: 40-41; KRZNARIĆ ŠKRIVANKO 2012b: 17.



Slika 9a. *Zračna snimka Gradine u Oroliku* (ožujak 2024., foto: I. Sokola)
Figure 9a *Aerial photo of Gradina in Orolik* (March 2024, photo by I. Sokola)



Slika 9b. *Orolik na zračnoj snimci iz 1968.* (M 1 : 5000 DGU Geoportal)
Figure 9b *Orolik in an aerial photo from 1968* (Scale 1:5,000 DGU Geoportal)

I ovdje možemo kazati da je riječ o dvama naseljima, telu i povezanom ravnom naselju, koji se nalaze s lijeve i desne strane ušća potoka Kosanovice u Bosut, što se vidi i na zračnim snimkama. Prostorno rasprostiranje potvrđeno je terenskim pregledom, arheološkim iskopavanjem, satelitskim, zračnim snimkama i lidarom.

OTOK – GRADINA (sl. 1/9) (45° 8'21.04"S 18°53'51.13"I)

Lokalitet Gradina (u literaturi se spominje kao Mandekov vinograd) prepoznaje se u nizini kao blago uzvišenje 1 km jugoistočno od središta Otoka. Gradina je višeslojni lokalitet eliptičnog oblika dimenzija 134 x 128 m, ili 165 x 155 m (od baze opkopa do baze opkopa) i relativne visine do 4 m.[35] Prvi nalazi s ovog lokaliteta smješteni su 1897. –

Here, too, it can be said that there were two settlements: a tell, and a connected flat settlement, located on the left and right sides of the mouth of the Kosanovica brook at its confluence with the Bosut, as can be seen also in aerial photographs. The spatial distribution was confirmed in a field survey, archaeological excavations, by satellite and aerial imagery, and LIDAR.

OTOK – GRADINA (Fig. 1/9) (45°8'21.04"N 18°53'51.13"E)

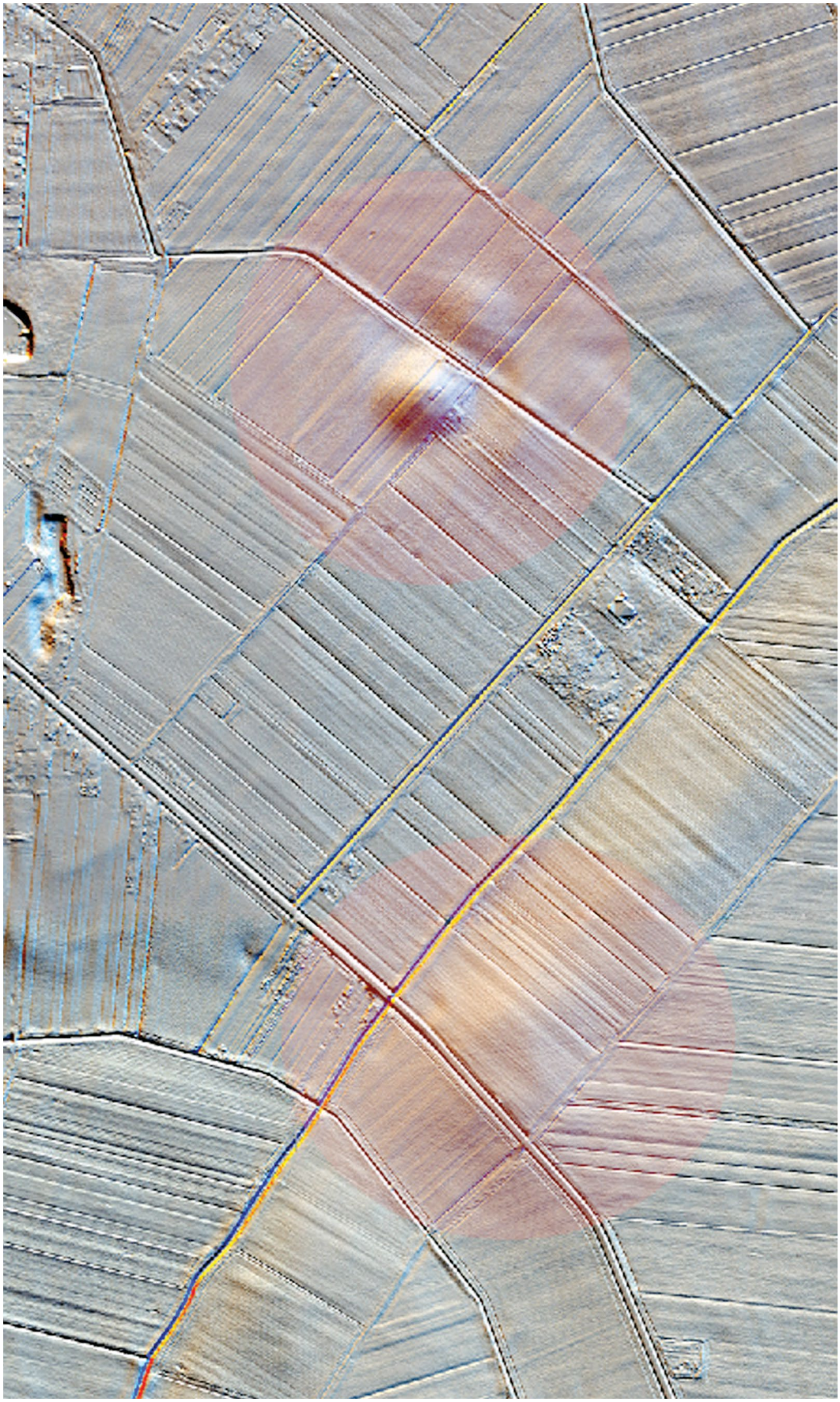
The Gradina site (in literature mentioned as Mandekov Vinograd) is identified in the plain as a gentle elevation one kilometre southeast of the centre of Otok. Gradina is a multi-layered site with an elliptical shape of 134 x 128 m, or 165 x 155 m (from the base of the moat to the base of the moat) and a relative height of up to four metres.[35] In 1897–1899, the first finds



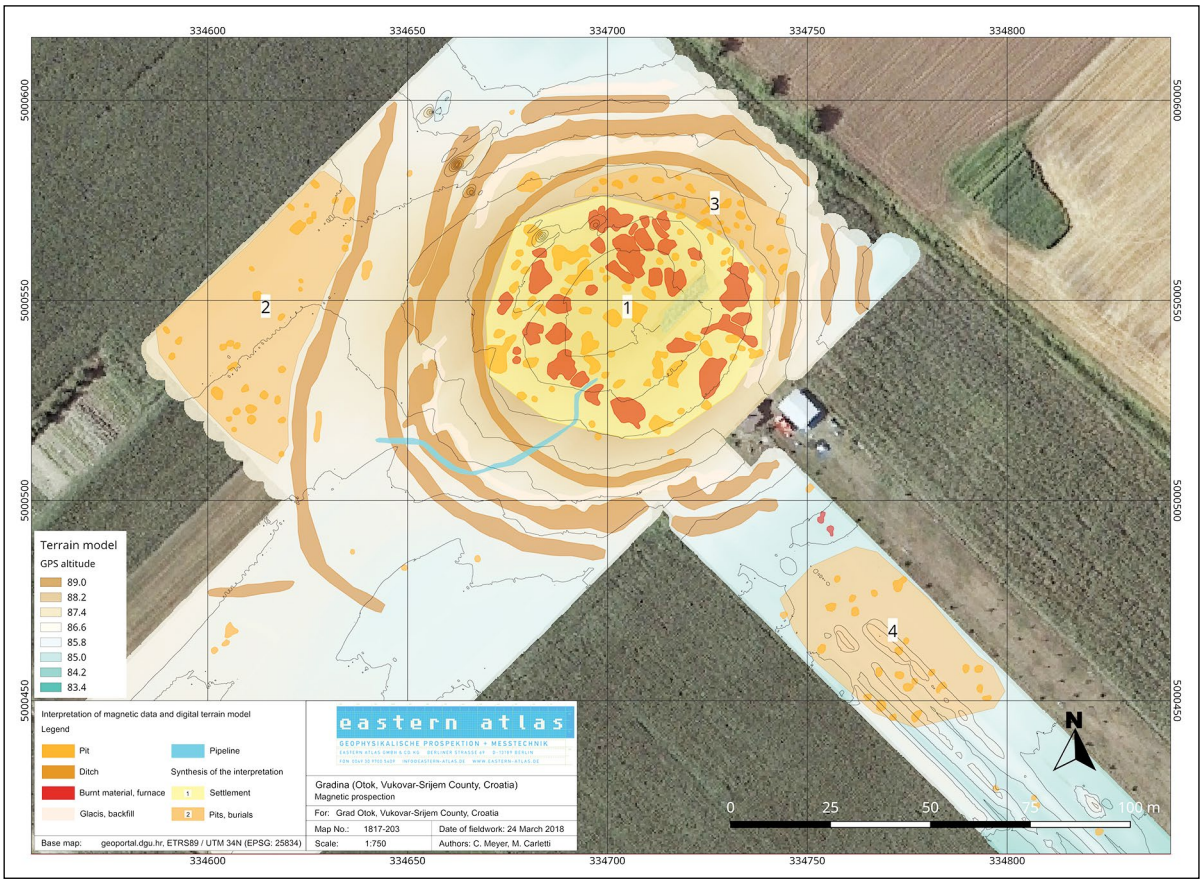
Slika 10a. *Zračna snimka Gradine u Otoku* (ožujak 2024., foto: I. Sokola)
Figure 10a *Aerial photo of Gradina in Otok* (March 2024, photo by I. Sokola)

[35] DIMITRIJEVIĆ 1979b: 270.

[35] DIMITRIJEVIĆ 1979b: 270.



Slika 10b. *DGU LIDAR Otok – Gradina* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 10b *DGU LIDAR Otok – Gradina* (2024, modified by N. Ostović and I. Sokola)



Slika 10c. *Otok - Gradina, rezultati geomagnetne metode* (Mayer 2018)
Figure 10c *Otok - Gradina, geomagnetic data* (Mayer 2018)

1899. u Arheološki muzej u Zagrebu.[36] Arheološka istraživanja provedena su 1957. i 1970., kada je istražen dio naselja sopotske kulture s kućama, gdje je debljina kulturnog sloja iznosila više od 4 m.[37]

Gradski muzej Vinkovci redovito obilazi lokalitete pod svojom ingerencijom, pa i ovaj u Otoku, gdje se po površini obrađenog tela nalaze mnogobrojni ulomci keramike sopotske kulture. Jedan od muzejskih suradnika godinama donosi glačane kamene alatke, počevši od dlijeta, klinova i sjekira, što navodi na pomisao da su sopotski lokaliteti bili specijalizirani npr. za izradu i obradu kamenih alatki.

Geomagnetna snimanja 2018.[38] pokazala su da se oko naselja nalaze četiri jarka.

from this site were deposited in the Archaeological Museum in Zagreb.[36] Archaeological campaigns were conducted in 1957 and 1970, when a part of the Sopot-culture settlement with houses was excavated, and the thickness of the cultural layer was more than four metres.[37]

The Vinkovci Town Museum regularly surveys the sites under its jurisdiction, including this one in Otok, where numerous Sopot-culture pottery sherds have been found on the surface of the tell in the process of cultivation. For years, a museum associate has been bringing in smoothed stone tools, including chisels, celts and axes, which suggest that the Sopot sites specialised in the knapping and processing of stone tools.

Geomagnetic scans from 2018[38] showed that

36 KRZNARIĆ ŠKRIVANKO 2012b: 13.
37 DIMITRIJEVIĆ 1966: 4; 1972: 52; 1979b: 270–271.
38 MAYER, CARLETTI 2018.

36 KRZNARIĆ ŠKRIVANKO 2012b: 13.
37 DIMITRIJEVIĆ 1966: 4; 1972: 52; 1979b: 270-271.
38 MAYER, CARLETTI 2018.

Unutarnji je promjera oko 100 m, idući oko 130 m, a promjer je trećeg jarka oko 160 m. Širina jaraka koji se vide u magnetometru iznosi od 5 do 6 m. Unutar jarka jasno se vide gorene kućne osnove, koje su kružno smještene prateći smjer jarka. Oko naselja postoji i prošireno ravničarsko naselje.[39]

Oko 800 m južno od Gradine u Otoku na toponimu Rudina Branjevina nađeni su površinski nalazi sopotske kulture (glačana kamena sjekira).

Prostorno rasprostiranje potvrđeno je terenskim pregledom, arheološkim iskopavanjem, satelitskim, zračnim snimkama i lidarom, te geomagnetnim snimanjem koje je potvrdilo da je višeslojno naselje bilo okruženo s nekoliko jaraka i otvorenim ravnim naseljem.

PODGRAĐE – GRAC (sl. 1/10) (45° 6'40.94"S 19° 4'25.55"I)

Na lijevoj obali Bosuta, 3 km istočno od sela Podgrađa, nalazi se umjetno nastalo uzvišenje danas četverokutnog oblika, dimenzija 50 x 60 m i relativne visine 2 m. Prvi ga spominje 1960. J. Korda.[40] Lokalitet, u literaturi poznat pod imenom Grac, ponovno je pregledan 2003., ali je tel zarastao u stari šljivik, a na okolnim oranicama površinski su prikupljeni ulomci keramike sopotske kulture.[41] Utvrđenom višeslojnom naselju i ovdje je vjerojatno prethodilo ravno naselje. Budući da se lokalitet nalazi blizu granice s Republikom Srbijom, ne postoji snimka lidarom.

[39] Budući da je u Otoku pronađeno i avarodobno groblje, dio jama može pripadati i zapunama raka grobova.

[40] KORDA 1960: 51.

[41] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2012b: 29. I ovaj lokalitet, kao i mnogi na istočnom području vinkovačkog kraja, godinama je bio okupiran, te u minski sumnjivom području.

around the settlement were four ditches. The diameter of the innermost ditch was c. 100 metres, of the next one c. 130 metres, and of the third one c. 160 metres. The width of the ditches seen in the magnetometer is from five to six metres. Within the ditch, burned house bases are clearly visible, which are arranged in a circular fashion, following its direction. Around the village was also an extended lowland settlement.[39]

About 800 metres south of Gradina in Otok, at the toponym of Rudina Branjevina, Sopot-culture surface finds (a smoothed stone axe) were unearthed.

The spatial distribution was confirmed in a field survey, archaeological excavations, by satellite and aerial imagery, and LIDAR, as well as by geomagnetic imaging, which confirmed that the multi-layered settlement was surrounded by several ditches and an open flat settlement.

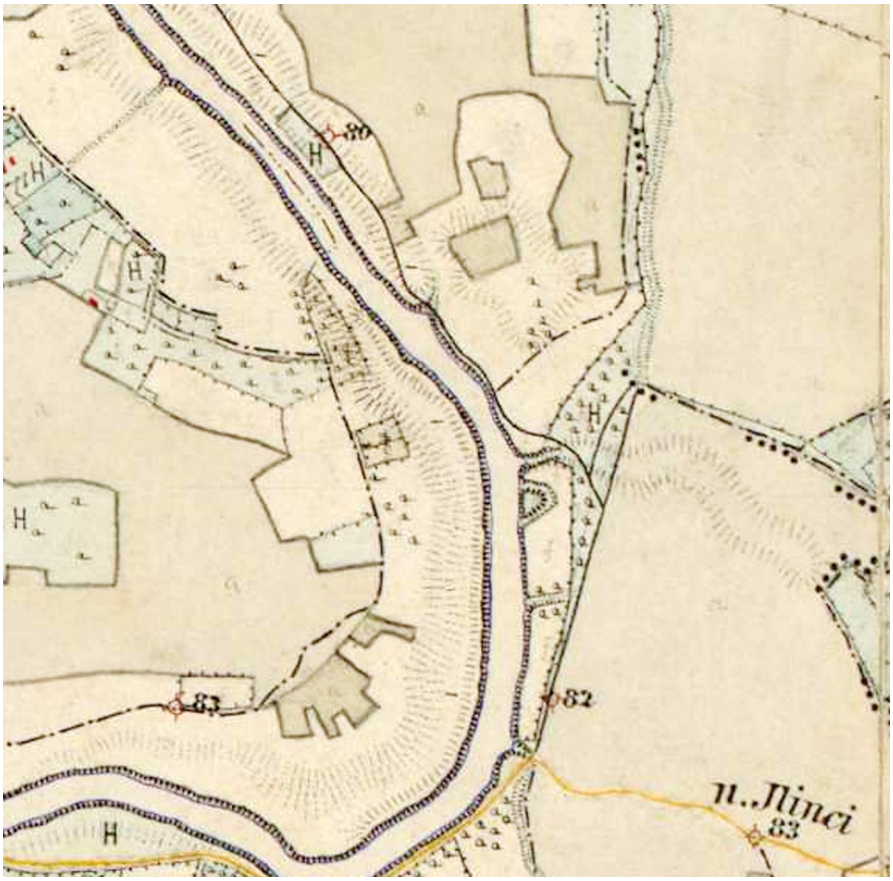
PODGRAĐE – GRAC (Fig. 1/10) (45°6'40.94"N 19°4'25.55"E)

On the left bank of the Bosut, three kilometres east of the village of Podgrađe, there is an artificial elevation, presently of a square shape, measuring 50 x 60 m and with a relative height of two metres. It was first mentioned in 1960 by J. Korda.[40] The site, known in the literature as Grac, was re-examined in 2003, but the tell was overgrown by an old plum orchard, while on the surface of the surrounding ploughland, fragments of Sopot-culture pottery were collected.[41] Here, too, the fortified multi-layered settlement was probably preceded by a flat settlement. As the site is located near the border with the Republic of Serbia, there is no LIDAR imagery.

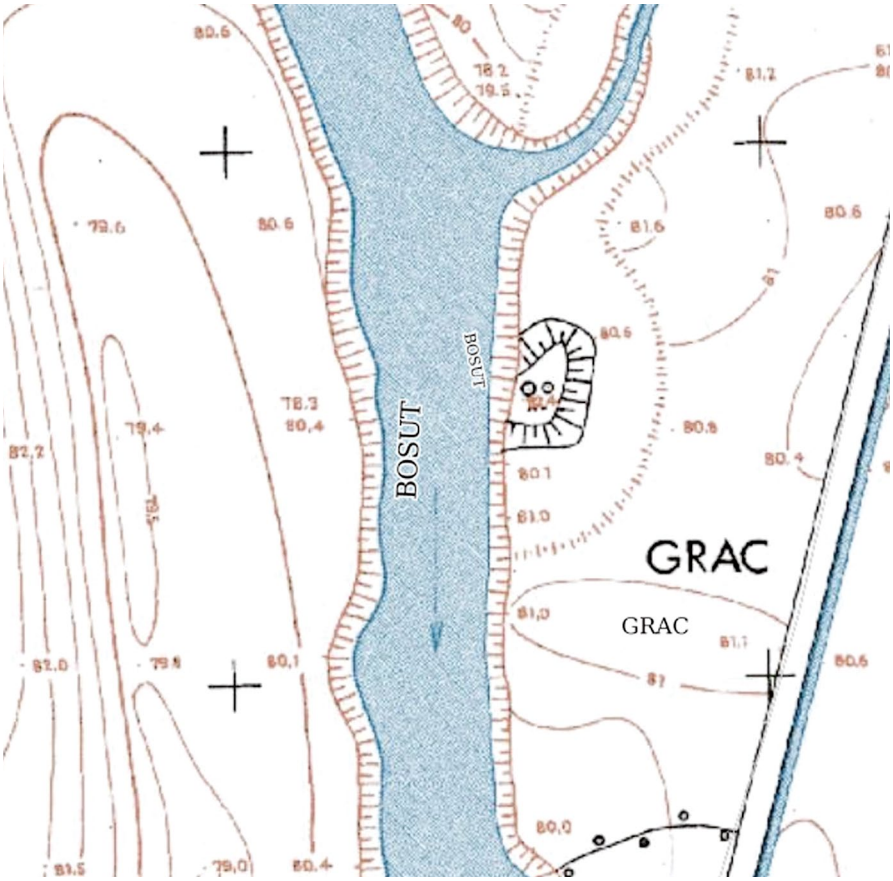
[39] Given that in Otok a cemetery from the Avar period was also uncovered, a part of the pits might also be interpreted as grave fills.

[40] KORDA 1960: 51.

[41] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2012b: 29. This site (like many in the eastern part of Vinkovci region) was occupied for years, and is located in a mine-suspected area.



Slika 11a. *Podgrađe – Grac na karti 3. vojne izmjere* (https://maps.arcanum.com/en/synchron/)
Figure 11a *Podgrađe – Grac on a map of the Third Military Survey* (https://maps.arcanum.com/en/synchron/)



Slika 11b. *Podgrađe – Grac* (HOK 1 : 5000, Geoportal GDU)
Figure 11b *Podgrađe – Grac* (Croatian Base Map (HOK) 1:5,000, Geoportal GDU)

PRIVLAKA – GRADINA
(Gole njive) (sl. 1/11)
(45°12'24.07"S 18°51'53.38"I)

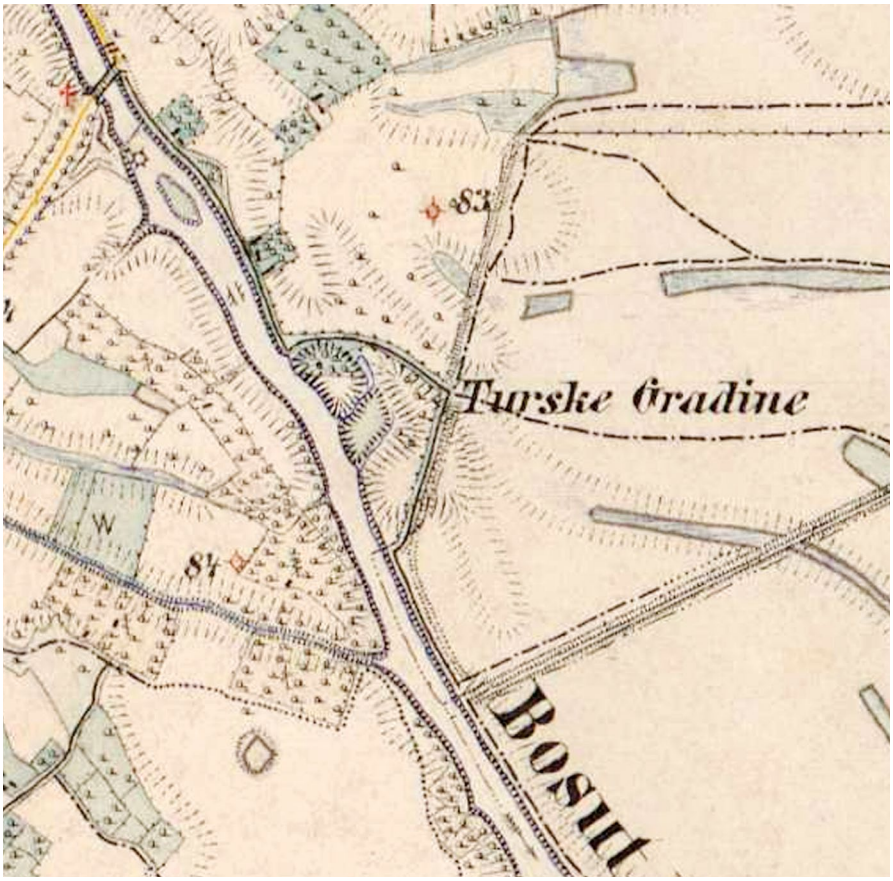
Lokalitet Gradina nalazi se 2,5 km sjeveroistočno od sela na lijevoj obali Bosuta.[42] Prvi pojedinačni nalazi s Gradine našli su svoje mjesto 1897. u Arheološkom muzeju u Zagrebu.[43] Lokalitet spominje i J. Korda,[44] a tijekom 70-ih i 80-ih godina 20. stoljeća Arheološki zavod Filozofskog fakulteta u Zagrebu proveo je arheološko iskopavanje.[45] Višeslojno naselje utvrđeno je prema sjeveru, istoku i jugu zemljanim bedemom i opkopom, dok se sa zapadne strane nalazi Bosut. Riječ je o dvojnom lokalitetu koji je naseljen od kasnog neolitika i vjerojatno je već tada bio utvrđen opkopom i zemljanim nasipom, dodatno je vidljiv i vanjski opkop. Pojavu sopotskih telova u paru prvi spominje S. Dimitrijević na primjeru telova u Privlaci i Slakovcima, gdje piše o naseobinskim kompozicijama/platoima u obliku vijenca između kojih nije jasan odnos.[46] Na osnovi satelitskih snimaka Kalafatić i Šiljeg izračunali su dimenzije sjevernog i južnog tela s opkopima koji ih okružuju, te vanjskim opkopom dimenzija 600 x 400 m.[47] Zračna snimka iz 2024. i lidar pokazuju da je riječ o dvama odvojenim telovima okruženim jarkom, te trećem, manjem uzvišenju, koji su zajedno okruženi većim jarkom.

PRIVLAKA – GRADINA
(Gole njive) (Fig. 1/11)
(45°12'24.07"N 18°51'53.38"E)

The Gradina site is located 2.5 kilometres north-east of the village on the left bank of the Bosut.[42] In 1897, the first individual finds from Gradina were deposited in the Archaeological Museum in Zagreb.[43] The site is also mentioned by J. Korda,[44] while in 1970s and 1980s the Archaeological Institute of the Faculty of Humanities and Social Sciences in Zagreb conducted archaeological campaigns there.[45] The multi-layered settlement was fortified to the north, east and south by an earthen rampart and a moat, while on the west was the Bosut. It is a dual site that was inhabited from the Late Neolithic on and probably already at that time enclosed by a moat and an earthen embankment; an outside moat is also visible. The appearance of the Sopot tells in pairs was first mentioned by S. Dimitrijević regarding the example of the tells in Privlaka and Slakovci, where he wrote about settlement compositions/plateaus in the form of a coronet and with an unclear relation between them.[46] Based on satellite images, Kalafatić and Šiljeg calculated the dimensions of the northern and southern tells with the surrounding moats, and an outer moat of 600 x 400 m.[47] A 2024 aerial photo and LIDAR show that these are two separate tells surrounded by a ditch, and a third, smaller elevation, all together enclosed by a larger ditch.

42 Vidi se na povijesnoj karti iz 18. st. (https://maps.arcanum.com/en/map/europe-18century-firstsurvey/).
43 KRZNARIĆ ŠKRIVANKO 2012: 13.
44 KORDA 1960: 48.
45 MAJNARIĆ PANDŽIĆ 1980: 45–48.
46 DIMITRIJEVIĆ 1979b: 272; KRZNARIĆ ŠKRIVANKO 2012b: 13, 15–16.
47 KALAFATIĆ, ŠILJEG 2018: 104.

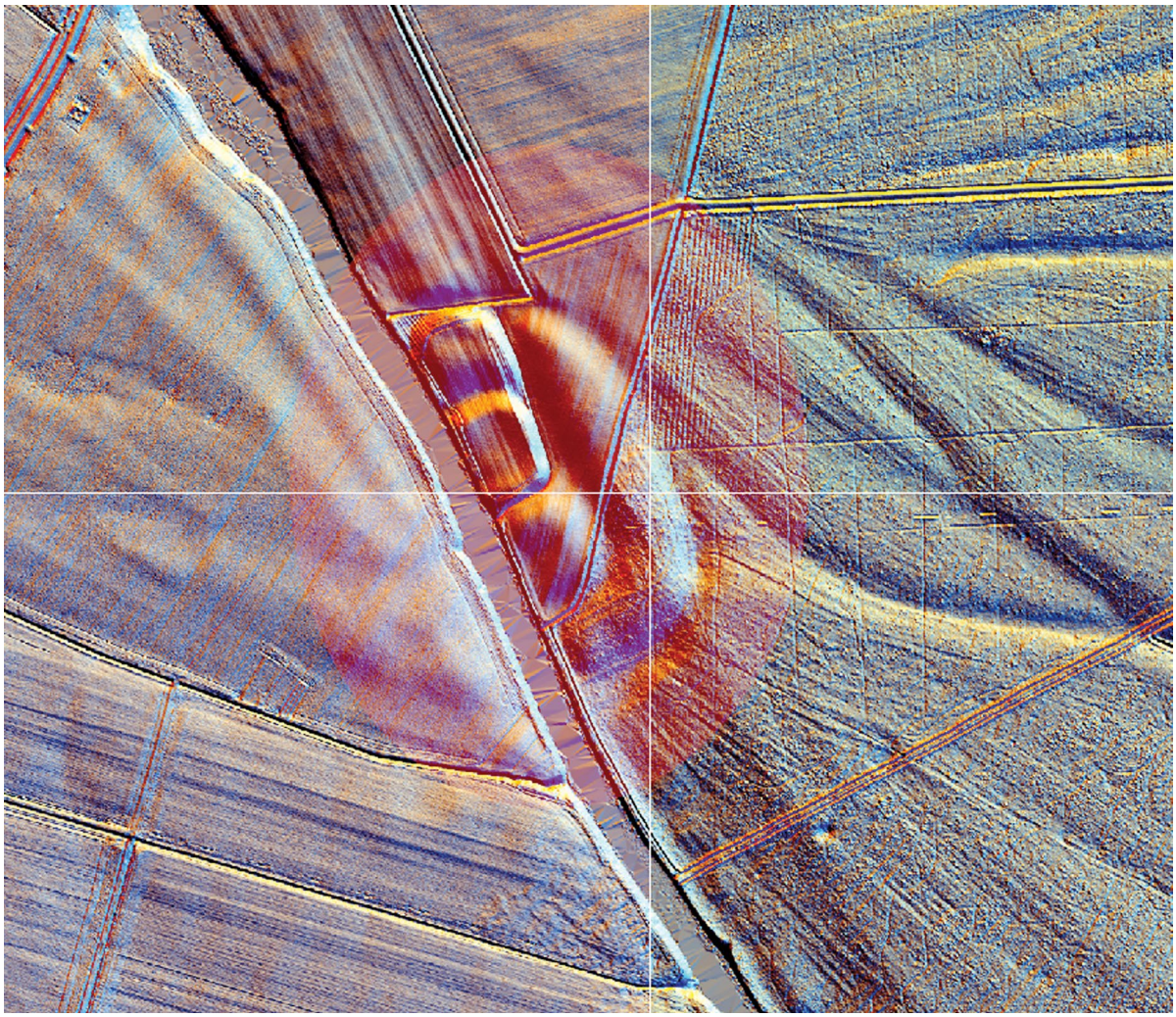
42 The site is visible on an 18th-century historical map (https://maps.arcanum.com/en/map/europe-18century-firstsurvey/).
43 KRZNARIĆ ŠKRIVANKO 2012: 13.
44 KORDA 1960: 48.
45 MAJNARIĆ PANDŽIĆ 1980: 45-48.
46 DIMITRIJEVIĆ 1979b: 272; KRZNARIĆ ŠKRIVANKO 2012b: 13, 15-16.
47 KALAFATIĆ, ŠILJEG 2018: 104.



Slika 12a. *Gradina u Privlaci na karti 3. vojne izmjere* (https://maps.arcanum.com/en/synchron/)
Figure 12a *Gradina in Privlaka on a map of the Third Military Survey* (https://maps.arcanum.com/en/synchron/)



Slika 12b. *Zračna snimka Gradine u Privlaci* (ožujak 2024., foto: I. Sokola)
Figure 12b *Aerial photo of Gradina in Privlaka* (March 2024, photo by I. Sokola)



Slika 12c. *DGU LIDAR Privlaka – Gradina* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 12c *DGU LIDAR Privlaka Gradina* (2024, modified by N. Ostović and I. Sokola)

RETKOVCI – GRADINA (RKT. GROBLJE) (sl. 1/12) (45°15'41.47"S 18°39'57.17"I)

Tri kilometra sjeverno od sela Retkovaca nalazi se višeslojno naselje eliptičnog oblika promjera oko 120 m. Za ovo bismo naselje mogli kazati da se nalazi na „svojevrsnom otoku" u močvarnom području, što se vidi i na starim kartama. Prvi su nalazi još 1911. smješteni u Arheološki muzej u Zagrebu,[48] a 1979. naselje spominje i Dimitrijević.[49] Na telu se danas nalazi seosko groblje, te se u rakama vide i ostatci uništenih gorenih pod-

[48] KRZNARIĆ ŠKRIVANKO 2012b: 13.
[49] DIMITRIJEVIĆ 1979b: 270.

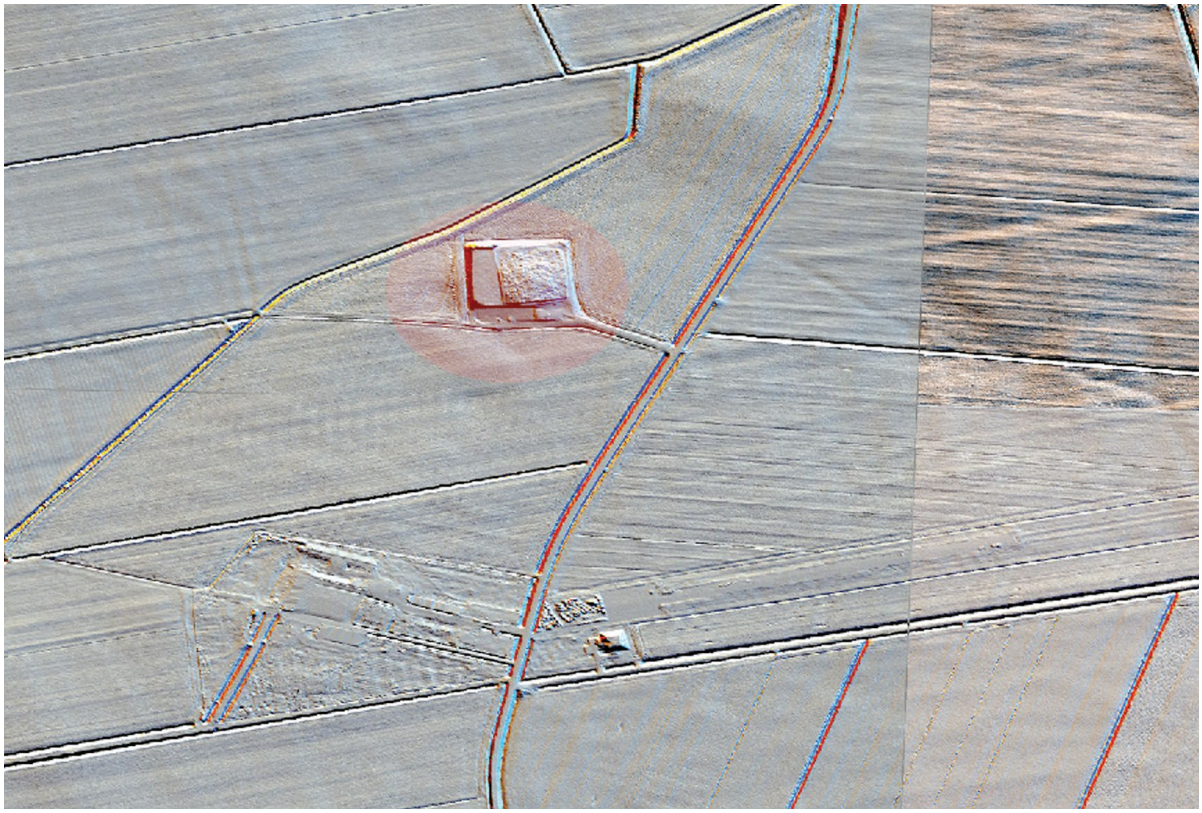
RETKOVCI – GRADINA (ROMAN-CATHOLIC CEMETERY) (Fig. 1/12) (45°15'41.47"N 18°39'57.17"E)

Three kilometres north of the village of Retkovci is a multi-layered settlement with an elliptical shape and a diameter of c. 120 metres. This settlement can be said to be located on an "island" in a wetland area, as can also be seen on old maps. The first finds were deposited in the Archaeological Museum in Zagreb[48] as early as 1911, while in 1979 the settlement was mentioned also by Dimitrijević.[49] Today there is a Roman Catholic cemetery on the tell; in the graves the remains of

[48] KRZNARIĆ ŠKRIVANKO 2012b: 13.
[49] DIMITRIJEVIĆ 1979b: 270.



Slika 13a. *Zračna snimka Gradine u Retkovcima* (ožujak 2024., foto: I. Sokola)
Figure 13a *Aerial photo of Gradina in Retkovci* (March 2024, photo by I. Sokola)



Slika 13b. *DGU LIDAR Gradine u Retkovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 13b *DGU LIDAR of Gradina in Retkovci* (2024, modified by N. Ostović and I. Sokola)



Slika 13c. *Retkovci - Gradina, rezultati geomagnetne metode* (Mayer 2023)
Figure 13c *Retkovci - Gradina, geomagnetic data* (Mayer 2023)

nih osnova. Devastacija počinjena u nekoliko navrata na južnom dijelu tela, zbog gradnje ceste i parkirališta, pokazala je ostatke gorenih kućnih osnova, te ulomke latenske keramike.[50]

Geomagnetna snimanja[51] obavljena su 2023. godine radi proširenja seoskog groblja, a zaštitno arheološko istraživanje proveo je 2024. Arheološki muzej u Osijeku. Na magnetnoj se snimci vidi veliki jarak koji prstenasto okružuje naselje, a oko njega se nalazi još najmanje jedan jarak. U naselju se prepoznaju gorene kućne osnove različitih orijentacija, a dio se objekata nalazi i u zatrpanom jarku. I oko ovog naselja nalazi se ravno naselje, u kojem se vide jame i veći ukopani objekti.

Prostorno rasprostiranje potvrđeno je teren-

destroyed burned floor bases are discernible. The devastation caused on several occasions in the southern part of the tell due to the construction of a road and a parking lot revealed the remains of burned house bases, and La Tène potsherds.[50]

Geomagnetic surveying[51] was performed in 2023 prior to the expansion of the village cemetery, while archaeological rescue excavations were conducted in 2024 by the Archaeological Museum in Osijek. The magnetic-survey data indicate a large ring-shaped ditch surrounding the settlement, around which is at least one more ditch. In the village, burned house bases with different orientations are recognised, while some structures are located also in a buried ditch. Around this settlement, too, there is a flat settlement, in which pits and larger buried structures are visible.

The spatial distribution was confirmed in field

50 KRZNARIĆ ŠKRIVANKO 2012b: 26.
51 MAYER, CARLETTI 2023.

50 KRZNARIĆ ŠKRIVANKO 2012b: 26.
51 MAYER, CARLETTI 2023.

skim pregledom, zračnim snimkama, lidarom, arheološkim istraživanjem i rezultatima geofizičke prospekcije gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima s ostatcima kuća, jama i većih ukopanih objekata.

ROKOVCI – GRADINA
(Jemrića stan) (sl. 1/13)
(45°15'37.10"S 18°44'53.43"I)

Tri kilometra sjeverno od sela, u blizini Rokovačkih zidina nalazi se gradina koju prvi spominje Brunšmid, a u literaturi se spominje pod imenom Rudina Široko (Prećka, Palina, Poljica).[52] Rekognosciranje provedeno 2000-ih otkrilo je u zapuštenom i gusto obraslom šljiviku na desnoj obali Bosuta manje uzvišenje koje je poslije korišteno kao srednjovjekovna utvrda, kao i mnogobrojni

surveys, as well as by aerial photographs, LIDAR, archaeological excavations and geophysical prospecting data, with visible remains of circular settlements enclosed by ditches with the remains of houses, pits and larger buried structures.

ROKOVCI – GRADINA
(Jemrića Stan) (Fig. 1/13)
(45°15'37.10"N 18°44'53.43"E)

Three kilometres north of the village, near the Rokovačke Zidine church ruins, is a hillfort settlement that was first mentioned by Brunšmid, known in the literature under the name Rudina Široko (Prećka, Palina, Poljica).[52] Archaeological prospecting conducted in the 2000s revealed a smaller elevation in a neglected and densely overgrown plum orchard on the right bank of the Bosut; the elevation had later been used as a



Slika 14a. *Zračna snimka Gradine u Rokovcima* (ožujak 2024., foto: I. Sokola)
Figure 14a *Aerial photo of Gradina in Rokovci* (March 2024, photo by I. Sokola)

[52] BRUNŠMID 1902: 121.

[52] BRUNŠMID 1902: 121.



Slika 14b. *Rokovci na zračnoj snimci iz 1968.* (M 1 : 5000 DGU Geoportal)
Figure 14b *Rokovci in a 1968 aerial photo* (Scale 1:5,000 DGU Geoportal)

sopotski telovi na obalama Bosuta ili Vuke.[53] Osim sa sjeverne strane gdje se nalazi Bosut, s ostalih strana bio je okružen jarkom koji je danas zarastao. Uzvišenje je polukružnog oblika dimenzija 75 x 75 m, a Petković smatra da je riječ o manjoj srednjovjekovnoj utvrdi ili stražarnici.[54] Izgled naselja najbolje se vidi na zračnim snimkama iz 1968.[55] i 2024.

medieval fortress, as was the case with numerous Sopot tells on the banks of the Bosut or Vuka.[53] Except on the north side, where the Bosut flows, on all other sides it was enclosed by a – now overgrown – ditch. The elevation has a semi-circular (75 x 75 m) shape, and Petković believes it was a rather small medieval fortress or a watchtower.[54] The appearance of the settlement is best seen in the 1968[55] and 2024 aerial photographs.

[53] KRZNARIĆ ŠKRIVANKO 2012b: 14; KRZNARIĆ ŠKRIVANKO et al. 2012: 58.
[54] PETKOVIĆ 2006: 70.
[55] Geoportal DGU 1968. (https://geoportal.dgu.hr/; 15. 3. 2024.).

[53] KRZNARIĆ ŠKRIVANKO 2012b: 14; KRZNARIĆ ŠKRIVANKO et al. 2012: 58.
[54] PETKOVIĆ 2006: 70.
[55] Geoportal DGU 1968. (https://geoportal.dgu.hr/; 15. 3. 2024).

SLAKOVCI – GRADINA (sl. 1/14) (45°12'53.77"S 18°56'14.25"I)

Lokalitet se nalazi 1 km jugozapadno od sela Slakovaca u nizinskom, nekad močvarnom području, a s južne mu se strane nalazio manji vodotok.[56] Za lokalitet se zna od 1896., kada su prvi nalazi dospjeli u Arheološki muzej u Zagrebu, a spominje ga i Dimitrijević.[57] Na sopotskom telu, promjera oko 150 m i visine veće od 4 m, u srednjem vijeku sagrađen je manji četverokutni burg, što se vidi na povijesnim kartama. Oko burga danas se vide tri manja uzvišenja kao ostatci sopotskog naselja po čijoj se površini nalaze ulomci keramike, kameni i koštani artefakti. Prije desetak godina lokalitet je poravnan te su se po površini mogle vidjeti uništene

SLAKOVCI – GRADINA (Fig. 1/14) (45°12'53.77"N 18°56'14.25"E)

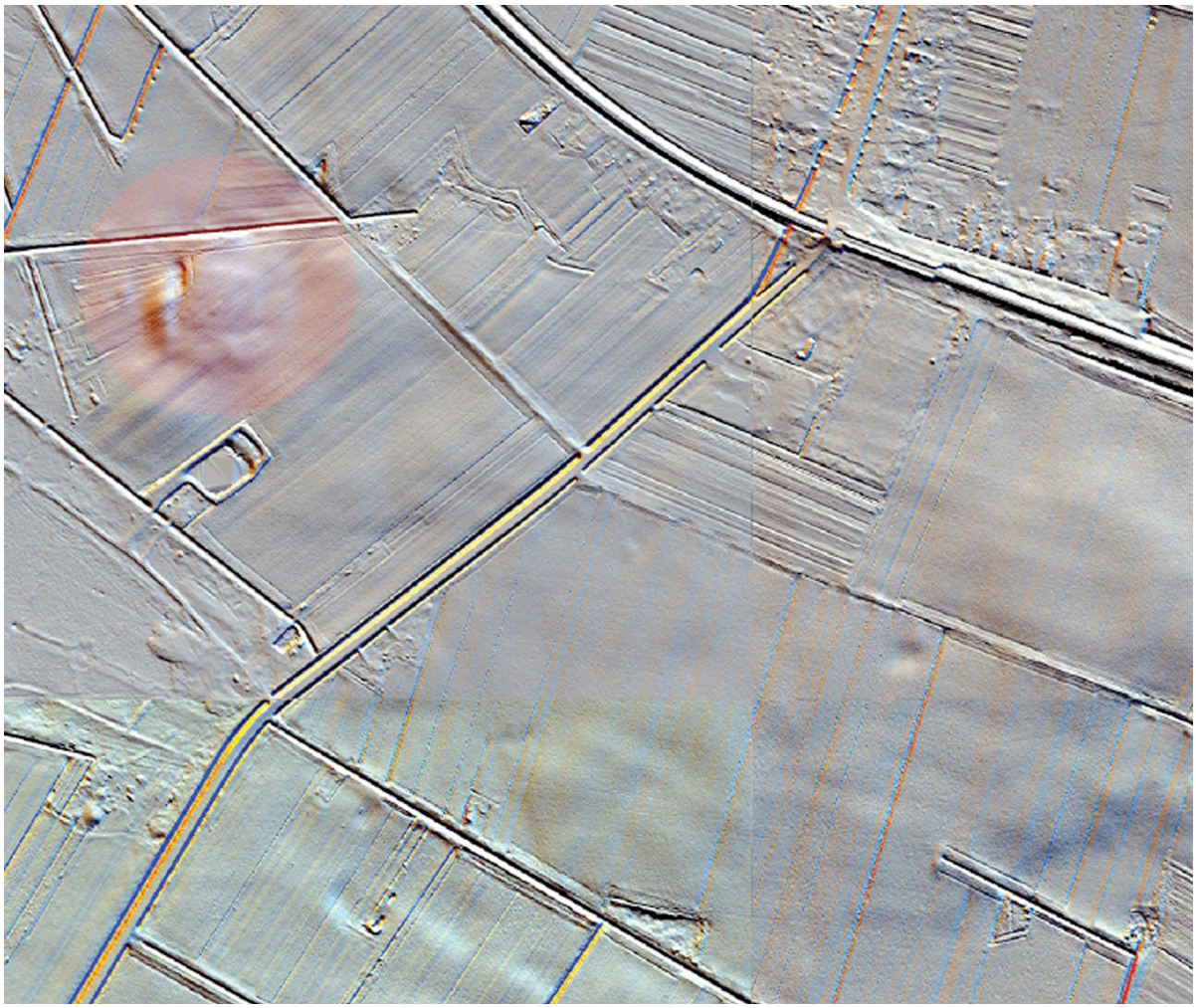
The site is located one kilometre southwest of the village of Slakovci in a lowland (once wetland) area, and on its south was a rather small watercourse.[56] The site has been known since 1896, when the first finds arrived in the Archaeological Museum in Zagreb, and was also mentioned by Dimitrijević.[57] On the Sopot tell, c. 150 metres in diameter and above four metres in height, in the Middle Ages a smaller rectangular burg was built, which can be seen on historical maps. In the present day, three smaller elevations are visible around the burg – the remains of a Sopot settlement whose surface area has yielded potsherds, stone and bone artefacts. About ten years ago, the site was levelled,



Slika 15a. *Zračna snimka Gradine u Slakovcima* (ožujak 2024., foto: I. Sokola)
Figure 15a *Aerial photo of Gradina in Slakovci* (March 2024, photo by I. Sokola)

[56] Vidi se na povijesnoj karti iz 18 st. (https://maps.arcanum.com/en/map/europe-18century-firstsurvey/).
[57] DIMITRIJEVĆ 1968: 21; KRZNARIĆ ŠKRIVANKO 2012b: 13.

[56] It is visible in an 18th-century historical map. (https://maps.arcanum.com/en/map/europe-18century-firstsurvey/).
[57] DIMITRIJEVĆ 1968: 21; KRZNARIĆ ŠKRIVANKO 2012b: 13.



Slika 15b. *DGU LIDAR Gradine u Slakovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 15b *DGU LIDAR of Gradina in Slakovci* (2024, modified by N. Ostović and I. Sokola)

gorene sopotske kuće.[58] Na satelitskim snimkama vidi se s južne strane još jedno manje uzvišenje, koje su izmjerili i opisali Kalafatić i Šiljeg.[59]

Zračno snimanje provedeno u ožujku 2024. pokazalo je opkop oko sjevernog naselja kao i ostatke pravokutne građevine.

Oko 800 m istočnije od gradine na toponimu Petrovčica pronađena je glačana kamena sjekira.

bringing destroyed burned Sopot houses to the surface.[58] Satellite images show another small elevation in the south, which was measured and described by Kalafatić and Šiljeg.[59]

Aerial footage conducted in March 2024 showed a moat around the northern settlement, as well as the remains of a rectangular building.

About 800 metres east of the hillfort settlement at the Petrovčica toponym, a smoothed stone axe was uncovered.

58 KRZNARIĆ ŠKRIVANKO 2012b: 26–27.
59 KALAFATIĆ, ŠILJEG 2018: 98.

58 KRZNARIĆ ŠKRIVANKO 2012b: 26-27.
59 KALAFATIĆ, ŠILJEG 2018: 98.

STARI MIKANOVCI – DAMIĆA GRADINA (sl. 1/15) (45°17'3.10"S 18°33'27.69"I)

Višeslojno utvrđeno naselje Damića gradina nalazi se u centru Starih Mikanovaca, na južnim padinama Đakovačko-vinkovačkog ravnjaka. Prvi nalazi s ovog lokaliteta dospijevaju 1888. godine sa zbirkom J. Brunšmida u Narodni muzej,[60] a kao neolitički lokalitet spominje ga 1954. J. Korda.[61] Naseobinski je plato eliptičnog oblika promjera 117 x 125 m, dok je u podnožju promjera oko 170 m. Gradina se blago spušta prema jugu, relativne je visine 8 m, dok je visina u sjeveroistočnom dijelu platoa veća od 9 m. Ulaz na gradinu bio je s jugoistočne strane, što se vidi i na Marsilijevu planu s početka 18. stoljeća.[62] Gradski muzej Vinkovci 1980. godine proveo je veliko zaštitno arheološko iskopavanje tijekom gradnje osnovne škole koje je pokazalo kontinuitet naseljavanja počevši od sopotske kulture do mlađeg željeznog doba. Iskopavanje koje je obuhvatilo istočnu stranu lokaliteta pokazalo je da je sopotsko naselje imalo zemljani bedem i danas djelomično vidljiv opkop. U iskopavanju su otkriveni ostatci kuća, jame i obilje pokretne arheološke građe sopotske kulture.[63]

Tijekom 2016. provedena su geofizička istraživanja na zapadnoj strani naseobinskog platoa na površini od 3250 m^2.[64] Na rezultatima magnetske metode prepoznaju se područja jačih magnetskih anomalija na mjestima gorenih kuća, koje mogu pripadati i sopotskim, ali i eneolitičkim kućama, te već spomenuti

60 KRZNARIĆ ŠKRIVANKO 2012b: 20.
61 KORDA 1954: 81.
62 VIRC 1979: 269–281.
63 ISKRA-JANOŠIĆ 1984: 149; DIZDAR 2001; KRZNARIĆ ŠKRIVANKO 2012b: 20–21; MILOGLAV 2016: 101.
64 Geofizička istraživanja mogla su se obaviti jer je posječen park koji je bio zasađen iza škole na zapadnoj strani platoa. Radove je izvela tvrtka Geoarh. d. o. o. iz Slovenije, a financijska sredstva osiguralo je Sveučilište u Zagrebu (programski ugovori za 2016. – prof. dr. Ina Miloglav).

STARI MIKANOVCI – DAMIĆA GRADINA (Fig. 1/15) (45°17'3.10"N 18°33'27.69"E)

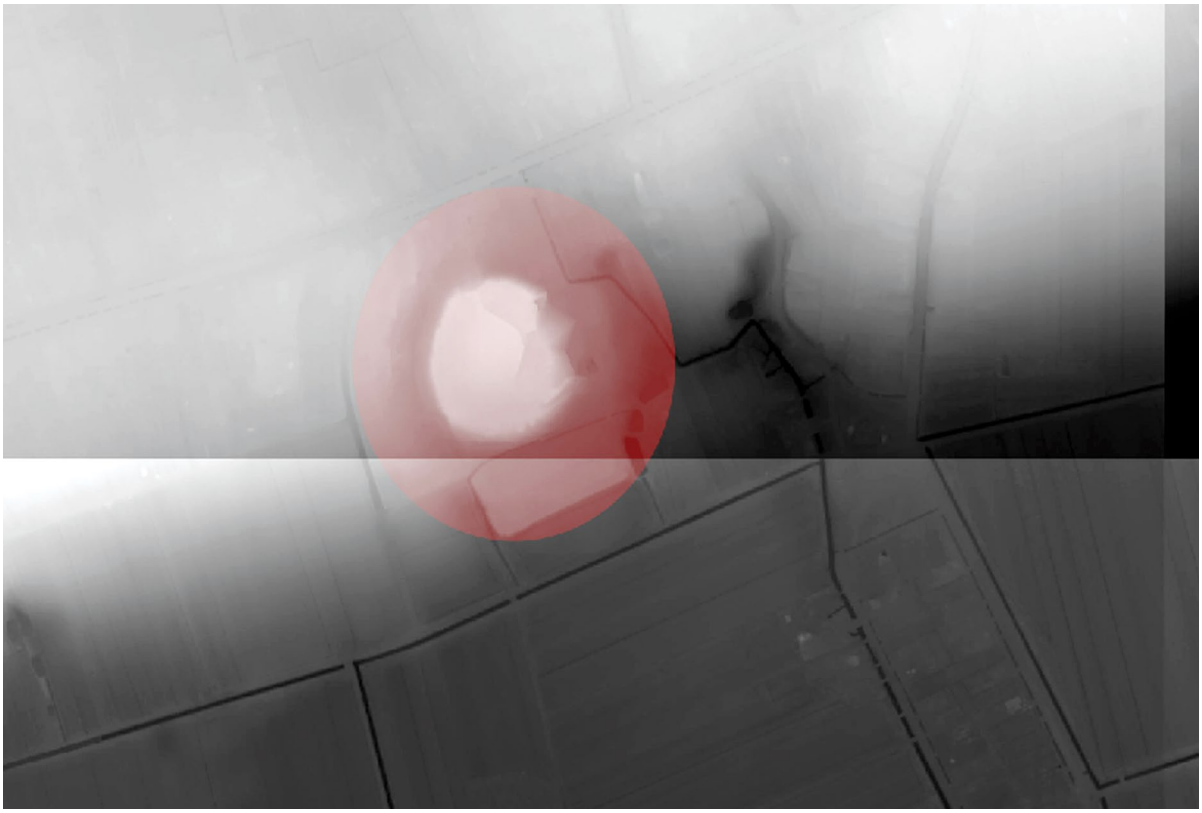
The multi-layered fortified settlement of Damića Gradina is located in the centre of Stari Mikanovci, on the southern slopes of the Đakovo-Vinkovci Plateau. The first finds from this site arrived in the National Museum[60] in 1888 with the collection of J. Brunšmid, while in 1954 it was mentioned as a Neolithic site by J. Korda.[61] The settlement plateau has an elliptical shape with a diameter of 117 x 125 m, while at the base it is c. 170 metres. The hillfort gently descends to the south; its relative height is eight metres, while its height in the north-eastern part of the plateau is more than nine metres. The entrance to the hillfort was from the south-east side, as can be seen on Marsili's plan from the beginning of the 18th century.[62] In 1980, the Vinkovci Town Museum conducted large-scale archaeological rescue excavations during the construction of a primary school, which showed the continuity of settlement from the Sopot culture to the Late Iron Age. The excavations in the eastern part of the site showed that the Sopot settlement had an earthen rampart, and a moat that is still partially visible. The excavations revealed the remains of houses, pits and plenty of movable Sopot-culture archaeological artefacts.[63]

In 2016, geophysical surveys were conducted on the western side of the settlement plateau over an area of 3,250 metres^2.[64] The magnetic data indicate areas of stronger magnetic anomalies in the locations of burned houses

60 KRZNARIĆ ŠKRIVANKO 2012b: 20.
61 KORDA 1954: 81.
62 VIRC 1979: 269-281.
63 ISKRA-JANOŠIĆ 1984: 149; DIZDAR 2001; KRZNARIĆ ŠKRIVANKO 2012b: 20-21; MILOGLAV 2016: 101.
64 It was possible to conduct the geophysical surveys because the park that had been planted behind the school was cut down on the west side of the plateau. The works were carried out by the company Geoarh. d. o. o. from Slovenia, and the funds were provided by the University of Zagreb (programme contracts for 2016 – Professor Ina Miloglav, PhD).



Slika 16a. *Zračna snimka Damića gradine u Starim Mikanovcima* (ožujak 2024., foto: I. Sokola)
Figure 16a *Aerial photo of Damića Gradina in Stari Mikanovci* (March 2024, photo by I. Sokola)



Slika 16b. *DGU LIDAR Damića gradine u Starim Mikanovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 16b *DGU LIDAR of Damića Gradina in Stari Mikanovci* (2024, modified by N. Ostović and I. Sokola)

bedem.[65]

Prostorno rasprostiranje potvrđeno je arheološkim iskopavanjem i rezultatima geofizičke prospekcije gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima s ostatcima kuća, jama i većih ukopanih objekata. Lokalitet je i zračno snimljen ne bi li se pokazalo ravno naselje oko tela.

STARI MIKANOVCI – ULJANSKO (ČANIĆA STAN) (sl. 1/16) (45°16'16.77"S 18°34'5.56"I)

Jedan i pol kilometar jugoistočno od centra Starih Mikanovaca i Damića gradine u ravnici na toponimu Uljansko (Čanića stan), nalazi se manje uzvišenje promjera oko 100 m i visine oko 1,5 m.[66] Terenskim pregledom na površini su nađeni ulomci sopotske keramike, kameni i koštani artefakti.[67] Na karti iz 19. stoljeća vide se dva uzvišenja, a s južne ga je strane presjekla željeznička pruga. Na zračnoj karti iz 2011. vide se tri kruga smjera sjever-jug. Sjeverni je promjera oko 90 m, srednji, koji je uzvišenje, promjera je oko 100 m, a najveći, južni promjera je oko 150 m, djelomično presječen prugom Vinkovci – Zagreb.[68]

Terenskim pregledom i na zračnim snimkama snimljenim dronom 2024. vidi se središnje uzvišenje, ali i krugovi sa sjeverne i južne strane tela.

(which could have belonged to both the Sopot culture and the Aeneolithic period) and the above-mentioned rampart.[65]

The spatial distribution was confirmed in archaeological excavations and geophysical prospecting data, with visible remains of circular settlements enclosed by ditches with the remains of houses, pits and larger buried structures. The site was also photographed from the air to display the flat settlement around the tell.

STARI MIKANOVCI – ULJANSKO (ČANIĆA STAN) (Fig. 1/16) (45°16'16.77"N 18°34'5.56"E)

One and a half kilometres southeast of the centre of Stari Mikanovci and Damića Gradina, on a plain at the toponym of Uljansko (Čanića Stan), there is a rather small elevation with a diameter of c. 100 metres and a height of c. 1.5 metres.[66] In a field survey, surface finds of Sopot potsherds, stone and bone artefacts were collected.[67] On a 19th-century map, two elevations can be seen, cut on the south side by a railway. On a 2011 aerial map, three circles in a north-south orientation are visible. The diameter of the northern circle is c. 90 metres, the middle circle is an elevation with c. 100 metres in diameter, while the largest, southern diameter is c. 150 metres, partially cut by the Vinkovci – Zagreb railway.[68]

Field surveys and aerial footage from 2024 show a central elevation, as well as circles on the north and south sides of the tell.

65 MILOGLAV, MUŠIČ 2016: 78–79.

66 Budući da se na lokalitetu nalazi šokački „stan" (salaš) s pripadajućim poljoprivrednim zemljištem, naselje se svakom strojnom obradom snižava. Od prvog terenskog pregleda 2000. do zadnjeg 2024. visina je lokaliteta smanjena.

67 KRZNARIĆ ŠKRIVANKO 2002b: 208; 2012b: 27. Lokalitet prvi spominje Š. Frković 1989. koji nas je na njega i odveo (FRKOVIĆ 1989).

68 Geoportal DGU 2011. (https://geoportal.dgu.hr/ 15. 3. 2024.).

65 MILOGLAV, MUŠIČ 2016: 78-79.

66 Given that the site includes an active local homestead with associated agricultural plot of land, the settlement is reduced with every machine cultivation. Between the first field survey in 2000 and the last in 2024, the site's height was reduced.

67 KRZNARIĆ ŠKRIVANKO 2002b: 208; 2012b: 27. The site was first mentioned in 1989 by Š. Frković, who accompanied us there (FRKOVIĆ 1989).

68 Geoportal DGU 2011. (https://geoportal.dgu.hr/ 15/03/2024).



Slika 17a. *Naselje Čanića stan/Uljansko u Starim Mikanovcima na zračnoj snimci iz 2011.* (M 1 : 5000 DGU Geoportal)
Figure 17a *A settlement Čanića stan/Uljansko u Starim Mikanovcima in a 2013 aerial photo* (Scale 1:5,000 DGU Geoportal)



Slika 17b. *Zračna snimka Čanića stana/Uljansko u Starim Mikanovcima* (ožujak 2024., foto: I. Sokola)
Figure 17b *Aerial photo of Čanića Stan / Uljansko in Stari Mikanovci* (March 2024, photo by I. Sokola)



Slika 17c. *DGU LIDAR Čanića stana/Uljansko u Starim Mikanovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 17c *DGU LIDAR of Čanića Stan / Uljansko in Stari Mikanovci* (2024, modified by N. Ostović and I. Sokola)

TORDINCI – VINOGRADSKA MLAKA (sl. 1/17) (45°23'27.43"S 18°48'46.90"I)

Lokalitet se nalazi u nizini 2 km sjeveroistočno od sela Tordinaca. Terenskim pregledom 2012. godine, između sela Tordinaca i Ludvinaca, otkrivena su dva kružna uzvišenja, koja dijeli kanal/paleovodotok, što se vidi i na vojnim kartama iz 19. stoljeća.[69] Terenskim pregledom potvrđeno je prostorno

[69] S pozicije Vinogradska mlaka u Tordincima u Gradskom muzeju Vinkovci nalazi se polirana kamena sjekira s rupom za nasad drška i pretpostavljen je kao sopotski lokalitet. KRZNARIĆ ŠKRIVANKO 2012b: 40.

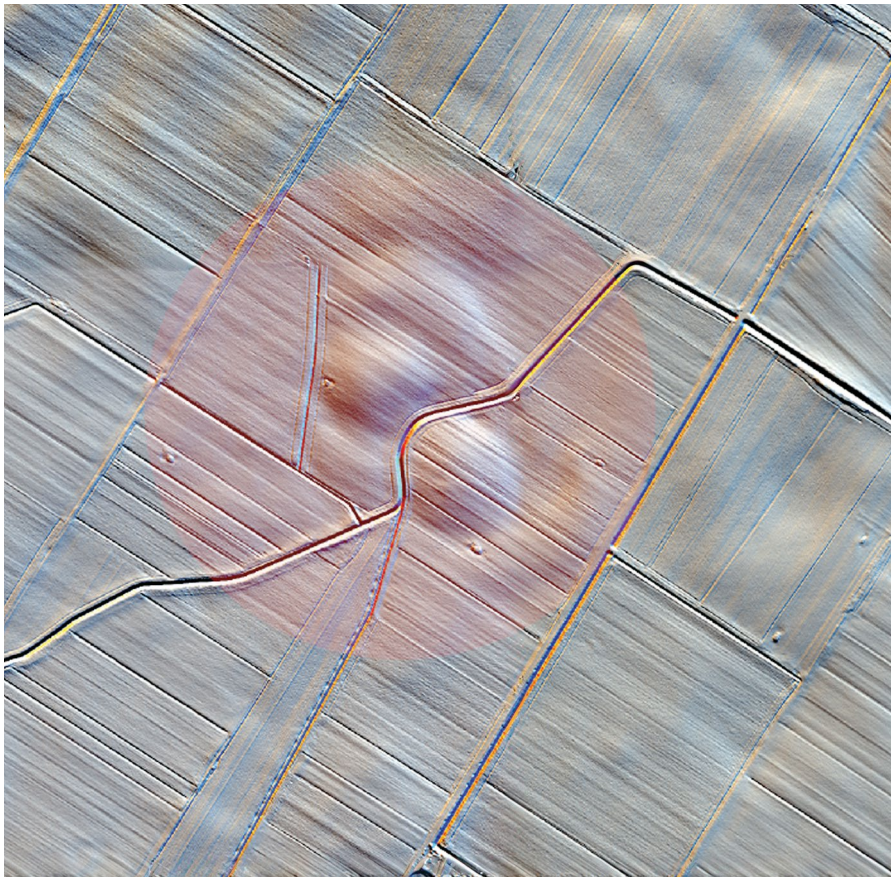
TORDINCI – VINOGRADSKA MLAKA (Fig. 1/18)(45°23'27.43"N 18°48'46.90"E)

The site is located on a plain, two kilometres north-east of the village of Tordinci. In a field survey conducted in 2012 between the villages of Tordinci and Ludvinci, two circular elevations were uncovered, divided by a (palaeo-) channel, as seen also on 19th-century military maps.[69] The field survey confirmed the spatial

[69] The Vinkovci Municipal Museum keeps a polished stone axe with a handle hafting hole recovered from Vinogradska Mlaka in Tordinci, assumed as a Sopot site. KRZNARIĆ ŠKRIVANKO 2012b: 40.



Slika 18a. *Naselja na Vinogradskoj mlaci u Tordincima na zračnoj snimci iz 2014. – 2016.* (M 1 : 5000 DGU Geoportal)
Figure 18a *The settlements at Vinogradska mlaka in Tordinci in 2014–2016 aerial photos* (Scale 1:5,000 DGU Geoportal)



Slika 18b. *DGU LIDAR naselja na Vinogradskoj mlaci* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 18b *DGU LIDAR of the settlement at Vinogradska Mlaka* (2024, modified by N. Ostović and I. Sokola)

rasprostiranje naselja. Po površini sjeverozapadnog višeg uzvišenja prikupljeni su mnogobrojni keramički ulomci, kameni, koštani i glineni nalazi. S obzirom na to da se duboko izoravaju, oni su danas sniženi u odnosu na originalnu visinu.

Daljinska prospekcija provedena 2016. potvrdila je postojanje dvaju krugova, od kojih je jedan uzvišen, a drugi bi mogao pripadati povezanom proširenom ravničarskom (podgradinskom) naselju, također okruženom jarkom. Jugoistočno uzvišenje ima vanjski krug dimenzija 181 x 170 m, a unutarnji 120 x 98 m, te relativne visine oko 2,5 m. Sjeverozapadni je krug dimenzija 168 x 166 m, širina jarka iznosi 11 m, a relativna je visina središnjeg dijela 3,2 m.[70]

Na lidarskoj snimci vide se uzvišenja, manje i veće, koja su, čini se, okružena većim jarkom.

VINKOVCI – MARICA (sl. 1/18)
(45°16'42.44"S 18°47'6.69"I)

Na desnoj (južnoj) obali Bosuta u jugozapadnom dijelu Vinkovaca nalazi se lokalitet Marica koji je oko 1 m uzdignut od okolnog područja. Lokalitet prvi spominje S. Dimitrijević 1968.[71] Na zračnim snimkama vidi se naselje s opkopom promjera oko 180 m.[72] Geomagnetna snimanja površine 7300 m^2 provedena 2018. godine potvrdila su arheološke objekte. U sjevernom dijelu snimke može se pretpostaviti jarak širine 2 do 3 metra, koji okružuje naselje. Unutar opkopa i izvan njega vide se jame i ostatci gorenih struktura.[73] Nažalost, zbog vremenskih uvjeta, ali i modernih struktura (cjevovoda), snimljena je premala površina da bi

[70] KALAFATIĆ, ŠILJEG 2018: 90–92.

[71] DIMITRIJEVIĆ 1968: 24; 1979a: 135, karta II-4. Piše da se 200 metara od tadašnjeg kupališta Marica nalazi kratkotrajno naselje sopotske kulture. Po kupalištu lokalitet je dobio ime Marica. Smješta ga u II. stupanj. KRZNARIĆ ŠKRIVANKO 2012b: 20.

[72] Geoportal DGU 2014/16. (https://geoportal.dgu.hr/; 15. 3. 2024.).

[73] MAYER, CARLETTI 2018.

distribution of the settlement. Numerous ceramic fragments, stone, bone and clay finds were collected on the surface of the northwestern higher elevation. As they have been deeply ploughed, their original height has been reduced.

Remote prospecting in 2016 confirmed the existence of two circles, one of which is elevated; the other could belong to an associated extended lowland (suburban) settlement, also surrounded by a ditch. The southeast elevation has an outside circle of 181 x 170 m, and an inside circle of 120 x 98 m, while its relative height is c. 2.5 metres. The northwest circle is 168 x 166 m, the width of the ditch is 11 metres, and the relative height of the central part is 3.2 metres.[70] LIDAR images show smaller and larger elevations, which seem to be surrounded by a larger ditch.

VINKOVCI – MARICA (Fig. 1/18)
(45°16'42.44"N 18°47'6.69"E)

Located on the right (south) bank of the Bosut, in the southwest of Vinkovci, is the Marica site, raised c. one metre above the surrounding area. The site was first mentioned by S. Dimitrijević in 1968.[71] Aerial footage shows a settlement with a moat, c. 180 metres in diameter.[72] Geomagnetic surveying of a surface area of 7,300 m^2 conducted in 2018 confirmed archaeological structures. In the northern part of the survey, a two- or three-metre-wide ditch surrounding the settlement can be assumed. Inside and outside the moat, pits and remains of burned structures are visible.[73] Unfortunately, due to the weather conditions, but also modern structures (pipe-

[70] KALAFATIĆ, ŠILJEG 2018: 90-92.

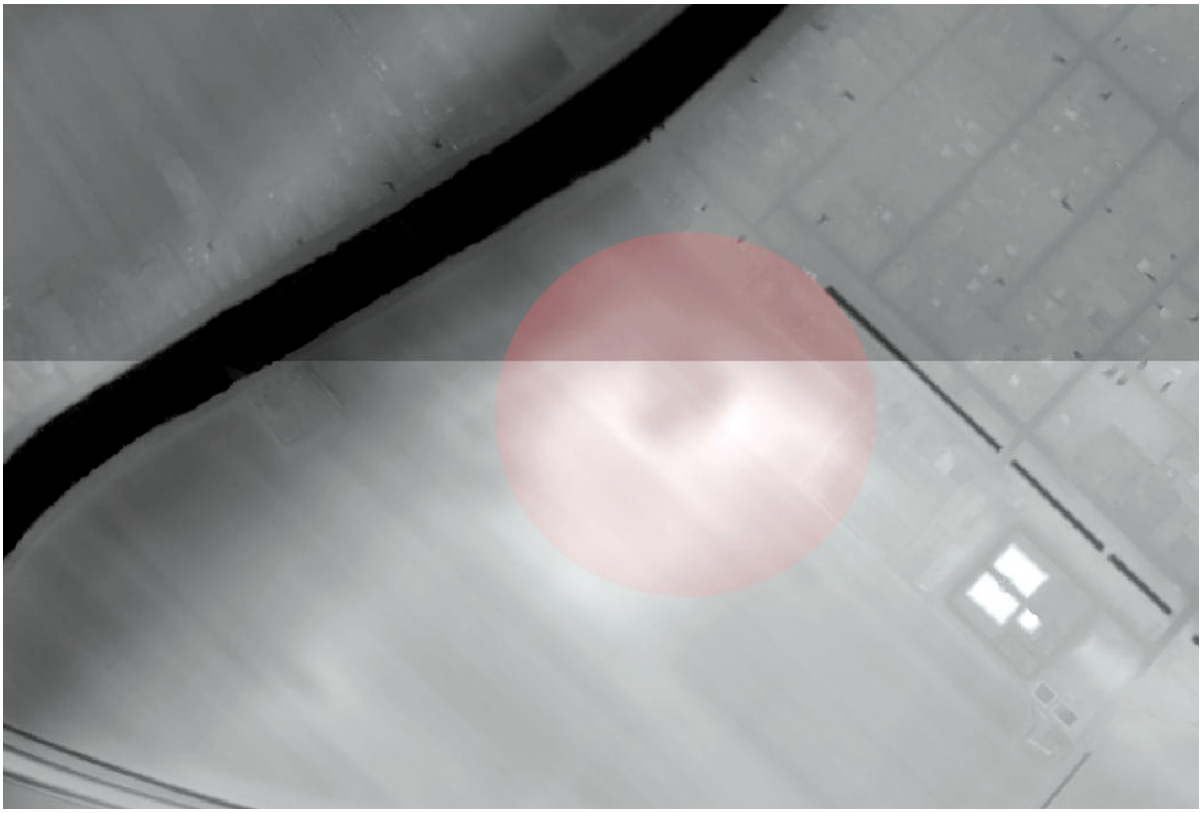
[71] DIMITRIJEVIĆ 1968: 24; 1979a: 135, Map II-4, said that 200 metres from what was then the Marica bathing area had been a short-lived Sopot culture settlement. The site was named Marica after the bathing spot. He dated it to Sopot II. KRZNARIĆ ŠKRIVANKO 2012b: 20.

[72] Geoportal DGU 2014/16. (https://geoportal.dgu.hr/; 15/03/2024).

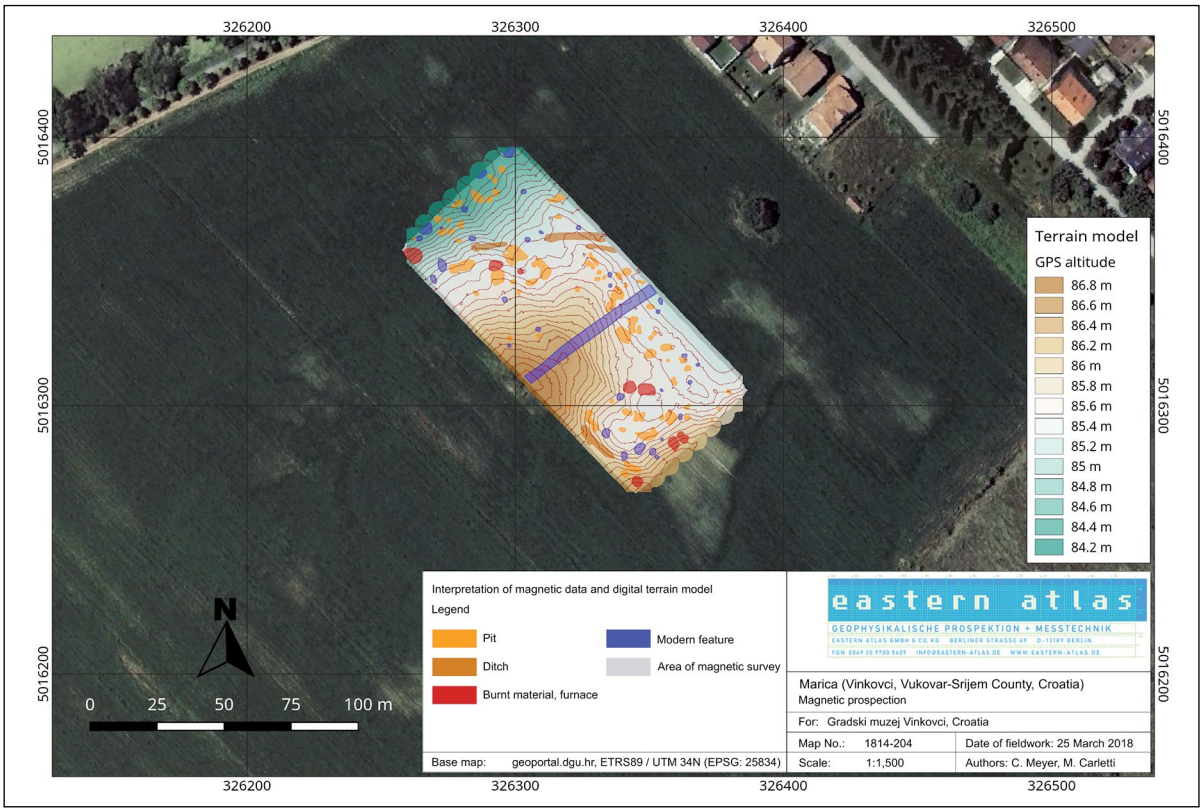
[73] MAYER, CARLETTI 2018.



Slika 19a. *Naselje na lokalitetu Marica u Vinkovcima na zračnoj snimci iz 2016.* (M 1 : 5000 DGU Geoportal)
Figure 19a *The settlement at Marica site in Vinkovci in a 2016 aerial photo* (Scale 1:5,000 DGU Geoportal)



Slika 19b. *DGU LIDAR naselja na Marici* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 19b *DGU LIDAR of the settlement at Marica* (2024, modified by N. Ostović and I. Sokola)



Slika 19c. *Rezultati geomagnetne metode* (Mayer 2018)
Figure 19c *Geomagnetic data* (Mayer 2018)

se nešto više moglo reći o naselju. Po površini lokaliteta samo se sporadično nalaze arheološki artefakti. To je ujedno i najbliži lokalitet Sopotu od kojeg je udaljen samo 2 km.

VOĐINCI – NADIŠEVCI
naselje nalik na tel (sl. 1/19)
(45°16'12.96"S 18°37'30.91"I)

U podnožju Đakovačko-vinkovačkog ravnjaka, u ravnici južno od sela Vođinaca nalazi se malo uzvišenje smjera sjever-jug, koje je sa sjeverne strane presjekla pruga Vinkovci – Zagreb. Do lokaliteta smo došli na osnovi slučajnih nalaza koji se čuvaju u Gradskom muzeju Vinkovci. Budući da je uzvišenje relativno malo, i na osnovi površinskih nalaza mogli bismo reći da je riječ o kratkom razdoblju okupacije, odnosno života u naselju.[74] Po po-

[74] KRZNARIĆ ŠKRIVANKO 2002b: 212; 2006a: 50; 2012b: 27. Kao slučajan nalaz s ovog lokaliteta u Gradski muzej u

lines), the scanned area was too small to be able to indicate more about the settlement. Archaeological surface finds were collected only sporadically at the site. It is also the site which is closest to Sopot (which is only two kilometres away).

VOĐINCI – NADIŠEVCI
settlement resembling tell (Fig. 1/19)
(45°16'12.96"N 18°37'30.91"E)

At the foot of the Đakovo-Vinkovci Plateau, on the plain south of the village of Vođinci, is a small elevation oriented north-south, whose northern part was cut by the Vinkovci–Zagreb railway. The site was identified on the basis of chance finds kept in the Vinkovci Town Museum. The relatively small size of the elevation, as well as surface finds suggest a short period of habitation of the settlement.[74] A small num-

[74] KRZNARIĆ ŠKRIVANKO 2002b: 212; 2006a: 50; 2012b: 27. A burnished stone axe with a drilled hole for hafting



Slika 20a. *Vođinci - Nadiševci na zračnoj snimci iz 1968.* (M 1 : 5000 DGU Geoportal)
Figure 20a *Vođinci - Nadiševci in a 1968 aerial photo* (Scale 1:5,000 DGU Geoportal)



Slika 20b. *Zračna snimka naselja Nadiševaca u Vođincima* (ožujak 2024., foto: I. Sokola)
Figure 20b *Aerial photo of settlement of Nadiševci in Vođinci* (March 2024, photo by I. Sokola)

vršini je prikupljeno malo keramičkih nalaza, koštanih i kamenih artefakta, te goreni kućni lijep. Ovogodišnje snimanje dronom pokazalo je naselje okruženo jarkom, i to, čini se, dvama jarcima, a prema zračnim fotografijama iz 1968., promjer unutarnjeg kruga je oko 100 m, a vanjskog (od baze do baze opkopa) oko 130 m.[75]

Otvorena ravničarska naselja

GABOŠ – MIŠLJENOVCI (sl. 1/20) (45°21'26.70"S 18°45'18.56"I)

Na povišenoj gredi koja prati desni tok rijeke Vuke u pravcu Markušice, 1,5 km sjeveroistočno od sela Gaboša nalazi se blago uzvišenje orijentacije zapad-istok. Na zračnoj snimci iz 1968. čini se da je riječ o dvama kružnim naseljima utvrđenim opkopom. Promjer vanjskog kruga (od baze opkopa do baze opkopa) iznosi oko 100 m, a unutarnjeg kruga oko 80 m.[76] Lokalitet je teško oštećen modernim poljoprivrednim radovima, oranjem su izbačeni veliki komadi gorenog kućnog lijepa od ostataka kuća, 250 glinenih kugli te pokretni arheološki nalazi keramike, kosti i kamena. Iako ne znamo kontekst kugli, osim da su bile pomiješane s gorenim ostatcima kuća, možemo pretpostaviti da je riječ o ostatcima toplinskih struktura u kućama.[77] Prostorno rasprostiranje potvrđeno je terenskim pregledom, a na lokalitetu je 2016. provedena i geofizička prospekcija. Budući da područje na kojem se nalazi sopotsko naselje nije bilo pogodno za snimanje (duboke brazde nastale nedavnim izoravanjem), sni-

ber of pottery finds, bone and stone artefacts, and burned house daub were collected on the surface. Drone footage in 2024 showed a settlement seemingly surrounded by two ditches; on the evidence of 1968 aerial photos the diameter of the inner circle is c. 100 metres and that of the outer (from the base to the base of the moat) c. 130 metres.[75]

Open Lowland Settlements

GABOŠ – MIŠLJENOVCI (Fig. 1/20) (45°21'26.70"N 18°45'18.56"E)

On the ridge that follows the right course of the Vuka River in the direction of Markušica, 1.5 km north-east of the village of Gaboš, is a slight west-east orientated elevation. In a 1968 aerial photo it appears that these are two circular settlements enclosed by a moat. The diameter of the outer circle (from the base of the moat to the base of the moat) is c. 100 metres, and the inner circle, c. 80 metres.[76] The site has been severely damaged by modern agricultural works: large pieces of burned house daub left from the house remains, 250 clay balls and mobile archaeological finds of pottery, bones and stone have all been thrown up by ploughing. Although all we know about the context of the ball finds is that they were mixed with the burned remains of houses, we can assume that they are the remains of heating structures in the houses.[77] The spatial distribution was confirmed in a field survey, and in 2016 geophysical prospecting was also conducted at the site. Since the area where the Sopot settlement used to be located was not suitable

Vinkovcima dospjeli su glačana kamena sjekira s bušenom rupom za nasad drška i kameno dlijeto. Na lokalitet nas je odveo B. Perak, jedan od suradnika muzeja.

[75] Geoportal DGU 1968. (https://geoportal.dgu.hr/; 15. 3. 2024.).

[76] Geoportal DGU 1968. (https://geoportal.dgu.hr/; 15. 3. 2024.).

[77] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2005b: 42; 2012b: 31; 2016b: 94. Lokalitet je upisan u Registar kulturnih dobara pod brojem Z-7125. Nažalost, to ga ne spašava od dubokog izoravanja i uništavanja.

the handle and a stone chisel arrived at the Vinkovci Municipal Museum as chance finds from this site. We were introduced to the site by the Museum's associate B. Perak.

[75] Geoportal DGU 1968 (https://geoportal.dgu.hr/; 15/03/2024).

[76] Geoportal DGU 1968 (https://geoportal.dgu.hr/; 15/03/2024).

[77] OŽANIĆ 2003: 180; KRZNARIĆ ŠKRIVANKO 2005b: 42; 2012b: 31; 2016b: 94. The site has been listed in the Register of Cultural Property under the number Z-7125. Unfortunately, this has not saved it from deep ploughing and destruction.



Slika 21a. *Naselja na lokaliteti Gaboš - Mišljenovci na zračnoj snimci iz 1968.* (M 1 : 5000 DGU Geoportal)
Figure 21a *The settlements at Mišljenovci in Gaboš in a 1968 aerial photo* (Scale 1:5,000 DGU Geoportal)

mljen je samo tumul koji se nalazi 15-ak m jugoistočno. Rezultati magnetnih snimanja na površini od 37 703 m^2 potvrdili su postojanje grobne komore na tumulu Mišljenovcima, ali na sjevernom dijelu magnetne snimke vide se i tri polukružna jarka i skupina jama koji pripadaju sopotskom naselju. Udaljenost između dvaju najbolje vidljivih unutarnjih jaraka iznosi 10 m, a širina unutarnjeg iznosi oko 3 m.[78]

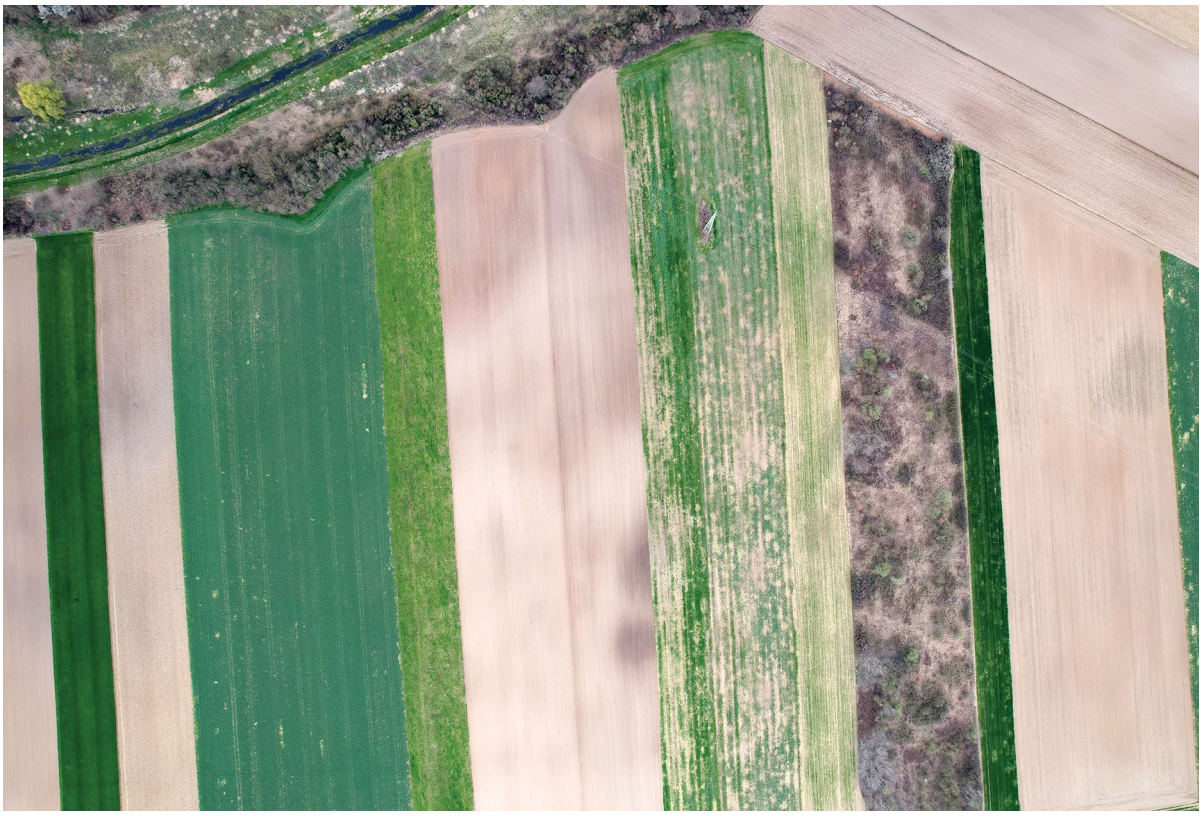
Najnovije fotografije proizašle iz zračnih snimanja dronom i lidarom potvrđuju opkope oko jugoistočnog kruga koji se vidio na geomagnetnim snimanjima. Zanimljivost fotografija dobivenih lidarom jest i to što se s druge, lijeve obale Vuke skoro preko puta Mišljenovaca u šumi vide još dva kruga. Za sada ne možemo reći komu pripadaju naselja s druge obale.

for photography (due to deep grooves created by recent ploughing), only a tumulus located approximately 15 metres to the southeast was recorded. The magnetic surveying results over an area of 37,703 m^2 confirmed the existence of a tomb chamber on the Mišljenovci tumulus, but in the northern section of the magnetic scan, also visible are three semicircular ditches and a group of pits belonging to the Sopot settlement. The distance between the two best visible inner ditches is 10 metres, and the width of the inside ditch is c. three metres.[78]

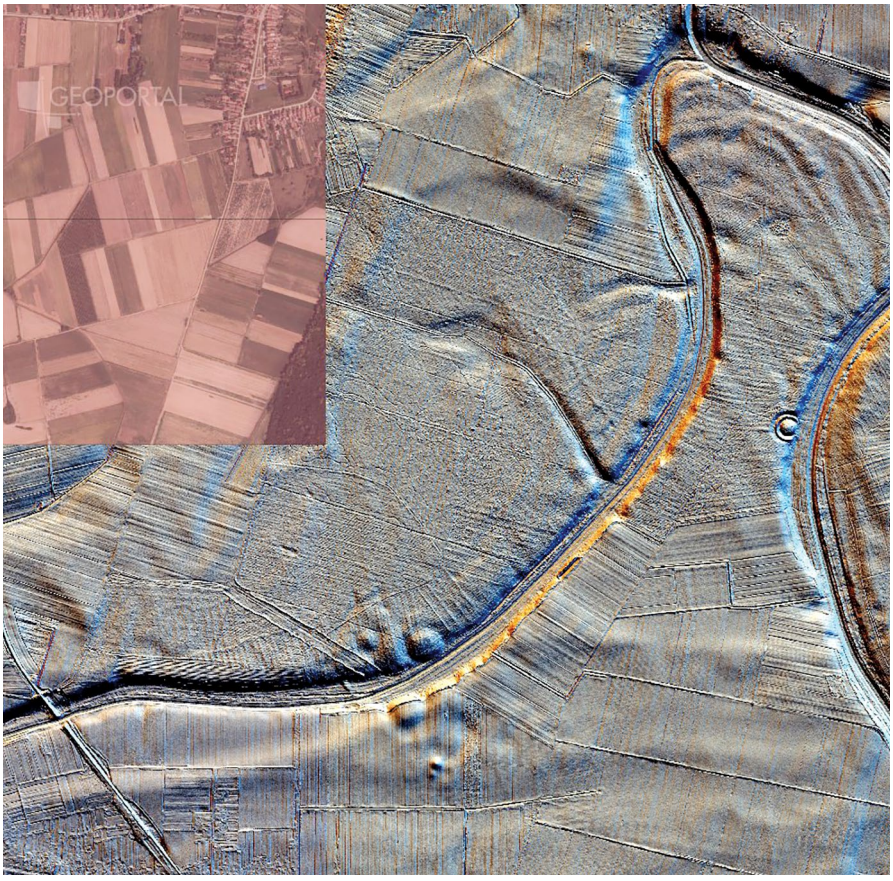
The latest aerial drone and LIDAR footage confirm the moats around the southeastern circle, visible in geomagnetic scans. Another interesting feature of the LIDAR photographs is that two more circles are visible in the forest on the opposite, left bank of the Vuka, almost directly across from Mišljenovci. So far, we cannot say to whom the settlements on the opposite bank belonged**.**

[78] MAYER 2017.

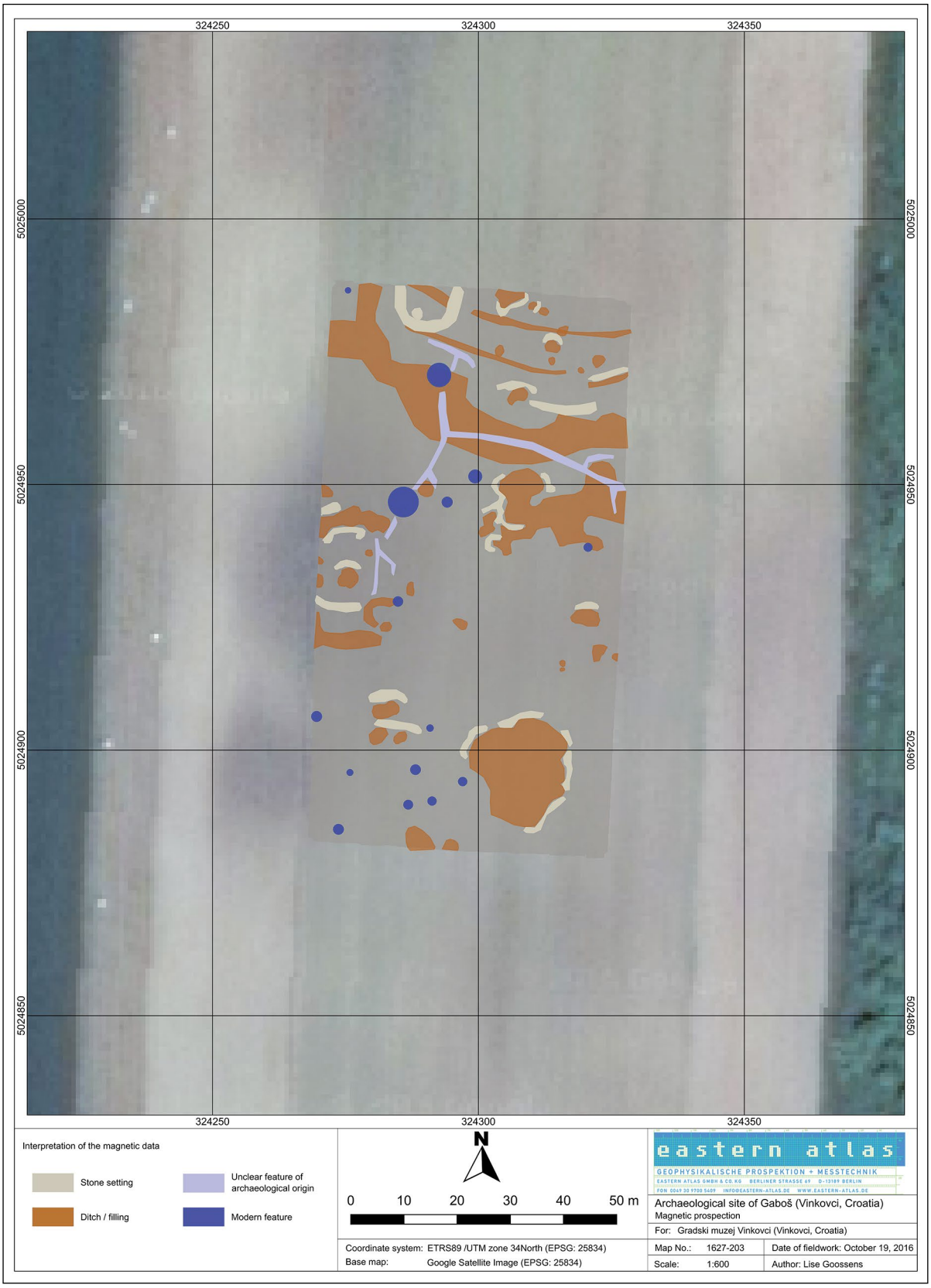
[78] MAYER 2017.



Slika 21b. *Zračna snimka Mišljenovaca u Gabošu* (ožujak 2024., foto: I. Sokola)
Figure 21b *Aerial photo of Mišljenovci in Gaboš* (March 2024, photo by I. Sokola)



Slika 21c. *DGU LIDAR naselja na Mišljenovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 21c *DGU LIDAR of the settlement at Mišljenovci* (2024, modified by N. Ostović and I. Sokola)



Slika 21d. *Rezultati geomagnetne metode s lokaliteta Gaboš - Mišljenovci* (Mayer 2017)
Figure 21d *Geomagnetic data from Mišljenovci in Gaboš* (Mayer 2017)

IVANKOVO – PALANKA (sl. 1/21) (45°17'44.99"S 18°40'35.57"I)

Terenskim pregledom južnih padina Đakovačko-vinkovačkog ravnjaka, sjeverno od sela Ivankova po površini oranica nađeni su ulomci keramike sopotske kulture. Vjerojatno je riječ o ravničarskom naselju sopotske kulture.[79]

KARADŽIĆEVO – DURGUTOVICA (Banovci – Čeretinci) (sl. 1/22) (45°19'47.04"S 18°37'56.32"I)

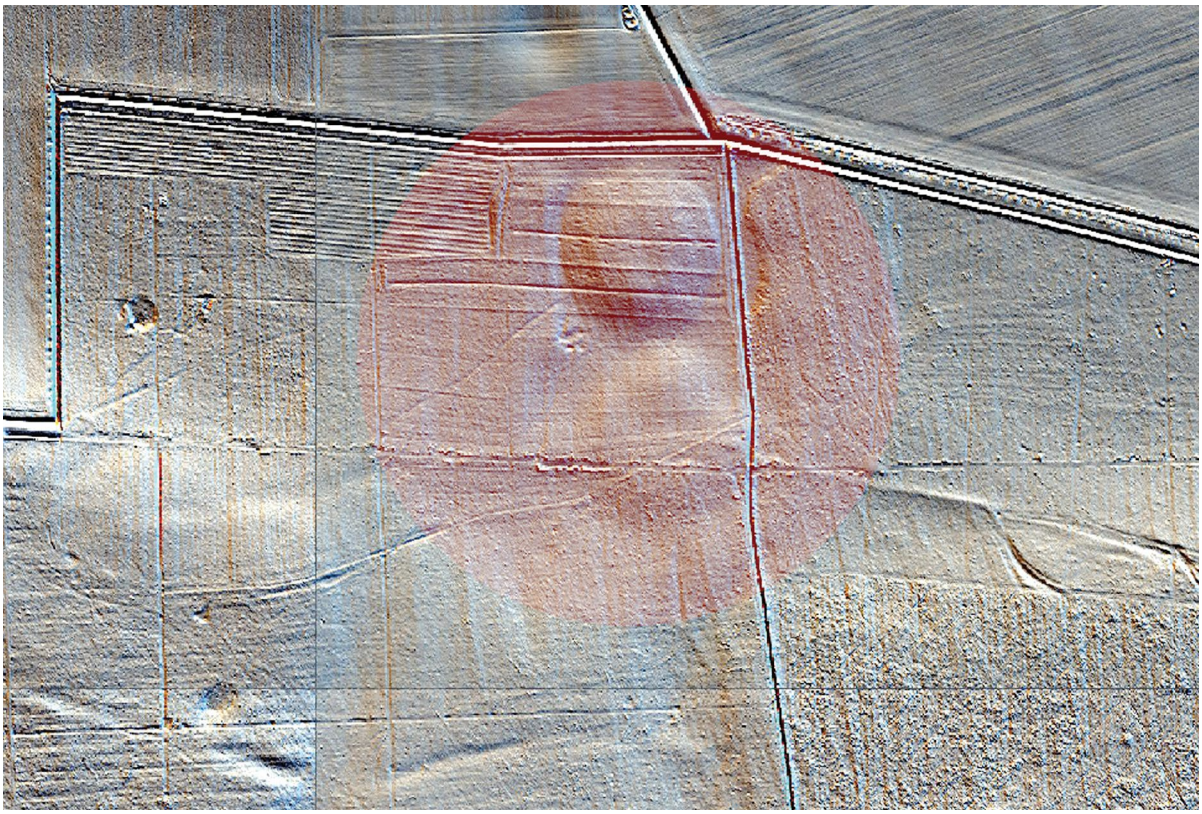
Oko 3,5 km zapadno od sela Karadžićeva, sjeverno od šume Durgutovice, terenskim pregledom 2017. po površini oranica pronađeni su mnogobrojni ulomci keramike sopotske kulture. Na lidarskim snimkama u šumi se vide dva velika uzvišenja orijen-

IVANKOVO – PALANKA (Fig 1/21) (45°17'44.99"N 18°40'35.57"E)

A field survey of the southern slopes of the Đakovo-Vinkovci Plateau, north of the village of Ivankovo, brought to light fragments of Sopot culture pottery on the surface of the ploughland. It is probably a Sopot-culture lowland village.[79]

KARADŽIĆEVO – DURGUTOVICA (Banovci – Čeretinci) (Fig. 1/22) (45°19'47.04"N 18°37'56.32"E)

In a 2017 field survey, approximately 3.5 kilometres west of the village of Karadžićevo, north of the Durgutovica Forest, numerous Sopot-culture potsherds were collected on the surface of the ploughland. In LIDAR photos, two large elevations in a south-north orientation, with a diame-



Slika 22. *DGU LIDAR naselja u šumi Durgutovici kod Karadžićeva* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 22 *DGU LIDAR of the settlement in the Durgutovica Forest near Karadžićevo (2024, modified by N. Ostović and I. Sokola)*

[79] KRZNARIĆ ŠKRIVANKO 2002b: 207; 2012b: 32.

[79] KRZNARIĆ ŠKRIVANKO 2002b: 207; 2012b: 32.

tacije jug-sjever promjera većeg od 200 m. Nažalost, ali i nasreću, s obzirom na to da su lokaliteti zaštićeni od uništavanja poljoprivrednom obradom u šumi, ne možemo ništa više napisati. Budući da je terenski pregled proveden sjeverno od telova, pretpostavljamo da se i ovdje rasprostiralo ravno naselje.[80]

MARKUŠICA – NOVOŠEVCI, BROŠOV SALAŠ I ČETERINCI GORNJI (sl. 1/23) (45°21'27.02"S 18°39'37.36"I)

Oko 2,5 km jugozapadno od sela Markušice nalaze se novootkriveni lokaliteti Markušica: Novoševci, Brošov salaš i Četerinci

ter of over 200 metres, are visible. The fortunate circumstance that the sites are located in a forest means they have not been destroyed by agricultural works; however, at the same time, the sites' inaccessibility leaves us with no data about their possible extent or function. Given that the field survey was conducted north of the tells, presumably there was a flat settlement in that section also.[80]

MARKUŠICA – NOVOŠEVCI, BROŠOV SALAŠ I ČETERINCI GORNJI (Fig. 1/23) (45°21'27.02"N 18°39'37.36"E)

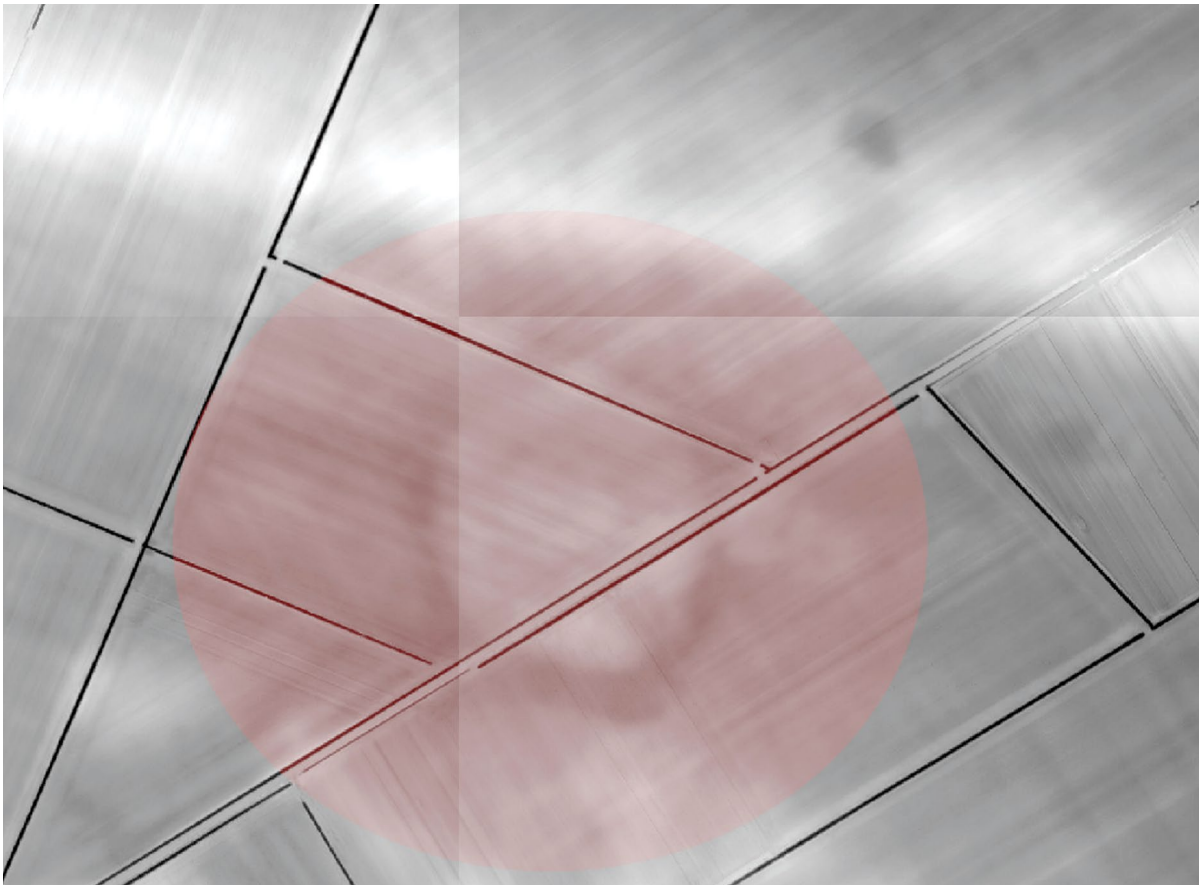
About 2.5 kilometres southwest of the village of Markušica are the newly discovered Markušica sites: Novoševci, Brošov Salaš and Četerinci



Slika 23a. *Naselja jugozapadno od Markušice na zračnoj snimci iz 2011. – 2013.* (M 1 : 5000 DGU Geoportal)
Figure 23a *The settlements southwest of Markušica in 2011–2013 aerial photos* (Scale 1:5,000 DGU Geoportal)

[80] Dana 18. rujna 2017. rekognoscirano je područje sjeverno od šume Durgutovice s lijeve (k. o. Karadžićevo) i s desne (k. o. Mrzović) strane kanala. Po površini oranica i kanala koji je čišćen nađeni su ulomci sopotske keramike, te jedan ulomak keramike drukčije fakture i ukrašavanja od tipične sopotske.

[80] On 18 September 2017, the area north of the Durgutovica Forest on the left (cadastral municipality of Karadžićevo) and on the right (cadastral municipality of Mrzović) side of the channel was surveyed. On the surface of the ploughland and the channel (which was cleaned for that purpose), Sopot pottery fragments, and a fragment of pottery with fabric and decorations atypical of the Sopot culture, were found.



Slika 23b. *DGU LIDAR naselja u Markušici* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 23b *DGU LIDAR of the settlements in Markušica* (2024, modified by N. Ostović and I. Sokola)

gornji. Za lokalitet smo doznali od kolega Kalafatića i Šiljega koji su 2015. u sklopu zračnog rekognosciranja Osječko-baranjske županije obišli i neke lokalitete u Vukovarsko-srijemskoj županiji. Na zračnim i satelitskim kartama u različita godišnja doba vidljiva su tri kruga: (mali) Brošov salaš (promjer 130 m), (veliki) Novoševci (promjer 400 m) i (mali) Čeretinci gornji (promjer 130 m).[81] Tijekom zimskog rekognosciranja u prosincu 2021. „krugovi" su prehodani, te pregledani i detektorom za metal. Lokaliteti se ne izdižu u odnosu na okolno područje, a po površini oranica nađeni su ulomci keramike, kamene alatke i uteg.

Gornji. We were informed about the site by our colleagues Kalafatić and Šiljeg who, in 2015, within the framework of air prospecting of Osijek-Baranja County, visited some sites there. On aerial and satellite maps made in different seasons, three circles are visible: Brošov Salaš (diameter: 130 m), the larger Novoševci (diameter: 400 m) and Čeretinci Gornji (diameter: 130 m).[81] In the course of the winter prospecting conducted in December 2021, field surveys of the "circles" were conducted, which included metal-detector examinations. The sites are not elevated above the surrounding area. Collected from the surface of the ploughland were potsherds, stone tools and a weight.

[81] KALAFATIĆ, ŠILJEG 2018; ŠOŠIĆ KLINDŽIĆ et al. 2023: 7, sl. 5 (c).

[81] KALAFATIĆ, ŠILJEG 2018; ŠOŠIĆ KLINDŽIĆ et al. 2023: 7, Fig. 5 (c).

NUŠTAR – ŽEŽNICA (sl. 1/24) (45°20'14.16"S 18°52'42.61"I)

Lokalitet Žežnica, koji se nalazi na povišenoj gredi na desnoj obali Vuke, otkriven je tijekom terenskog pregleda 2007. godine za kanal Dunav-Sava. Po površini obrađenih polja nalaze se ulomci sopotske keramike. Lokalitet Žežnica nalazi se na povišenoj gredi koja prati tok rijeke Vuke prema istoku. Smješten je ispred lokaliteta Segetac, između sela Nuštra i Marinaca. Očito je riječ o otvorenom ravničarskom jednoslojnom naselju s horizontalnom stratigrafijom.[82]

NUŠTAR – ŽEŽNICA (Fig. 1/24) (45°20'14.16"N 18°52'42.61"E)

The Žežnica site, located on an elevated ridge on the right bank of the river Vuka, was discovered in a 2007 field survey, conducted prior to the construction of the Danube–Sava channel. On the surface of cultivated fields, Sopot potsherds were collected. The Žežnica site is located on a ridge that follows the course of the Vuka toward the east. It is located in front of the Segetac site, between the villages of Nuštar and Marinci. It is obviously an open lowland one-layered settlement with a horizontal stratigraphy.[82]



Slika 24. *Naselja Žežnica i Segetac na zračnoj snimci iz 1968.* (M 1 : 5000 DGU Geoportal)
Figure 24 *The settlements of Žežnica and Segetac in a 1968 aerial photo* (Scale 1:5,000 DGU Geoportal)

MARINCI – SEGETAC (OTOČIĆ) (sl. 1/ 25) (45°20'17.91"S 18°52'59.23"I)

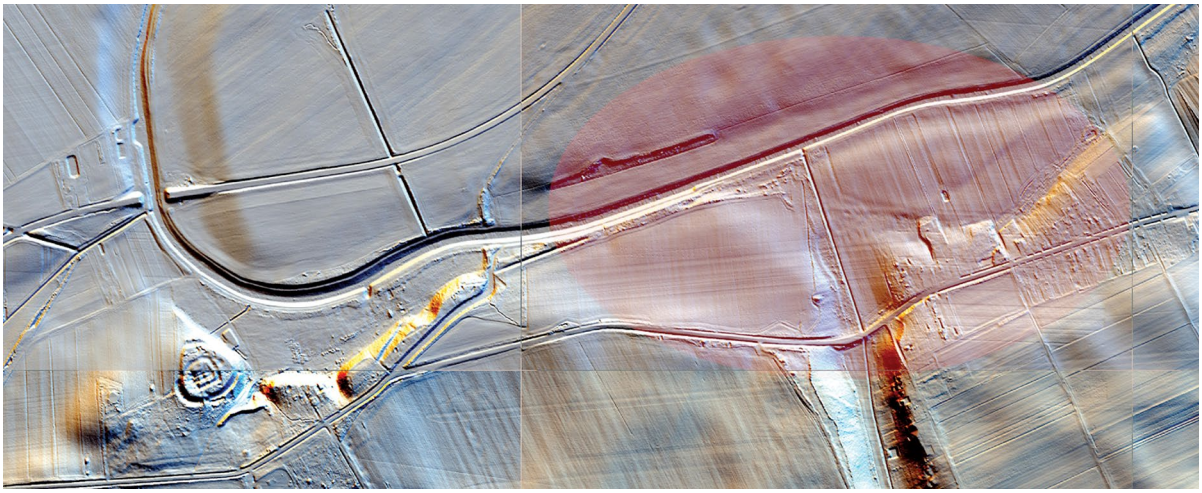
Lokalitet Segetac nalazi se na zapadnom ulazu u selo Marince na povišenoj gredi koja prati desni tok Vuke prema istoku, u produžetku lokaliteta Žežnica. Lokalitet je sa sjeverne strane omeđen obalom Vuke, a sa zapadne i južne strane ušćem potoka Hasađa u Vuku, čime je naselje prirodno okruženo vodom. Nakon mirne reintegracije po površini izoranih njiva pronalaze se ulomci sopotske

[82] KRZNARIĆ ŠKRIVANKO 2008a: 60; 2012b: 34–35.

MARINCI – SEGETAC (A SMALL ISLAND) (Fig. 1/25) (45°20'17.91"N 18°52'59.23"E)

The Segetac site is located at the western entrance to the village of Marinci, on the ridge that follows the right course of the Vuka toward the east, and is an extension of the Žežnica site. The village is naturally bounded by water, to the north by the river Vuka, and to the west and south by the mouth of the Hasađ brook, a tributary of the Vuka. After the post-war peaceful reintegration of the Croatian territories, Sopot potsherds were

[82] KRZNARIĆ ŠKRIVANKO 2008a: 60; 2012b: 34-35.



Slika 25. *DGU LIDAR naselja Žežnice i Segetca* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 25 *DGU LIDAR of the settlements of Žežnica and Segetac* (2024, modified by N. Ostović and I. Sokola)

keramike.[83]

Na lokalitetu Segetac 2016. u okviru projekta Instituta za arheologiju[84] provedeno je geomagnetno snimanje te je izrađen ERT profil. Snimke su pokazale da su arheološki objekti smješteni na najvišem dijelu grede smjera zapad-istok te da postoji veliki jarak u istočnom dijelu lokaliteta širine oko 5 m, koji na sjevernoj strani blago zaokreće prema zapadu. Osim toga, vidljive su i rupe od stupova, vjerojatno od kuća.[85] Budući da je lokalitet bio naseljen i tijekom mlađeg željeznog doba, samo buduća iskopavanja mogu odijeliti sopotske od latenskih objekata.

Prostorno rasprostiranje potvrđeno je terenskim pregledom, satelitskim, zračnim snimkama i lidarom, te geomagnetnim snimanjem manjeg obima, koje je potvrdilo da je naselje bilo okruženo jarkom. Očito je riječ o otvorenom ravničarskom jednoslojnom naselju s horizontalnom stratigrafijom. Je li riječ o jednom velikom sopotskom lokalitetu s jedne i druge strane potoka Hasađa, može potvrditi geofizičko snimanje ukupne površine lokaliteta.

collected on the surface of ploughed fields.[83]

In 2016, a geomagnetic survey of the Segetac site was conducted as part of a project of the Institute of Archaeology,[84] and an ERT profile created. The images showed that the archaeological structures oriented west-east were located on the highest part of the ridge, and that in the eastern part of the site there was a large, c. five-metre-wide ditch, on the north side slightly turning west. In addition, holes for pillars were also visible, probably from dwellings.[85] Given that the site was inhabited also in the Late Iron Age, excavations will be necessary to be able to distinguish the Sopot and the La Tène structures.

The spatial distribution was confirmed in a field survey, as well as satellite, aerial and LIDAR imagery, and small-scale geomagnetic imaging, which confirmed that the settlement was surrounded by a ditch. It is obviously an open lowland one-layered settlement with a horizontal stratigraphy. A geophysical surveying of the total site area could confirm whether or not there was a large Sopot site on both sides of the Hasađ brook.

83 KRZNARIĆ ŠKRIVANKO 2008a: 60; 2012b: 35.
84 Institut za arheologiju u suradnji s Institutom za arheologiju Sveučilišta Kardinal Stefan Wyszynski u Varšavi u sklopu zajedničkog miniprojekta „Geoarchaeological prospection of Slavonia region" proveo je između ostalog i magnetna snimanja i geološka bušenja na lokalitetima vinkovačkog kraja: Vinkovci – Blato, Sopot i Marinci – Segetac.
85 BOTIĆ 2017: 146, sl. 8–9.

83 KRZNARIĆ ŠKRIVANKO 2008a: 60; 2012b: 35.
84 The Institute of Archaeology in Zagreb in cooperation with the Institute of Archaeology of Cardinal Stefan Wyszynski University in Warsaw, within the framework of the joint mini-project "Geoarchaeological Prospection of the Slavonia Region", conducted magnetic surveying and geological drillings at the following sites in the Vinkovci region: Vinkovci – Blato, Sopot and Marinci – Segetac.
85 BOTIĆ 2017: 146, Figs. 8-9.

OTOK – STARA SKELA/PENAVE (sl. 1/26) (45°11'11.20"S 18°55'29.96"I)

Na desnoj obali Bosuta, oko 5,5 km sjeveroistočno od Otoka tijekom rekognosciranja otkriven je još jedan lokalitet koji bismo na osnovi površinskih nalaza mogli pripisati sopotskoj kulturi.

OTOK – STARA SKELA / PENAVE (Fig. 1/26) (45°11'11.20"N 18°55'29.96"E)

In the course of archaeological prospecting conducted on the right bank of the Bosut, c. 5.5 kilometres north-east of Otok, another site was discovered that, on the basis of surface finds, could be attributed to the Sopot culture.



Slika 26. *Zračna snimka Stare skele / Penave na desnoj obali Bosuta* (ožujak 2024., foto: I. Sokola)
Figure 26 *Aerial photo of Stara Skela / Penava on the right bank of the Bosut* (March 2024, photo by I. Sokola)

VINKOVCI – BORINCI – BLATO (sl. 1/27) (45°18'4.28"S 18°47'2.48"I)

Lokalitet Blato rasprostire se sjeverno od Vinkovaca na južnim obroncima Đakovačko-vinkovačkog ravnjaka (Borinci). Prvi se put spominje 1887., kada su pri izgradnji željezničke pruge pronađeni kamene alatke i dva žrvnja te keramička posuda. Probno iskopavanje proveo je Š. Ljubić 1887., kada je pronašao keramiku i litičke alatke iz mlađeg kamenog doba. Brunšmid je 1896. na svojoj njivi zapadno od Vinkovaca u predjelu Blato pronašao litičke alatke, a nešto prije i

VINKOVCI – BORINCI – BLATO (Fig. 1/27) (45°18'4.28"N 18°47'2.48"E)

The Blato site extends north of Vinkovci on the southern slopes of the Đakovo-Vinkovci Plateau (Borinci). It was first mentioned in 1887, when stone implements, two grindstones and a ceramic vessel were found during railway construction. Trial excavations were conducted by Š. Ljubić in 1887, when he unearthed pottery and lithic tools from the Neolithic. In 1896, Brunšmid recovered lithic tools in his field in the Blato area west of Vinkovci, and somewhat earlier also a stone

kameno dlijeto.[86] Probna arheološka iskopavanja 1998. proveo je Gradski muzej Vinkovci na sjevernom dijelu Blata, tijekom kojih je otkriveno latensko groblje, a na površini okolnih oranica pronađena je litika.[87] Godine 2010. provedeno je probno arheološko istraživanje (k. č. 4277/1) za utvrđivanje prirode lokaliteta[88] tijekom kojeg je iskopan probni rov širine 2 m i duljine oko 500 m. U iskopu su zabilježeni jamski objekti od kojih najstariji pripadaju sopotskoj kulturi. Očito je riječ o nizinskom naselju čije se središte pretpostavlja sjevernije, na obroncima Borinaca ispresijecano dvama vodotocima. U zapunama objekata pronađeno je izrazito malo pokretnih arheoloških nalaza. Nalazi su ograničeni na istočni dio lokaliteta.[89] Na sjeveroistočnom dijelu lokaliteta 2016. provedena su magnetna snimanja na površini od 20 x 60 m, koja su pokazala moguće manje arheološke cjeline. Riječ je o manjim anomalijama, koje bi mogle pripadati rupama od stupova, a snimanjem je obuhvaćen i probni rov iz 2010.[90]

Prostorno rasprostiranje potvrđeno je terenskim pregledom, arheološkim sondiranjem i rezultatima geofizičke prospekcije gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima s ostatcima kuća, jama i većih ukopanih objekata.

Sjeverna strana Vinkovaca koja se uzdiže prema Borincima (dijelu Đakovačko-vinkovačkog ravnjaka) mogla bi cijela biti proglašena arheološkim lokalitetom jer terenskim

chisel.[86] In 1998, archaeological trial excavations were conducted by the Vinkovci Town Museum in the northern part of Blato, in the course of which a La Tène cemetery was discovered, and lithic artefacts were found on the surface of the surrounding fields.[87] In 2010, archaeological trial excavations were conducted (at cadastral plot 4277/1) to determine the character of the site.[88] For this purpose, a two-metre-wide and c. 500-metre-long trial trench was dug. Uncovered in the trench were pit structures, the oldest of which belong to the Sopot culture. It is obviously a lowland settlement whose centre is assumed to have been located further north, on a slope at Borinci cut by two watercourses. In the structure fills, very few archaeological finds were unearthed. The finds are limited to the eastern part of the site.[89] In 2016, in the northeastern part of the site, over an area of 20 x 60 m, magnetic surveying was made, which showed possible smaller archaeological units. These are minor anomalies, which might be interpreted as holes for pillars. The surveying also included the 2010 trial trench.[90]

The spatial distribution was confirmed in a field survey, archaeological trial trenching and geophysical prospecting data, with visible remains of circular settlements enclosed by ditches with the remains of houses, pits and larger buried structures.

The entire northern side of Vinkovci that rises towards Borinci (a part of the Đakovo-Vinkovci Plateau) could be declared an archaeological site because in field surveys of the

86 BRUNŠMID 1888: 66, 68; 1902: 12, 122.

87 DIZDAR 1998: 37–42; KRZNARIĆ ŠKRIVANKO 2012b: 35.

88 Radovi su financirani sredstvima znanstvenog projekta Instituta za arheologiju u Zagrebu „Razvoj mobilnosti protopovijesnih zajednica na tlu kontinentalne Hrvatske".

89 VULIĆ , H., DIZDAR, M., RAPAN PAPEŠA, A. 2010: 76–77.

90 BOTIĆ 2017: 144, 146, sl. 7. Institut za arheologiju u suradnji s Institutom za arheologiju Sveučilišta Kardinal Stefan Wyszynski u Varšavi u sklopu zajedničkog miniprojekta „Geoarchaeological psospection of Slavonia region" proveo je između ostalog i magnetna snimanja na lokalitetu Vinkovci – Blato.

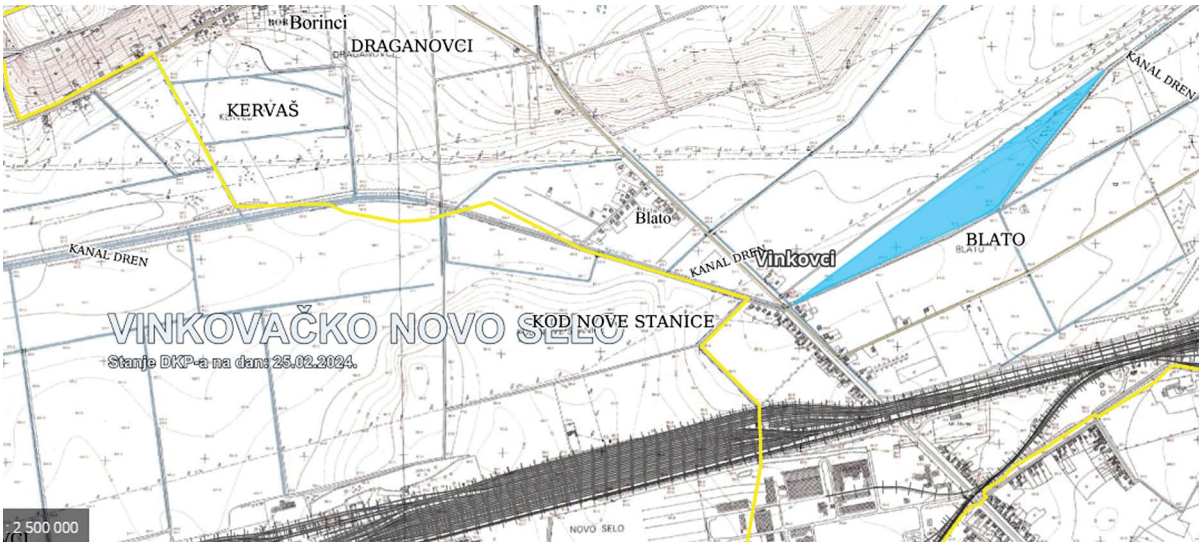
86 BRUNŠMID 1888: 66, 68; 1902: 12, 122.

87 DIZDAR 1998: 37-42; KRZNARIĆ ŠKRIVANKO 2012b: 35.

88 The works were funded from the research project "Development of the Mobility of Protohistoric Communities in the Territory of Continental Croatia" of the Institute of Archaeology in Zagreb.

89 VULIĆ , H., DIZDAR, M., RAPAN PAPEŠA, A. 2010: 76–77.

90 BOTIĆ 2017: 144, 146, Fig. 7. The Institute of Archaeology in Zagreb in cooperation with the Institute of Archaeology of the Cardinal Stefan Wyszynski University in Warsaw, within the framework of the joint mini-project "Geoarchaeological Prospection of the Slavonia Region", conducted magnetic surveying at the Vinkovci – Blato site.



Slika 27. *Područje rasprostiranja sopotskog naselja* (M 1 : 5000 HOK Geoportal DGU)
Figure 27 *Distribution area of the Sopot settlement* (Scale 1:5,000 Croatian Base Map (HOK) Geoportal DGU)

pregledom područja od Blata pa do Zablaća po površini izoranih polja nalazimo ulomke keramike, pa i sopotske.

VINKOVCI

Tijekom više od stoljeća na području Vinkovaca poznati su mnogobrojni lokaliteti koji se danas nalaze u sklopu arheološki zaštićene zone Vinkovaca, koja se rasprostire na 5 945 833

area from Blato to Zablaće, on the surface of the ploughed land, potsherds, including Sopot pottery fragments, have been found.

VINKOVCI

For over a century, many sites have been known in the Vinkovci area, which are today located within the Archaeological Protected Zone of Vinkovci, which spreads over



Slika 28. *Zračna snimka Vinkovaca s pozicijama sopotskih naselja – Krnjaša, tela Tržnice, Ervenice i Pjeskane* (2015., foto: G. Skelac; prilagodila: M. Krznarić Škrivanko)
Figure 28 *Aerial photo of Vinkovci with the positions of the Sopot settlements – Krnjaš, Tržnica tell, Ervenica and Pjeskana* (2015 photo by G. Skelac; modified by M. Krznarić Škrivanko)

m², odnosno na gotovo 600 hektara. Upravo zahvaljujući arheološkoj zoni od 1972. godine svim gradnjama prethode arheološka istraživanja, te je na teritoriju grada otkriveno nekoliko velikih prapovijesnih arheoloških lokaliteta: tel Tržnica, Ervenica, Krnjaš, Pjeskana, te u jugoistočnom dijelu Vinkovaca, Trbušanci, odnosno Jošine.

ERVENICA – Ulica M. Gupca (sl. 1/28) (45°16'42.86"S 18°48'48.01"I; 45°16'53.44"S 18°48'31.93"I)

Prapovijesno naselje u literaturi poznato pod nazivom Ervenica nalazi se u jugoistočnom dijelu Vinkovaca i rasprostire se od utoka potoka Ervenice u Bosut (istočna granica tela Tržnice) nizvodno uz lijevu obalu Bosuta do položaja Vrapčana u dužini većoj od 1 km. Ervenicu kao prapovijesno naselje prvi spominje 1902. J. Brunšmid.[91] Slučajni nalazi iz Ulice M. Gupca 108 potječu još iz 1957., a S. Dimitrijević iste je godine proveo sondažno iskopavanje na poziciji Poljskog jarka u kojem je istražio naselje sopotske kulture s jamom u kojoj je nađena podnica.[92]

Zaštitno arheološko iskopavanje provedeno je u Ulici M. Gupca 137 na površini od 250 m² 1997. godine, kada je ispod humusa i sterilnog žutog nasipa debljine 85 cm otkriven nastavak otvorenog ravničarskog naselja sopotske kulture koje se uz rijeku Bosut širi do područja istočne obilaznice, odnosno do naselja na Jošinama. U jami I pravilnog pravokutnog oblika s ostatcima rupa za stupove, orijentacije sjever-jug, otkriven je tada jedini ukop sopotske kulture na vinkovačkom području – parcijalni ukop dječje kalote, s razbacanim životinjskim ko-

[91] BRUNŠMID 1902: 120; KRZNARIĆ ŠKRIVANKO 2012b: 14.

[92] DIMITRIJEVIĆ 1968: 22, 24; KRZNARIĆ ŠKRIVANKO 2012b: 18. Poljski je jarak kanal koji povezuje Ulicu M. Gupca s Bosutom.

5,945,833 metres², or almost 600 hectares. Thanks to the Archaeological Zone, archaeological research has preceded all building works since 1972, and several large prehistoric archaeological sites have been discovered in the municipal area: Tržnica tell, Ervenica, Krnjaš, Pjeskana, and in the southeastern part of Vinkovci, Trbušanci, and Jošine.

ERVENICA – Ulica M. Gupca (Fig. 1/28) (45°16'42.86"N 18°48'48.01"E; 45°16'53.44"N 18°48'31.93"E)

A prehistoric settlement, in the literature known as Ervenica, is located in the southeastern part of Vinkovci and extends from the confluence of the Ervenica brook with the Bosut (the eastern border of the Tržnica tell) downstream along the left bank of the Bosut, to the Vrapčani site, over a length of more than one kilometre. Ervenica was first mentioned as a prehistoric settlement in 1902 by J. Brunšmid.[91] Stray finds from Ulica Matije Gupca 108 date back to 1957, and S. Dimitrijević also conducted trial trenching at the Poljski Jarak site, unearthing a Sopot culture settlement with a pit in which a floor was found.[92]

Archaeological rescue excavations were carried out at Ulica M. Gupca 137 over an area of 250 m² in 1997, when, under humus and a sterile yellow 85-centimetre-thick embankment, a continuation of the open lowland Sopot-culture settlement was uncovered, which spreads along the Bosut River to the area of the eastern by-pass road, to the settlement at Jošine. Pit I had a regular rectangular shape and the remains of holes for pillars, and was oriented north-south. On that occasion the at that time only Sopot-culture interment in the Vinkovci area was unearthed – a partial bur-

[91] BRUNŠMID 1902: 120; KRZNARIĆ ŠKRIVANKO 2012b: 14.

[92] DIMITRIJEVIĆ 1968: 22, 24; KRZNARIĆ ŠKRIVANKO 2012b: 18. Poljski Jarak (field ditch) is a channel that connects Ulica M. Gupca with the Bosut.



Slika 29a. *Zračna snimka Ervenice i do južne obilaznice* (2020., foto: M. Mađerić)
Figure 29a *Aerial photo of Ervenica, as far as the southern by-pass road* (2020, photo by M. Mađerić)



Slika 29b. *Naselje sopotske kulture na Poljskom jarku* (2011., foto: G. Skelac)
Figure 29b *Settlement of the Sopot culture at Poljski Jarak* (2011, photo by G. Skelac)

stima, gorenim kućnim lijepom i prilogom – crno poliranim loncem bikoničnog tijela i konkavnog vrata.[93]

Na području Ervenice (M. Gupca – položaj Poljski jarak) tijekom 2011. provedeno je zaštitno arheološko istraživanje na površini od 2560 m^2. Na cijeloj površini otkriveno je naselje sopotske kulture, koje je preslojilo starije naselje starčevačke kulture. Riječ je o otvorenom ravničarskom naselju s četrdesetak ukopanih objekata, stambenim i radnim objektima, otpadnim jamama i bunarima, rupama od stupova, vjerojatno nadzemnih konstrukcija kuća te jarkom. Unutar naselja istraženo je i nekoliko grobova od kojih su neki prilozima i 14C datumima datirani u starčevačku kulturu.[94]

JOŠINE (TRBUŠANCI) (sl. 1/29)
(45°16'0.93"S 18°48'44.00"I)

Jošine se nalaze na lijevoj obali Bosuta u nastavku naselja na Ervenici i Trbušancima. Naselje je istraživano za istočnu obilaznicu 2011. gdje je otkriveno otvoreno ravničarsko naselje sopotske kulture na površini od oko 10 000 m^2. U naselju su otkriveni stambeni i radni objekti, otpadne jame, rupe od stupova od nadzemnih konstrukcija kuća i bunari. Lokalitet je datiran jednim uzorkom u 4790. – 4620. kal. g. pr. Kr.[95]

TRBUŠANCI (sl. 1/30)
(45°16'5.99"S 18°48'39.42"I)

Lokalitet Trbušanci nalazi se u nastavku lokaliteta Ervenica, na lijevoj obali Bosuta, gdje se nalazi mala ovalna gradina promjera

93 KRZNARIĆ ŠKRIVANKO 1997: 205–215.
94 MALJKOVIĆ 2011: 74; 2014: 103–104. Lokalitet je istraživala privatna arheološka firma.
95 KOPRIVNJAK 2011; 2014. Lokalitet je istraživala privatna arheološka firma.

ial of a child's calotte, with scattered animal bones and burned house daub. An accompanying grave good was a black-polished pot with a biconic body and a concave neck.[93]

In 2011, in Ervenica (M. Gupca – Poljski Jarak site), archaeological rescue excavations were conducted over a surface area of 2,560 m^2. A Sopot-culture settlement, which superimposed an older Starčevo-culture settlement, occupied the entire site. It was an open lowland settlement with approximately forty sunken structures: residential and work buildings, waste pits and wells, pillar holes (probably for above-ground houses), and a ditch. Several graves within the settlement were also excavated; on the evidence of grave goods and C_{14} dates, some of the graves were attributed to the Starčevo culture.[94]

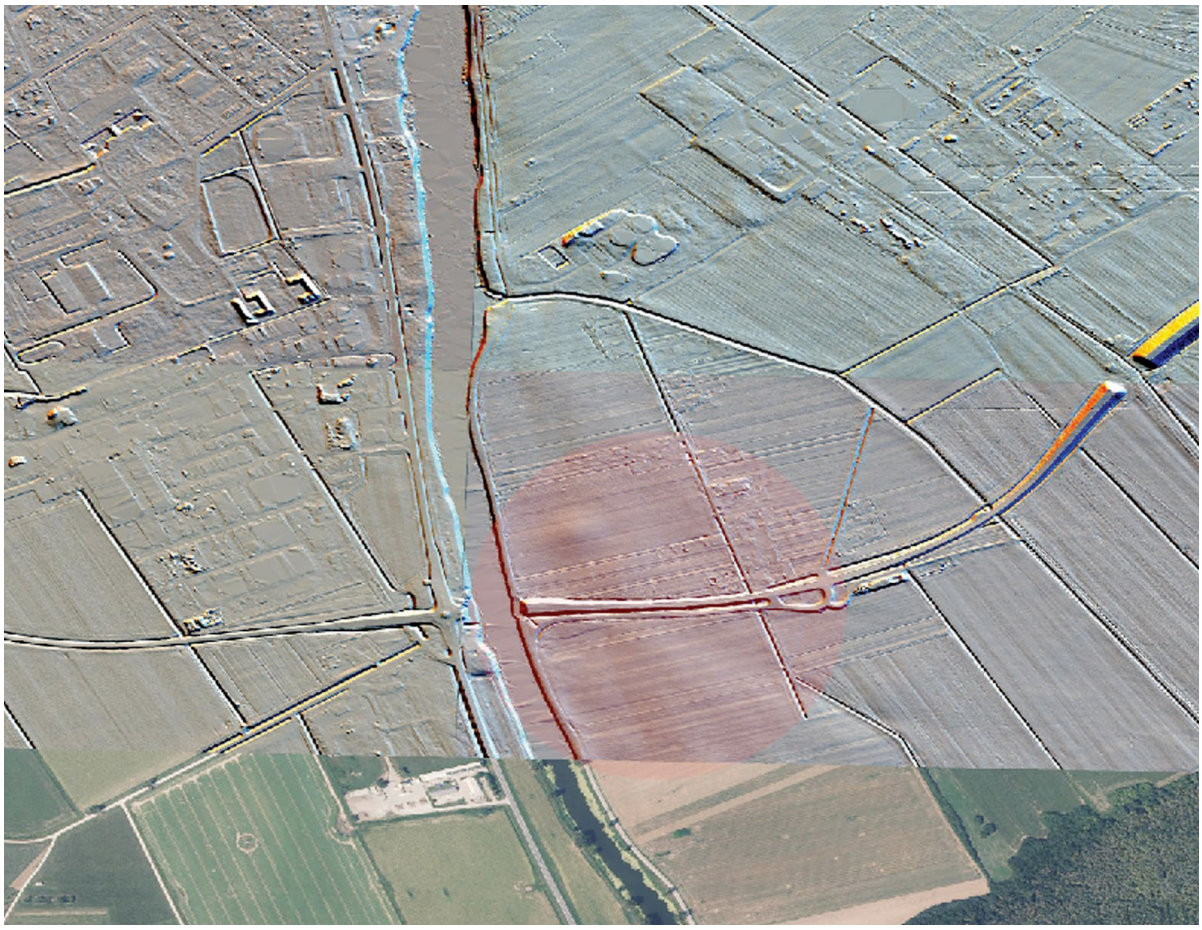
JOŠINE (TRBUŠANCI) (Fig. 1/29)
(45°16'0.93"N 18°48'44.00"E)

Jošine is located on the left bank of the Bosut and is an extension of the Ervenica and Trbušanci settlements. The settlement was excavated in 2011 prior to the construction of the eastern by-pass road. An open lowland Sopot-culture settlement was unearthed over a surface area of c. 10,000 m^2. Recovered in the settlement were residential and work structures, waste pits, pillar holes for above-ground houses, and wells. On the basis of a single sample, the site was dated to 4790–4620 cal BC.[95]

TRBUŠANCI (Fig. 1/30)
(45°16'5.99"N 18°48'39.42"E)

The Trbušanci site is a continuation of the Ervenica site, located on the left bank of the Bosut, on a spot where there is a small oval hillfort

93 KRZNARIĆ ŠKRIVANKO 1997: 205-215.
94 MALJKOVIĆ 2011: 74; 2014: 103-104. The site was excavated by a private archaeological company.
95 KOPRIVNJAK 2011; 2014. The site was excavated by a private archaeological company.



Slika 30. *DGU LIDAR Trbušanaca i Jošina* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 30 *DGU LIDAR of Trbušanci and Jošine* (2024, modified by N. Ostović and I. Sokola)

80 m i relativne visine 1,25 m, gdje je S. Dimitrijević 1957. proveo probno iskopavanje u kojem je utvrđeno postojanje kratkotrajnog naselja sopotske kulture koje na osnovi keramičkih nalaza datira u rani stupanj.[96] Izgled naselja najbolje se vidi na snimci lidarom.

KRNJAŠ (sl. 1/31) (45°17'15.57"S 18°47'35.64"I)

Prapovijesno naselje na Krnjašu nalazi se u nastavku naselja na telu Tržnici (zapadna granica), na blago povišenom području smještenom neposredno uz lijevu obalu Bosuta, a rasprostire se od ušća nekadašnjeg manjeg vodotoka u Bosut (sjeveroistočna granica)

[96] DIMITRIJEVIĆ 1966: 5; 1968: 22, T. VII/8-12.

with an 80-metre diameter and a relative height of 1.25 metres. S. Dimitrijević conducted trial excavations of the site in 1957 and established the existence of a short-lived Sopot-culture settlement, which was dated to its early stage on the basis of pottery finds.[96] The appearance of the settlement is best seen in the LIDAR photo.

KRNJAŠ (Fig. 1/31) (45°17'15.57"N 18°47'35.64"E)

The prehistoric settlement at Krnjaš is a continuation of the settlement at the Tržnica tell (western border), on a slightly elevated area immediately adjacent to the left bank of the Bosut; it stretches from the mouth of a former small watercourse flowing into the Bosut (north-east-

[96] DIMITRIJEVIĆ 1966: 5; 1968: 22, Pl. VII/8-12.



Slika 31. *Zračna snimka Krnjaša* (2015., foto: G. Skelac)
Figure 31 *Aerial photo of Krnjaš* (2015, photo by G. Skelac)

preko ušća potoka Nevkoša u Bosut do južne obilaznice Vinkovaca u dužini od gotovo 2 km.

Lokalitet Krnjaš prvi spominje J. Korda 1960.[97] Posljednjih tridesetak godina istraživalo se na nekoliko pozicija koje su pokazale nalaze sopotske kulture, i to najvećim dijelom u južnom dijelu Krnjaša. Veća zaštitna arheološka iskopavanja povezana s izgradnjom kuća i infrastrukture provedena su u Ulici J. Kozarca 62,[98] u Ulici 68. bojne Vojne policije[99] i u Ulici Dirov brijeg.[100]

Na Krnjašu se rasprostiralo otvoreno ravničarsko naselje s ukopanim stambenim i radnim objektima, otpadnim jamama i bunarima.

PJESKANA (sl. 1/32) (45°17'6.67"S 18°47'36.52"I)

Na desnoj, nižoj obali Bosuta preko puta Krnjaša nalazi se prapovijesno naselje Pjeska-

97 KORDA 1960: 42.
98 RAPAN PAPEŠA 2006.
99 KRZNARIĆ ŠKRIVANKO 2015d: 106.
100 KRZNARIĆ ŠKRIVANKO 2016c: 101–103.

ern border) over the mouth of the Nevkoš brook into the Bosut, to the southern Vinkovci by-pass road, over a length of almost two kilometres.

The Krnjaš site was first mentioned by J. Korda in 1960.[97] Over the last three decades or so, several sites rendering Sopot-culture finds, mostly in the southern part of Krnjaš, have been excavated. Major archaeological rescue excavations related to the construction of houses and infrastructure were conducted at the addresses Ulica J. Kozarca 62,[98] Ulica 68. bojne Vojne policije,[99] and Ulica Dirov brijeg.[100]

At Krnjaš was an open lowland settlement with buried residential and work facilities, waste pits and wells.

PJESKANA (Fig. 1/32) (45°17'6.67"N 18°47'36.52"E)

On the right, lower bank of the Bosut, opposite Krnjaš, is the prehistoric settlement of Pjeskana.

97 KORDA 1960: 42.
98 RAPAN PAPEŠA 2006.
99 KRZNARIĆ ŠKRIVANKO 2015d: 106.
100 KRZNARIĆ ŠKRIVANKO 2016c: 101-103.

na. Naselja na Pjeskani I i II prvi spominje Brunšmid,[101] a svi pronađeni predmeti dospjeli su s Brunšmidovom zbirkom u Arheološki muzej u Zagrebu.[102] Naselje na Pjeskani s nalazima keramike sopotske kulture spominje i Dimitrijević,[103] a interpretira ga kao sezonsko stanište.[104]

Zaštitnim arheološkim iskopavanjem provedenim 2006. na području Pjeskane I (Ulica D. Žanića Karle 37) otkriveno je jednoslojno naselje u kojem je istraženo pet poluukopanih jamskih objekata. Neke su jame zapunjene gorenim kućnim lijepom, što sugerira da su se u blizini nalazili i nadzemni objekti. Pronađeni su keramički ulomci sopotske kulture, jedan litički ulomak i vrlo malo loše sačuvanih životinjskih kostiju, vjerojatno zbog sastava tla od pijeska i gline.[105] Desna obala Bosuta u Vinkovcima je niža od lijeve, te je do prije stotinjak godina plavila, zbog čega se naselje interpretira kao sezonsko.

VINKOVCI – VINKOVAČKO NOVO SELO – ZABLAĆE (sl. 1/33) (45°17'37.94"S 18°44'36.53"I)

Mlađekamenodobni lokalitet sopotske kulture Zablaće smješten je južno od Borinaca, na obroncima Đakovačko-vinkovačkog ravnjaka, na uzvišenoj terasi uz desnu obalu potoka Nevkoša. Naseobinski raster utvrđen je na sustavno istraženoj površini od oko 4500 m^2 tijekom zaštitnih arheoloških iskopavanja od 2014. do 2016. godine, dok su probna arheološka istraživanja kao i arheološki nadzor i terenski pregled potvrdili da se naselje rasprostiralo na površini većoj od 40 ha. Istraživanje je otkrilo vrlo važan,

[101] BRUNŠMID 1902: 120. Piše da se neolitičko naselje nalazi na desnoj obali Bosuta gdje se vadi pijesak. S vremenom je tamo prikupio ulomke ručno rađenih keramičkih posuda, komade kućnog lijepa i kamene alatke.
[102] KRZNARIĆ ŠKRIVANKO 2012b: 14.
[103] DIMITRIJEVIĆ 1968: 24.
[104] DIMITRIJEVIĆ 1979a: 135.
[105] KRZNARIĆ ŠKRIVANKO 2006d: 52–53; 2012b: 14, 20.

The settlements at Pjeskana I and II were first mentioned by Brunšmid,[101] and all uncovered artefacts came to the Archaeological Museum in Zagreb from Brunšmid's collection.[102] The settlement at Pjeskana with Sopot-culture pottery finds was also mentioned by Dimitrijević[103] and interpreted as a seasonal habitation.[104]

Archaeological rescue excavations conducted in 2006 at the Pjeskana I site (at Ulica D. Žanića Karle 37) revealed a one-layered settlement, in which five semi-buried pit structures were excavated. Some pits were filled with burned house daub, which suggests that nearby were also above-ground structures. Recovered were Sopot culture potsherds, a lithic fragment, and a small amount of animal bones, which were poorly preserved, probably due to the composition (sand and clay) of the soil.[105] The right bank of the Bosut in Vinkovci is lower than the left, and until a hundred years ago would regularly flood, which is why the settlement is interpreted as seasonal.

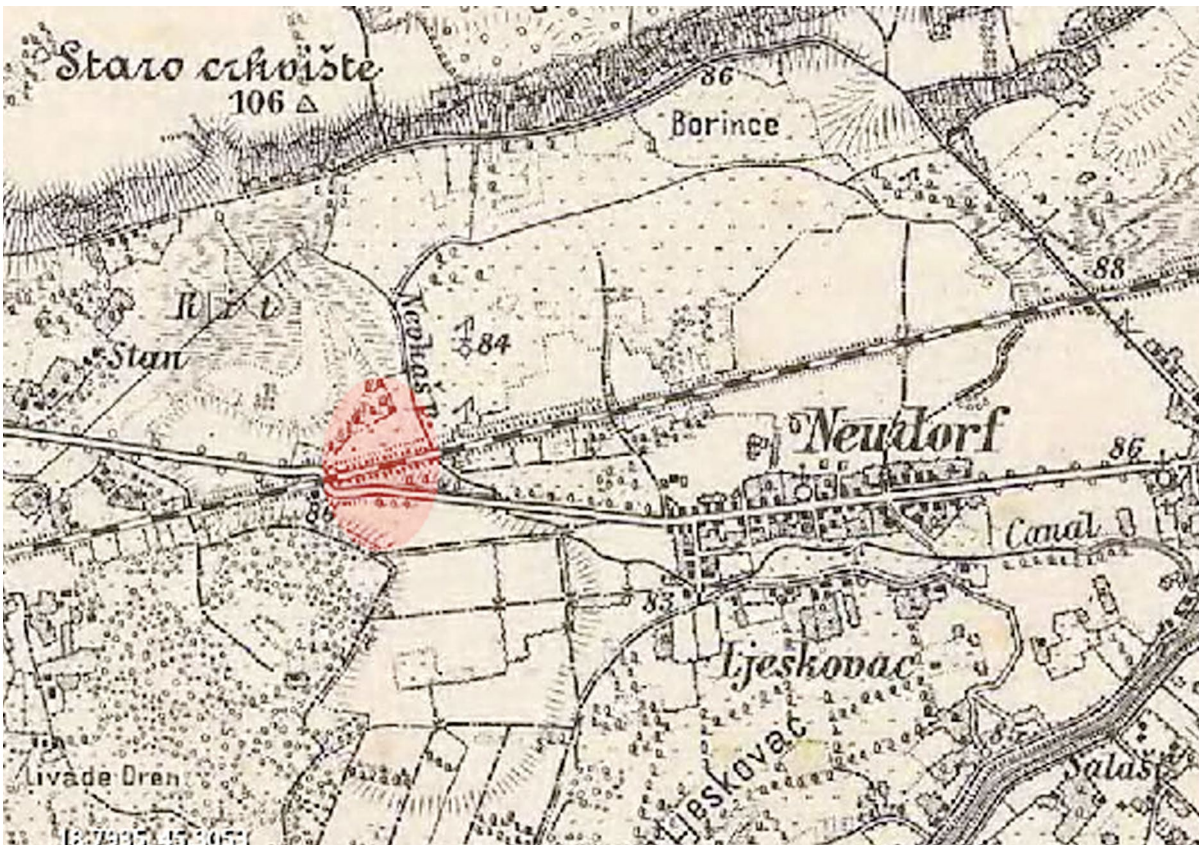
VINKOVCI – VINKOVAČKO NOVO SELO – ZABLAĆE (Fig. 1/33) (45°17'37.94"N 18°44'36.53"E)

The Neolithic Sopot-culture site of Zablaće is located south of Borinci, on the slopes of the Đakovo-Vinkovci Plateau, on a high terrace along the right bank of the Nevkoš brook. The settlement grid was established over a systematically explored surface area of c. 4,500 m^2 in the course of archaeological rescue excavation campaigns conducted from 2014 to 2016, while archaeological trial excavations as well as archaeological surveillance and field surveying confirmed that the settlement spread over an

[101] BRUNŠMID 1902: 120. He wrote that the Neolithic settlement was located on the right bank of the Bosut, at a point where sand was extracted. Over time, he collected sherds of hand-made ceramic pots, pieces of house daub and stone implements.
[102] KRZNARIĆ ŠKRIVANKO 2012b: 14.
[103] DIMITRIJEVIĆ 1968: 24.
[104] DIMITRIJEVIĆ 1979a: 135.
[105] KRZNARIĆ ŠKRIVANKO 2006d: 52-53; 2012b: 14, 20.

kompleksan i veliki naseobinski lokalitet, koji svjedoči o dugotrajnom opstanku na jednom mjestu, planiranoj izgradnji i održavanju naselja, izgradnji ukopanih i nadzemnih stambenih objekata s pećima i skladišnim prostorima. Na lokalitetu je istražen, s obzirom na gustoću objekata, središnji dio naselja koji se sastojao od poluukopanih objekata i koliba. Za poznavanje infrastrukture naselja važno je otkriće i dvaju paralelnih kanala koji su bili ukopani u već zatrpanu zemunicu. Osim toga, u naselju su istražene mnogobrojne otpadne jame, jame za vađenje gline, različiti konstruktivni elementi kuća, kao što su rupe za stupove, temeljni rovovi, ali i kanali koji su ograđivali ili dijelili prostor naselja. Prostorna organizacija ravnih naselja, kao što je naselje na Zablaću, pokazuje veću raznolikost, a kao i većina takvih naselja u jugoistočnoj Europi nije ograničena nekom preprekom, koja bi

area of more than 40 hectares. The research revealed a very important, complex and large settlement site, which testifies to long-term habitation in one place, the planned construction and maintenance of settlements, and the construction of buried and above-ground residential buildings with stoves and storage spaces. Given the dense distribution of structures, the central part of the settlement, which included semi-buried structures and huts, was excavated. The recovery of two parallel channels buried in an already filled pit dwelling brought to light important facts about the settlement's infrastructure. Also excavated in the settlement were numerous waste pits, clay pits, various house construction elements such as pillar holes and foundation trenches, as well as channels enclosing or dividing the settlement's surface area. The spatial organisation of flat settlements, such as the settlement at Zablaće, displays greater diversity; it is similar to most



Slika 32a. *Pozicija sopotskog naselja na Zablaću na karti 3. vojne izmjere* (https://maps.arcanum.com/en/synchron/)
Figure 32a *The position of the Sopot culture settlement at Zablaće on a map of the Third Military Survey* (https://maps.arcanum.com/en/synchron/)



Slika 32b. *Zračna snimka istraženog dijela naselja na Zablaću 2014.* (foto: A. Papić)
Figure 32b *Aerial photo of the excavated part of the settlement at Zablaće in 2014* (photo by A. Papić)

usporila njihovu prostornu ekspanziju.

Otvoreno ravničarsko naselje Vinkovačko Novo Selo – Zablaće trenutačno je jedno od najstarijih naselja sopotske kulture, nastalo tijekom početne/rane faze sopotske kulture. Napuštanje ovog naselja nakon relativno kratkog vremena života, unatoč znatnim ulaganjima u njegovu izgradnju, govori o društvenim pokretima krajem 6. i početkom 5. tisućljeća pr. Kr.

Čini se da je mreža sopotskih naselja brzo uspostavljena u jednoj ili dvjema generacijama. Naselja, kao što je Zablaće, vjerojatno su osnovana u generaciji prije onog na Sopotu, oko 5300. – 5200 kal. g. pr. Kr. koje je datirano iz ljudskih i životinjskih zuba.[106]

such settlements in Southeast Europe, which were not limited by any obstacles that would slow their spatial expansion.

The open lowland settlement of Vinkovačko Novo Selo – Zablaće is currently one of the oldest Sopot-culture settlements, established during its initial/early phase. That this settlement was abandoned – after a relatively short period of habitation and despite considerable investments in its construction – speaks of social movements in the late 6th and early 5th millennia BC.

It seems that the Sopot settlement network was quickly established by one or two generations. Settlements such as Zablaće were probably established by the generation before the settlement at Sopot, around 5300–5200 cal BC (dating based on human and animal teeth).[106]

[106] KRZNARIĆ ŠKRIVANKO 2014b: 70–73; 2015b: 210; 2015c: 96–98; 2016a: 86–88; 2021: 127–139.

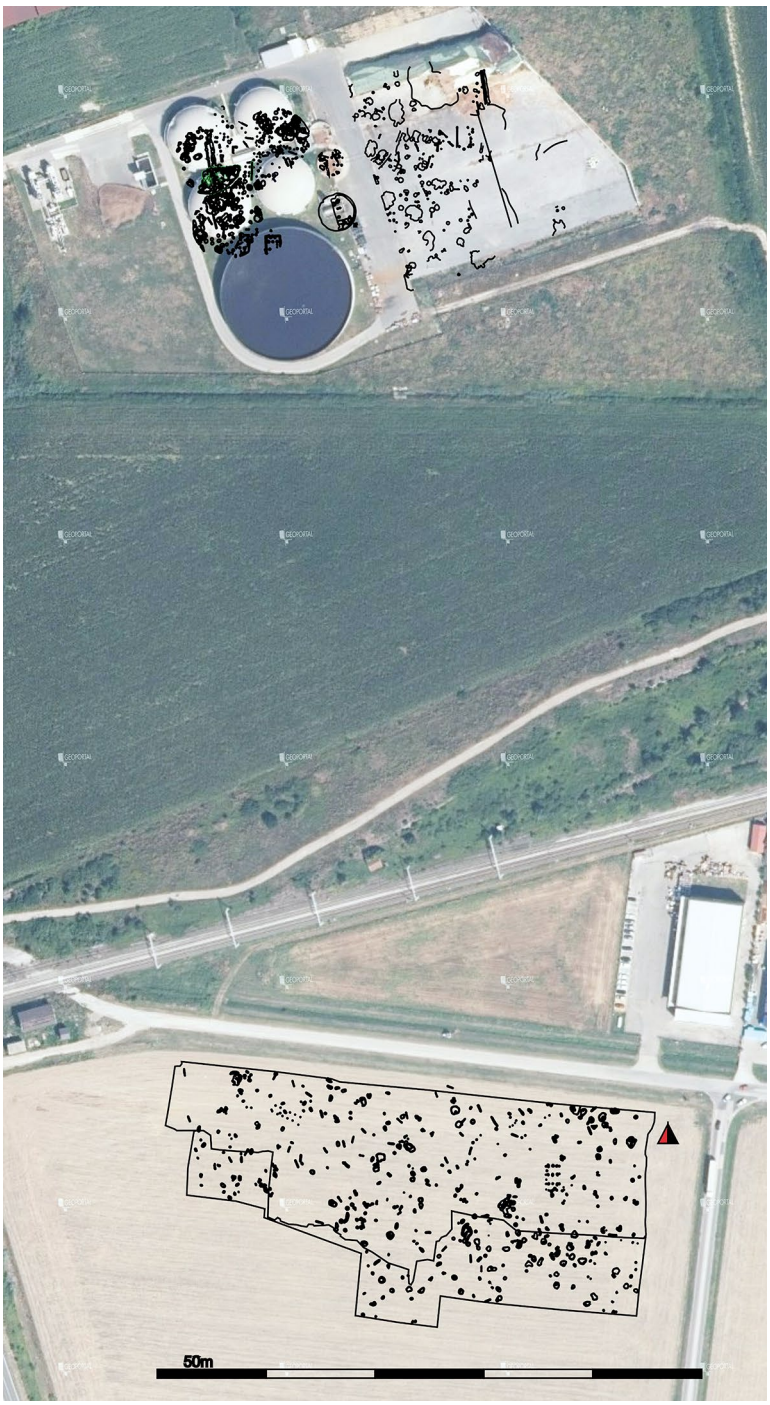
[106] KRZNARIĆ ŠKRIVANKO 2014b: 70-73; 2015b: 210; 2015c; 96-98; 2016a: 86-88; 2021: 127-139.

VINKOVAČKO NOVO SELO / A. STEPINCA BB (Ldc-Hladnjača) (sl. 1/34) (45°17'22.60"S 18°44'38.36"I)

Tijekom 2022. i 2023. provedeno je 300 m južnije od lokaliteta Zablaće zaštitno arheološko istraživanje na površini od 18 000 m^2. I ovo je naselje bilo smješteno na uzvišenoj terasi uz desnu obalu potoka Nevkoša iznad

VINKOVAČKO NOVO SELO / A. STEPINCA BB (Logistics and distribution centre (LDC) Hladnjača) (Fig. 1/34) (45°17'22.60"N 18°44'38.36"E)

In 2022 and 2023, 300 metres south of the Zablaće site, archaeological rescue excavations were conducted over a surface area of 18,000 m^2. This settlement was also located on an ele-



Slika 33a. *Odnos istraženog dijela sopotskog naselja na Zablaću i 300 m južnije na tzv. Hladnjači na zračnoj snimci* (srpanj 2023., foto: I. Sokola, izradila: N. Ostović)
Figure 33a *The relation between the excavated part of the Sopot settlement at Zablaće, and Hladnjača* (300 metres further south), in an aerial photo (July 2023, photo by I. Sokol; illustration by N. Ostović)



Slika 33b. *Zračna snimka rastera sopotskog naselja na 18 000 m² na Hladnjači* (srpanj 2023., foto: I. Sokola)
Figure 33b *Aerial photo of the grid of the Sopot settlement at Hladnjača over a surface area of 18,000 m²* (July 2023, photo by I. Sokola)

plavnog područja. Istraživanje na ovoj poziciji, iako na daleko većoj površini, pokazalo je manju gustoću ukopanih objekta gdje su do sada prepoznate samo dvije kuće. Naselje je većim dijelom uništeno dubokim izoravanjem, tako da u mnogim slučajevima nalazimo samo dna objekata, odnosno ne može se točno odrediti izvorna dubina objekata. Za razliku od naselja na Zablaću u kojem je iskopano nekoliko stotina kilograma keramičkog materijala, u naselju na Hladnjači možemo govoriti o nekoliko kilograma. Za razliku od naselja na Zablaću gdje su istražena tri groba, ovdje je otkriven samo jedan dječji grob koji je poslužio za datiranje naselja u 5220. – 5030. kal. g. pr. Kr.[107]

Nekoliko stotina metara istočno od Zablaća nalazi se toponim Lisičak, te teretna stanica

vated terrace along the right bank of the Nevkoš brook, above the floodplain. Excavations at this site, although conducted over a much larger surface area, showed a less dense distribution of sunken structures, with only two houses identified. The settlement has been largely destroyed by deep ploughing; hence, often only structure bottoms are recovered, and it is not possible to accurately determine the structures' original depth. While in the settlement at Zablaće several hundred kilograms of pottery material were excavated, the village at Hladnjača yielded only a few kilograms. Unlike at the settlement at Zablaće, where three graves were excavated, only a single, child's grave was uncovered here, based on which the settlement was dated to 5220–5030 cal BC.[107]

[107] KRZNARIĆ ŠKRIVANKO 2023: 206–207; 2024: 151–153. Budući da je u objektima bilo vrlo malo životinjskih kostiju, a i one nisu bile pogodne za datiranje, za ovaj lokalitet postoji samo još jedan datum iz zemunice: 5370. – 5200. kal. g. pr. Kr.; 6297.+/- 38 BP(DeA-47218).

[107] KRZNARIĆ ŠKRIVANKO 2023: 206-207; 2024: 151-153. Since in the structures were a very limited amount of animal bones (which were not suitable for dating), there is only one more date for this site (from the pit dwelling): 5370-5200 cal BC; 6297+/- 38 BP (DeA-47218).

Vinkovačko Novo Selo, po čijoj površini nalazimo i ulomke sopotske keramike. Ulazi li i to područje pod veliko sopotsko naselje čiji se centar nalazio na području Zablaća, može pokazati samo geofizičko snimanje cijelog područja.

VINKOVCI – MIRKOVCI – MALAT (sl. 1/35) (45°15'27.50"S 18°52'4.38"I)

Oko 1,5 kilometar jugoistočno od Mirkovaca na toponimu Malat otkriven je lokalitet koji se rasprostire na južnom rubu velikog lesnog ravnjaka koji se spušta prema bosutskoj ravnici. Naselja se rasprostiru od zapada na

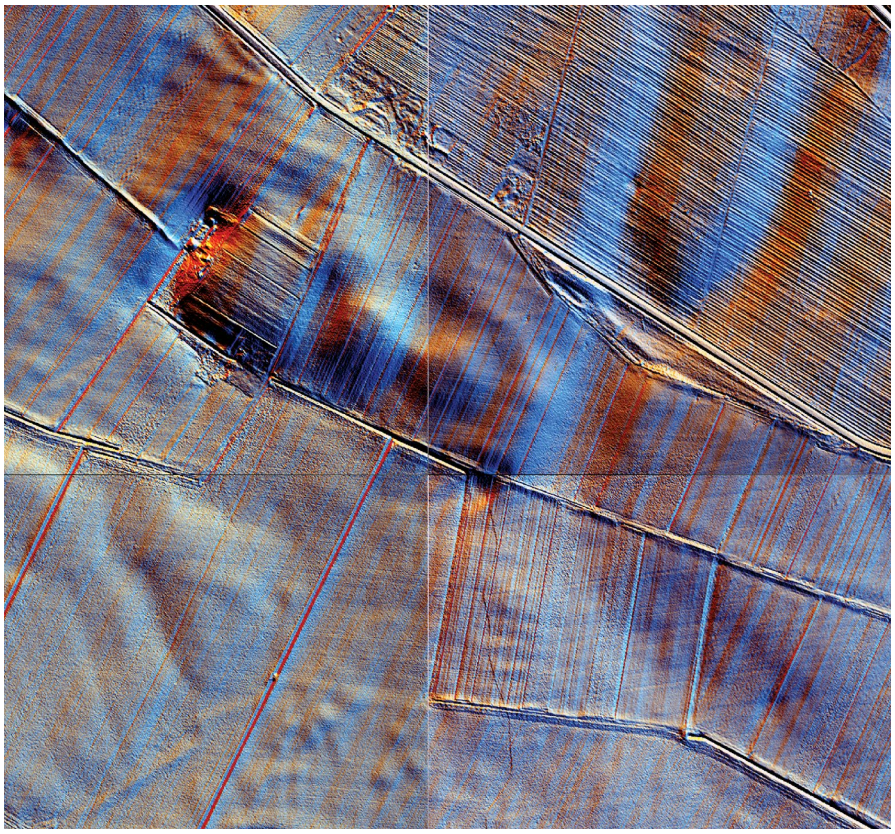
A few hundred metres east of Zablaće is the toponym of Lisičak and the cargo station of Vinkovačko Novo Selo, where Sopot potsherds have also been found. Whether this was also a part of the large Sopot settlement whose centre was in the area of Zablaće can only be determined on the evidence of geophysical data for the entire area.

VINKOVCI – MIRKOVCI – MALAT (Fig. 1/35) (45°15'27.50"N 18°52'4.38"E)

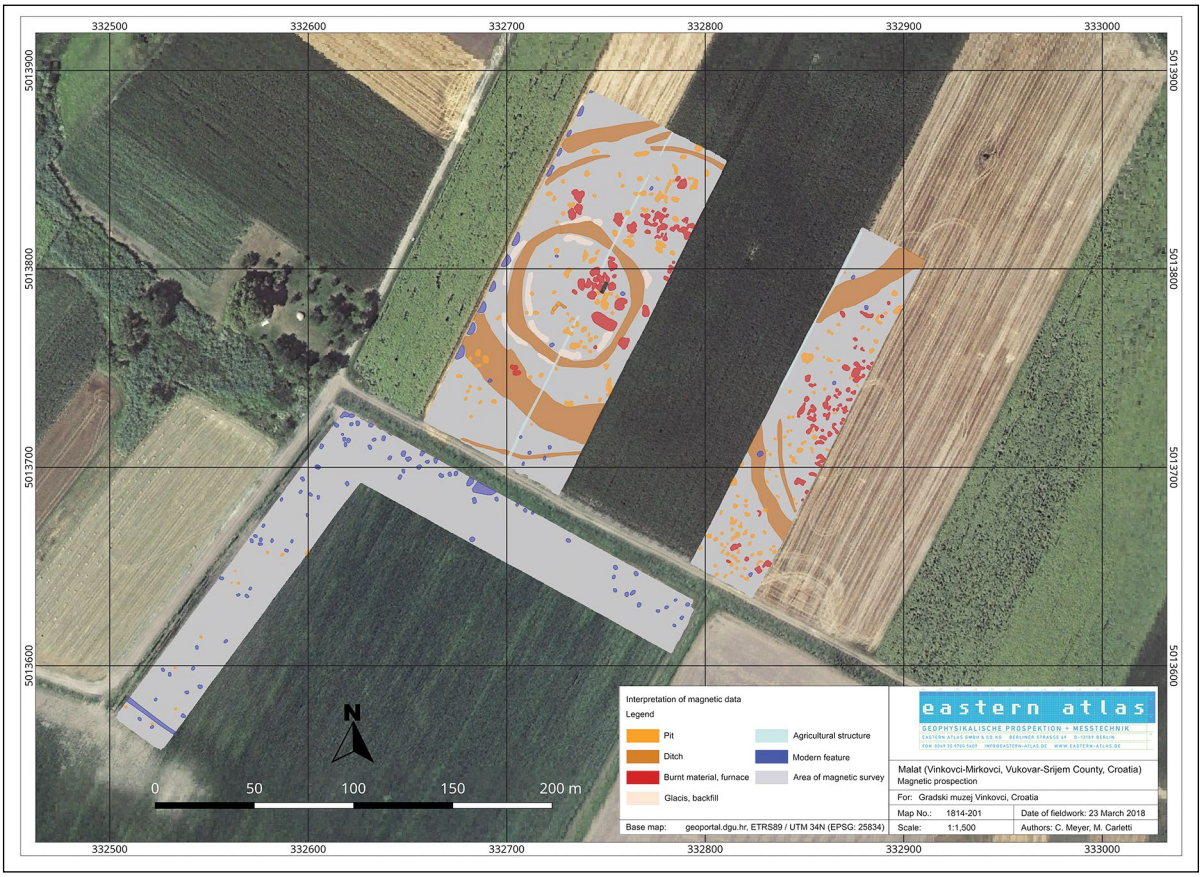
Approximately 1.5 kilometres southeast of Mirkovci, at the Malat toponym, a site spreading over the southern margin of a large loess plateau descending towards the Bosut plain



Slika 34a. *Naselja na Malatu na zračnoj snimci iz 2014. – 2016.* (M 1 : 5000 DGU Geoportal)
Figure 34a *The settlements at Malat in 2014–2016 aerial photos* (Scale 1:5,000 DGU Geoportal)



Slika 34b. *DGU LIDAR naselja na Malatu u Mirkovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 34b *DGU LIDAR of the settlement at Malat in Mirkovci* (2024, modified by N. Ostović and I. Sokola)



Slika 34c. *Rezultati magnetne metode* (Mayer 2018)
Figure 34c *Magnetic data* (Mayer 2018)

istok u duljini od nekoliko stotina metara, i to na trima blagim uzvisinama. Po površini duboko izoravanog lokaliteta nalaze se ulomci sopotske keramike.[108]

Geofizička snimanja na površini od 3,2 ha potvrdila su dva naselja ograđena s nekoliko vanjskih i unutarnjih kružnih jaraka. Zapadno naselje ima više opkopa od kojih je vanjski promjera oko 120 m, a unutarnji oko 60 m. Drugi istočni krug samo je djelomično snimljen, ali je njegov promjer veći od onog zapadnog. Širina je jarka od 6 do 8 m kod vanjskih krugova, a kod unutarnjih je nešto manja. Unutar opkopa u naselju se vide gorene strukture kuća.[109]

Prostorno rasprostiranje potvrđeno je terenskim pregledima, rezultatima geofizičke prospekcije i lidarom, gdje su vidljivi ostatci kružnih naselja utvrđenih opkopima s ostatcima kuća, jama i većih ukopanih objekata. Lokalitet se jasno vidi i na satelitskim snimkama.

VINKOVAČKI BANOVCI – RENOVICA I ŠUMA (sl. 1/36) (45°10'51.92"S 19° 2'40.55"I)

Selo Vinkovački Banovci nalazi se na krajnjem istočnom dijelu vinkovačkog kraja na gredi koja se blago uzdiže iz ravnice uz rijeku Bosut u smjeru istoka. Naselje je evidentirano samo na osnovi slučajnog nalaza iz 1955. bez točne pozicije.[110] Institut za arheologiju anketiranjem stanovnika sela došao je do dviju potencijalnih pozicija na kojima bi se mogla provesti probna arheološka iskopavanja, te je 2016. u okviru istraživačkog projekta[111] proveo probna arheološka iskopavanja na položajima Šuma i Renovica. U

[108] KRZNARIĆ ŠKRIVANKO 2002b: 204; 2012b: 32–33.
[109] MAYER, CARLETTI 2018.
[110] KRZNARIĆ ŠKRIVANKO 2012b: 35, 40.
[111] Iskopavanje je provedeno u sklopu istraživačkog projekta HZZZ „Pogrebni običaji i društvo kasnog brončanog doba na jugu Karpatske kotline".

was unearthed. The settlements extend from west to east over a length of several hundred metres, on three moderate elevations. On the surface area of the deeply ploughed site, fragments of Sopot pottery have been found.[108]

Geophysical screening over a surface area of 3.2 hectares confirmed two settlements enclosed by several outer and inner circular ditches. The western settlement has several moats, of which the outermost has a diameter of c. 120 metres, and the innermost c. 60 metres. The second, eastern circle was only partially screened, but its diameter is larger than that of the western. The outer ditch circle is six to eight metres wide, while the inner is slightly less. Inside the moat in the settlement, burned house structures are visible.[109]

The spatial distribution was confirmed in field surveys, geophysical prospecting data and LIDAR, with visible remains of circular settlements enclosed by ditches with the remains of houses, pits and larger buried structures. The site is also clearly visible in satellite images.

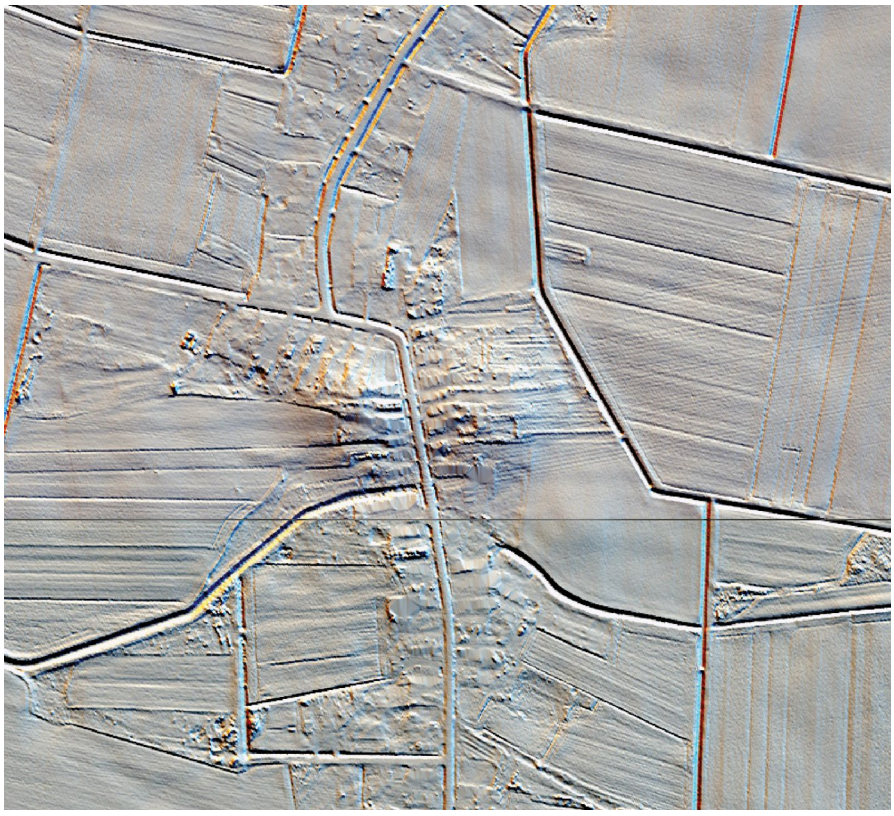
VINKOVAČKI BANOVCI – RENOVICA AND ŠUMA (Fig. 1/36) (45°10'51.92"N 19° 2'40.55"E)

The village of Vinkovački Banovci is located at the easternmost part of the Vinkovci region, on a ridge that rises slightly above the plain along the River Bosut towards the east. The settlement was recorded only on the basis of a 1955 chance find without an accurate position.[110] Having consulted the inhabitants of the village, the Institute of Archaeology identified two possible locations for archaeological trial excavations; in 2016, as part of an excavation campaign, these were conducted at the Šuma and Renovica sites.[111] They

[108] KRZNARIĆ ŠKRIVANKO 2002b: 204; 2012b: 32-33.
[109] MAYER, CARLETTI 2018.
[110] KRZNARIĆ ŠKRIVANKO 2012b: 35, 40.
[111] The excavations were conducted as part of the research project "Late Bronze Age Mortuary Practices and Society in the Southern Carpathian Basin", supported by the Croatian Science Foundation (HZZZ).



Slika 35a. *Pozicija sopotskog naselja u Vinkovačkim Banovcima na karti 3. vojne izmjere* (https://maps.arcanum.com/en/synchron/)
Figure 35a *The position of the Sopot-culture settlement in Vinkovački Banovci on a map of the Third Military Survey* (https://maps.arcanum.com/en/synchron/



Slika 35b. *DGU LIDAR naselja u Vinkovačkim Banovcima* (2024., prilagodili: N. Ostović i I. Sokola)
Figure 35b *DGU LIDAR of the settlement in Vinkovački Banovci* (2024, modified by N. Ostović and I. Sokola)

iskopavanju je obuhvaćen zapadni dio naselja, koje se širi na istok prema centru sela u dužini od nekoliko stotina metara te se nalazi na blago povišenom položaju. Naselje je bilo okruženo manjim vodotokom, ali i iskopanim jarcima s čije površine potječu brojni keramički ulomci sopotske kulture.[112] Prema rezultatima istraživanja i terenskog pregleda na području sela Vinkovačkih Banovaca nalazilo se veliko naselje sopotske kulture.

Prostorno rasprostiranje naselja potvrđeno je terenskim pregledima, ciljanim arheološkim istraživanjima na dvama položajima, geofizičkom prospekcijom na dvama položajima i lidarom.[113]

OGRAĐENI PROSTORI

Na zračnim i satelitskim snimkama vide se tragovi u tlu (*soil marks*) i tragovi u usjevima (*crop marks*) na toponimima Andrijaševci – Gornje njive (sl. 1/37) (45°14'59.42"S 18°42'24.85"I), Ivankovo – Matakovica (sl. 1/38) (45°16'37.33"S 18°38'30.76"I), Ivankovo – Dren/Slatine (sl. 1/39) (45°15'23.47"S 18°42'20.69"I) i Zverinjak – istok (sl. 1/40) (45°20'26.22"S 18°49'53.74"I). Riječ je o krugovima na obalama Bosuta i Vuke, koji se nalaze u blizini sopotskih naselja, ali bez površinskih nalaza pretpostavljamo da je riječ o sopotskim lokalitetima.[114]

[112] LOŽNJAK DIZDAR, DIZDAR 2016: 84–86; 2017: 29 i 31, sl. 7 i 8; KRZNARIĆ ŠKRIVANKO 2016b: 94.

[113] Geofizičko snimanje dviju pozicija na površini od 41 565 m² i 35 059 m² potvrdilo je postojanje i mlađeželjeznodobnih i rimskih objekata na položaju Šuma u Vinkovačkim Banovcima. Snimanje je proveo Cornelius Mayer iz Eastern Atlas GMBH & Co.KG, Berlin.

[114] KALAFATIĆ, ŠILJEG 2018: 92–94.

covered the western part of the settlement, which extended over a length of several hundred metres towards the centre of the village, at a slightly elevated location. The settlement was surrounded by a small watercourse and also by man-made ditches from whose surface numerous Sopot-culture potsherds were recovered.[112] According to the results of the excavations and a field survey, in the area of the village of Vinkovački Banovci was a large Sopot-culture settlement.

The spatial distribution of the settlement was confirmed by field surveys, targeted archaeological excavations at two sites, geophysical prospecting at two sites, and LIDAR.[113]

ENCLOSED SPACES

Aerial and satellite images show soil marks and crop marks at the toponyms Andrijaševci – Gornje Njive (Fig. 1/37) (45°14'59.42"N 18°42'24.85"E), Ivankovo – Matakovica (Fig. 1/38) (45°16'37.33"N 18°38'30.76"E), Ivankovo – Dren/Slatine (Fig. 1/39) (45°15'23.47"N 18°42'20.69"E) and Zverinjak – East (Fig. 1/40) (45°20'26.22"N 18°49'53.74"E). These are circles on the Bosut and Vuka riverbanks that are located near Sopot settlements. However, without surface finds, they can only be assumed to be Sopot sites.[114]

[112] LOŽNJAK DIZDAR, DIZDAR 2016: 84-86; 2017: 29 and 31, Figs. 7 and 8; KRZNARIĆ ŠKRIVANKO 2016b: 94.

[113] Geophysical screening of two sites over surface areas of 41,565 m² and 35,059 m² confirmed the existence of both Late Iron Age and Roman structures at the Šuma site in Vinkovački Banovci. The screening was conducted by Cornelius Mayer from Eastern Atlas GMBH & Co. KG, Berlin.

[114] KALAFATIĆ, ŠILJEG 2018: 92-94.



Slika 36. *Zračna snimka ograđenog prostora u Ivankovu (Matakovica)* (M 1 : 5000 DGU Geoportal)
Figure 36 *Aerial photo of the enclosed area in Ivankovo (Matakovica)* (Scale 1:5,000 DGU Geoportal)

ZAKLJUČNA RAZMATRANJA

Na temelju do sada prikupljenih podataka sustavnim, zaštitnim i probnim arheološkim iskopavanjima, terenskim pregledima, daljinskom prospekcijom i geomagnetnim snimanjima u posljednjih tridesetak godina dana je topografska slika vinkovačkog kraja tijekom trajanja sopotske kulture. Zastupljena su tri tipa naselja: utvrđena višeslojna naselja (tells), ravničarska naselja i ograđeni prostori, čime se potvrđuje iznimna važnost ovog prostora u poznavanju infrastrukturne i materijalne ostavštine eponimne sopotske kulture, kao i gusta naseljenost vinkovačkog kraja krajem 6. i tijekom 5. tisućljeća pr. Kr.

Na prostoru od 1022 km^2 vinkovačkog kraja (bivša Općina Vinkovci pod ingeren-

CONCLUDING REMARKS

The data that have been collected over the past thirty years by systematic archaeological rescue and trial excavations, field surveys, remote prospecting and geomagnetic screenings have resulted in a topographic image of the Vinkovci region over the period of the Sopot culture. Three types of settlements are represented: fortified multi-layered settlements (tells), lowland settlements, and enclosed spaces, thus confirming the exceptional importance of this region for understanding the infrastructural and material heritage of the eponymous Sopot culture, as well as the dense settlement of the Vinkovci region at the end of 6th and in the 5th millennia BC.

In the 1,022-km^2 area of the Vinkovci Region (former Municipality of Vinkovci under the au-

cijom Gradskog muzeja Vinkovci) utvrđeno je postojanje 54 sopotska lokaliteta.[115] Naselja su se nalazila na udaljenosti od samo nekoliko kilometara, te možemo govoriti o velikoj gustoći naseljavanja. Najviše je telova (19) i naselja nalik na tel visine do 3 m i manje površine. Uz neke telove nalaze se i povezana ravna naselja. Ravnih naselja je 17, a njima možemo pribrojiti i 14 za koja znamo na osnovi površinskih nalaza. U ravna naselja vjerojatno bismo mogli pribrojiti i četiri do sada poznata ograđena prostora kojih je sigurno daleko više.[116] Osim utvrđenih višeslojnih naselja i ravničarskih naselja, prepoznaju se i manja uzvišenja (do 50 m) okružena opkopom. Riječ je o manjim naseljima koja se u Srbiji nazivaju naseljima tipa Obrovac. Prema autorima, sredinom 5. tisućljeća pr. Kr. na središnjem Balkanu dogodile su se promjene te su napuštena velika utvrđena kasnoneolitička naselja, a na prirodno zaštićenim područjima nastaju mala naselja za manji broj stanovnika koja su egzistirala tijekom kasnog neolitika i ranog eneolitika.[117] Na vinkovačkom području također prepoznajemo manja naselja promjera do 50 m (Ivankovo – Dren, Andrijaševci – Goričica). Najveći broj telova grupiran je na obalama rijeka Bosuta i Vuke (Sopot, Privlaka, Orolik), te u širem arealu plavnih i močvarnih zona, kao npr. Slakovci, Otok, Retkovci, Komletinci, Ivankovo, Stari Mikanovci. Telovi

thority of the Vinkovci Town Museum), the existence of 54 Sopot sites has been confirmed.[115] The settlements were located at distances only a few kilometres apart, suggesting a large population density. Most tells (19) and tell-like settlements were at heights of up to three metres and smaller surface area. Next to some tells were also associated flat settlements. There are 17 flat settlements, to which 14 – which have become known thanks to surface finds – can be added. Four more sites previously known as enclosed areas (of which there are certainly far more) might probably also be interpreted as flat settlements.[116] In addition to the fortified multi-layered settlements and lowland settlements, smaller elevations (up to 50 metres) surrounded by a moat have also been identified. These are smaller settlements, in Serbia known as Obrovac-type settlements. According to the authors, in the mid-5thmillennium BC, changes occurred in the central Balkans and large fortified late Neolithic settlements were abandoned, while in naturally protected areas, small settlements for a smaller number of inhabitants emerged, which survived over the course of the late Neolithic and early Aeneolithic periods.[117] Smaller settlements with a diameter of up to 50 metres (Ivankovo – Dren, Andrijaševci – Goričica) were also identified in the Vinkovci area. The largest number of tells was grouped on the banks of the rivers Bosut and Vuka (Sopot, Privlaka, Orolik), and in a wider area of flooded and wetland zones, such as Slakovci, Otok, Retkovci, Komletinci, Ivankovo, Stari

115 Za primjer, na području bivše Općine Vinkovci danas postoji 36 sela.

116 Korištenjem daljinske prospekcije, a sada i LIDARA potvrđena su naselja o kojima se znalo samo na osnovi površinskih nalaza.

117 TRBUHOVIĆ, VASILJEVIĆ 1974 godine prvi put spominju naselja tipa Obrovac kao poseban tip naselja u zapadnoj Srbiji. Noviji autori pišu da je kraj neolitika u zapadnoj Srbiji obilježen specifičnom vrstom lokacija koje nisu poznate u drugim dijelovima područja središnjeg Balkana. Riječ je o malim nasipima, obično promjera do 50 m, koji se nazivaju naselja tipa Obrovac (što znači – okružena jarkom) prema toponimima nekih od njih. Glavni argument u prethodnim tumačenjima o podrijetlu i funkciji humaka bila je potreba da se lokalno stanovništvo prilagodi močvarnom i poplavnom okolišu mačvanskog kraja (zapadna Srbija). TRIPKOVIĆ 2014; TRIPKOVIĆ, PENEZIĆ 2017.

115 For example, in the former Municipality of Vinkovci currently there are 36 villages.

116 Remote prospecting, and more recently also LIDAR, have confirmed settlements that had only been assumed on the basis of surface finds.

117 TRBUHOVIĆ, VASILJEVIĆ 1974 for the first time mentioned Obrovac-type settlements as a special settlement type in western Serbia. More recent authors have written that the Late Neolithic in Western Serbia was marked by a specific type of site, unknown in other parts of the central Balkans. These are small embankments, usually with a diameter of up to 50 metres, called the Obrovac-type settlements (meaning "surrounded by a ditch") after the toponyms of some of them. In previous interpretations, the main contention was that the origin and function of the mounds lay in the need for the local population to adapt to the marshy and flooded environment of the Mačva region (Western Serbia). TRIPKOVIĆ 2014; TRIPKOVIĆ, PENEZIĆ 2017.

su žarišno mjesto na obalama rijeka i u močvarnom području, koje se u krajoliku vidi iz daljine, dominiraju krajolikom jer su neki od njih dosegnuli impresivne visine (Sopot, Damića gradina, Orolik, Privlaka, Slakovci, Retkovci, Komletinci), a dio su složenog sustava naselja oko njih. Najstarija sopotska naselja jednoslojna su i velikih površina, kao npr. Zablaće. Tek u kasnom neolitiku počinju nastajati telovi jer je trebalo nekoliko stotina godina da se akumulira sloj građevnog otpada i zemlje, kada naselja počinju rasti u visinu. Prvi stanovnici koji su odlučili „graditi" takve impresivne „brežuljke" koji se svojom visinom izdižu iz okolnog područja s horizontalnim jednoslojnim naseljima očito žele dominirati krajolikom.[118] Samo je kod nekih horizontalnih naselja na nekom dijelu počeo „izrastati" višeslojni zatvoreni tel. Za sada ne možemo sa sigurnošću govoriti je li telu prethodilo otvoreno ravničarsko naselje, ili su ona nastajala oko telova zbog povećanja broja stanovnika.[119] Formiranje tel naselja na prostoru sjevernog Balkana i Karpatske kotline slijedilo je u regionalnom kasnom neolitiku, no ne u sklopu početnog procesa neolitizacije, nego u sklopu naseljavanja već socijalno i ekonomski razvijenih zajednica.[120] Na nekim lokalitetima uz uzvišenja u magnetometru pokazala su se ravna naselja okružena opkopom (Otok – Gradina), kao i na zračnim snimkama (Ivankovo – Križin stan, Stari Mikanovci – Čanića stan). Više naseobinskih kružnih struktura koje se nastavljaju jedna iza druge smjera zapad-istok pokazalo je sopotsko naselje Malat u Mirkovcima. Postojanje horizontalnih naselja oko tela nije novost, samo je u posljednjih tridesetak godina njihov broj porastao zbog provođenja zaštitnih arheoloških istraživanja, iako o tim naseljima još uvijek imamo manje podataka u odnosu na impresivne telove.

[118] KIENLIN 2020: 4.
[119] KIENLIN 2015: 13. Slična situacija je u Mađarskoj.
[120] NAUMOV 2020a; 2020b.

Mikanovci. Tells were focal points on river banks and in wetland areas, since they were visible from a distance, dominating the landscape, in particular those that reached impressive heights (Sopot, Damića Gradina, Orolik, Privlaka, Slakovci, Retkovci, Komletinci), and were part of a complex system of settlements around them. The oldest Sopot settlements are single-layered and with large surface areas, such as Zablaće. It was only in the Late Neolithic that tells began to emerge, because it took several hundreds of years to accumulate a layer of construction waste and land, when settlements began to grow in height. The first peoples who decided to "build" such impressive "hills" that rose above the surrounding areas (with typical horizontal single-layered settlements) obviously wanted to dominate the landscape.[118] There were only some horizontal settlements that had a section growing into a multi-layered closed tell. For now, it is not possible to conclude with certainty whether the open lowland settlements preceded the tells, or whether they were formed around tells due to an increase in population.[119] The formation of tells in the northern Balkans and the Carpathian Basin followed in the regional Late Neolithic, but not as part of the initial process of neolithization, but as part of the settlement of already socially and economically developed communities.[120] At some sites along the elevations, the magnetometer showed flat settlements surrounded by a moat (Otok – Gradina); the same was visible also in aerial photographs (Ivankovo – Križin Stan, Stari Mikanovci – Čanića Stan). Several circular settlement structures that continue one behind the other in a west-east direction are evident at the Sopot settlement of Malat in Mirkovci. Horizontal settlements distributed around tells are not a new discovery, but over the past three decades the number of such settlements uncovered has increased due to the practice of conducting archaeological rescue excavations, although we still have less data about these settlements than about the impressive tells.

[118] KIENLIN 2020: 4.
[119] KIENLIN 2015: 13. A similar situation exists in Hungary.
[120] NAUMOV 2020a; 2020b.

Iako postoji veliki broj sopotskih naselja, teško je utvrditi gustoću naselja u različitim vremenskim razdobljima/stupnjevima. Očito je u ranim fazama riječ o otvorenim ravničarskim naseljima da bi se tijekom klasičnih faza počela graditi utvrđena višeslojna naselja, ovisno o tome koliko je vremena neki lokalitet bio okupiran, odnosno koliko se dugo živjelo u nekom naselju. Novi obrasci naseljavanja, drukčije gospodarske aktivnosti i priljev novog stanovništva tijekom srednjeg bakrenog doba ukinuli su život na telovima. Na Sopotu, kao i na drugim istraživanim lokalitetima, nisu vidljivi tragovi nasilne okupacije, invazije ili razaranja.[121]

Na osnovi 14C datuma sopotskih lokaliteta vinkovačkog kraja trajanje sopotske kulture možemo datirati u razdoblje od 5300./5200. do 4200./4000. kal. g. pr. Kr., tijekom srednjeg, kasnog neolitika i ranog eneolitika.[122] Osim serije od 22 konvencionalna datuma dobivena iz drvenog ugljena 90-ih godina 20. stoljeća i početkom 21. stoljeća, postoji i 25 AMS datuma dobivenih iz životinjskih kostiju ili ljudskih kostiju ili zuba. Za Sopot postoji 17 konvencionalnih datuma i 16 AMS datuma, odnosno ukupno 33 datuma. Za Otok postoje tri, a za Privlaku dva konvencionalna datuma. Zablaće je datirano sa šest AMS datuma, te još dvama datumima s pozicije Vinkovačko Novo Selo (Hladnjača). Nuštar/Zverinjak je datiran dvama AMS datumima, a Vinkovci/Jošine (Obilaznica) jednim AMS datumom.[123]

Većina (30-ak) prije spomenutih arheoloških lokaliteta/naselja je registrirana, pogotovo utvrđeni višeslojni lokaliteti koji su korišteni i u mlađim razdobljima. Manji broj ravnih sopotskih sela koja se nalaze u sklopu oranica je zaštićen, samo ako su na njima provedena ar-

Although there were many Sopot settlements, it is difficult to determine the density of settlements in different time periods / stages. Obviously, in the early phases there were open lowland settlements, while in later phases of settlement history the construction of fortified multi-layered settlements began, depending on the time over which a site had been occupied. With new settlement patterns, different economic activities and the influx of a new population in the Middle Copper Age, life on tells ceased. At Sopot, as well as at other excavated sites, no traces of violent occupation, invasion or destruction are visible.[121]

Based on C_{14} dates for Sopot sites of the Vinkovci region, the duration of the Sopot culture can be dated to the period between 5300/5200 and 4200/4000 cal BC (the Middle/Late Neolithic, Early Aeneolithic).[122] In addition to a series of 22 conventional dates obtained (from charcoal) in the 1990s and at the beginning of the 21st century, there are also 25 AMS dates derived from animal or human bones and teeth. For Sopot, there are 17 conventional dates and 16 AMS dates: a total of 33. There are three conventional dates for Otok and two for Privlaka. Zablaće was dated based on six AMS dates, and two more dates from the Vinkovačko Novo Selo (Hladnjača) site. Nuštar/Zverinjak was dated on the basis of two AMS dates, and Vinkovci/Jošine (Obilaznica – the bypass road) on one AMS date.[123]

Most (about 30) of the above-mentioned archaeological sites/settlements have been registered, especially the fortified multi-layered sites that were used in the latter historical periods. A small number of flat Sopot villages located on ploughland have been protected only after archaeological excavations, trial trenching or geophysical screening were conducted at the sites. The biggest problem with all the above-men-

121 KRZNARIĆ ŠKRIVANKO 2012: 48; 2015: 377, 381.

122 Prva mjerenja radiokarbonskih datuma za sopotsku kulturu napravljena su tijekom 90-ih godina 20. st. na Institutu R. Bošković u Zagrebu, zatim u Beta Analytic Inc. Miami, u Oxfordu i zadnjih godina u Isotoptech Zrt. u Debrecenu.

123 OBELIĆ et al: 2004; KOPRIVNJAK 2011: 79–82; KRZNARIĆ ŠKRIVANKO 2011a: 211–212; 2012a: 47–49; 2021: 135-136; 2023: 206–207; 2024: 151–153.

121 KRZNARIĆ ŠKRIVANKO 2012: 48; 2015: 377, 381.

122 The first Sopot-culture radiocarbon dates were obtained in 1990s at the R. Bošković Institute in Zagreb; subsequent dating was performed at Beta Analytic Inc. Miami, in Oxford, and in recent years at Isotoptech Zrt. in Debrecen.

123 OBELIĆ et al: 2004; KOPRIVNJAK 2011: 79-82; KRZNARIĆ ŠKRIVANKO 2011a: 211-212; 2012a: 47-49; 2021: 135-136; 2023: 206-207; 2024: 151-153.

Slika 37. *Tablica 14C datuma sa sopotskih lokaliteta na vinkovačkom području* (izradila: M. Krznarić Škrivanko)
Figure 37 *C14 dates from Sopot sites in the Vinkovci area* (made by M. Krznarić Škrivanko)

Broj / Number	Sloj / Layer	Vrsta objekta / Type of object	Lokalitet / Site	Kalibrirani datum / Calibrated date	Konvencionalni (BP) / Conventional (BP)	Lab. i šifra / Lab. and code
1.		kuća	Sopot I/96	4680.-4630. BC	5675.+/-120 BP	I.R.B.Z., Z-2752
2.		kuća	Sopot I/96	4780.-4490.	BC 5790.+/-125 BP	I.R.B.Z., Z-2753
3.	11	kuća	Sopot III/98	4320.-4270. BC	5360.+/-130 BP	I.R.B.Z., Z-2754
4.	11	kuća	Sopot III/98	5430.-5210. BC	6339.+/-99 BP	I.R.B.Z., Z-2826
5.	11	kuća	Sopot III/98	4340.-4210. BC	5380. +/-100 BP	I.R.B.Z., Z-2827
6.	20	kuća	Sopot III/99	4170.-3950. BC	5230. +/-100 BP	I.R.B.Z., Z-2909
7.	20	kuća	Sopot III/99	4250.-4040. BC	5330.+/-90 BP	I.R.B.Z., Z-2911
8.	6	ruš. kuće	Sopot III/00	4960.-4710. BC	5960.+/-100 BP	I.R.B.Z., Z-3141
9.	23	kuća	Sopot III/00	5050.-4780. BC	6020.+/-100 BP	I.R.B.Z., Z-3139
10.	23	kuća	Sopot III/00	5040.-4770. BC	6010.+/-100 BP	I.R.B.Z., Z-3140
11.	24	sloj	Sopot III/01	4550.-4240. BC	5550. +/-130 BP	I.R.B.Z., Z-3142
12.	53	kuća	Sopot III/01	4730.-4360. BC	5715.+/-155 BP	I.R.B.Z., Z-3867
13.	53	kuća	Sopot III/01	4800.-4580. BC	5840.+/-100 BP	I.R.B.Z., Z-3143
14.	138a	kuća	Sopot III/04	5380.-5200. BC	6295. +/-135 BP	I.R.B.Z., Z-3868
15.	207	kuća	Sopot III/04	4850.-4680. BC	5900. +/-75 BP	I.R.B.Z., Z-3869
16.	207	kuća	Sopot III/04	4850.-4680. BC	5900. +/-75 BP	I.R.B.Z., Z-3869
17.	332	kuća	Sopot III/06	4450.-4030. BC	5415.+/-195 BP	I.R.B.Z., Z-3866
18.	238	zap. kanala	Sopot III/05	4800.-4590. BC	5840. +/-80 BP	I.R.B.Z., Z-3870
19.	11	kuća	Sopot III/96	4690.-4460. BC	5720.+/-40 BP	Beta-290811
20.	21	kuća	Sopot III/99	4930.-4720. BC	5940. +/-40 BP	Beta-251907
21.	23	kuća	Sopot III/00	4840.-4690. BC	5880.+/-40 BP	Beta-230029
22.	24	sloj	Sopot III/01	4550.-4440. BC i 4435.-5403.7506 BC	5650.+/-40 BP	Beta-290806
23.	30	sloj	Sopot III/00	4690.-4470. BC	5739. +/-40 BP	Beta-290804
24.	35	sloj	Sopot III/01	4730.-4540. BC	5800. +/-40 BP	Beta-290905
25.	183	kuća	Sopot III/04	4790.-4540. BC	5820.+/-50 BP	Beta-290808
26.	183a	kuća	Sopot III/04	4710.-4500. BC	5760. +/-40 BP	Beta-230033
27.	186	zap. kanala	Sopot III/04	4730.-4540. BC	5800.+/-40 BP	Beta-290809
28.	218	kuća	Sopot III/04	4600.-4450. BC	5680.+/-40 BP	Beta-230032
29.	222	kanal	Sopot III/04	4250.-4030. BC	5280.+/-40 BP	Beta-230030
30.	235	ruš. kuće	Sopot III/05	4941.-4730. BC	5962. BP	OxA-23595
31.	301	kuća	Sopot III/05	4720.-4530. BC	5780.+/-40 BP	Beta-230031
32.	4	sloj	Sopot III/07	4981.-4790. BC	5988. BP	OxA-23594
33.	403	podnica	Sopot III/07	4800.-4560. BC	5840. +/-50 BP	Beta-251908
34.	433	zap. kanala	Sopot III/07	4827.-4618. BC	5861. BP	OxA-23596
35.	14	zap. kanala	Nuštar-Zverinjak	4820.-4690. BC	5880. +/-30 BP	Beta-340289
36.	14	zap kanala	Nuštar-Zverinjak	4820.-4690. BC	5880. +/- 30 BP	Beta-340290
37.	Grob 1		Vinkovci-Zablaće	5351-5214. BC	6299.+/-36 BP	DeA-11612
38.	Grob 2		Vinkovci-Zablaće	5358.-5218. BC	6310.+/-36 BP	DeA-11613
39.	Grob 3		Vinkovci-Zablaće	5300.-5064. BC	6223. +7-33 BP	DeA-11614
40.	SJ 49	kanal	Vinkovci-Zablaće	5480.-4930. BC	6249.+/-116 BP	DeA-23704
41.	SJ 69	zemunica	Vinkovci-Zablaće	5370.-5080. BC	6288.+/-42 BP	DeA-23705
42.	Grob 1		Vinkovci-VNS/AS	5220.-5030. BC	6170.+/-29 BP	DeA-45938
43.	SJ 705	zemunica	Vinkovci-VNS/AS	5370.-5200. BC	6297.+/-38 BP	DeA-47216

Broj / Number	Sloj / Layer	Vrsta objekta / Type of object	Lokalitet / Site	Kalibrirani datum / Calibrated date	Konvencionalni (BP) / Conventional (BP)	Lab. i šifra / Lab. and code
44.			Otok/Gradina	4620.-4350.	BC	5650.+/-120 BP
45.			Otok/Gradina	4330.-4290. BC	5330.+/-120 BP	I.R.B.Z., Z-2762
46.			Otok/Gradina	4540.-4310. BC	5555.+/-120 BP	I.R.B.Z., Z-2913
47.		kuća	Privlaka/Gradina	5000.-4800. BC	6030.+/-100 BP	I.R.B.Z., Z-727
48.		kuća	Privlaka/Gradina	4600.-4450. BC	5700. +/-80 BP	I.R.B.Z., Z-728
49.			Vinkovci/Jošine	4790.- 4620. BC		

heološka iskopavanja, sondiranja ili geofizička snimanja. Najveći problem svih spomenutih lokaliteta, osim Sopota gdje je zabranjena obrada, jest što se bez obzira na registraciju i zaštitu, lokaliteti duboko izoravaju te su 100 % ugroženi s obzirom na dubinu oranja od 0,30 do 0,80 m. Nažalost, ubrzo će mnogi od ovih lokaliteta biti uništeni za buduće istraživače.

POPIS NALAZIŠTA SOPOTSKE KULTURE NA VINKOVAČKOM PODRUČJU
Višeslojna, utvrđena naselja ili telovi:

1. SOPOT
2. ANDRIJAŠEVCI – GORIČICE (ULICA V. NAZORA)
3. ANTIN – BAĆINO (ĆILIJE)
4. IVANKOVO – DREN
5. IVANKOVO – KRIŽIN STAN
6. KOMLETINCI – GRADINA (RKT. GROBLJE)
7. NUŠTAR – ZVERINJAK
8. OROLIK – GRADINA
9. OTOK – GRADINA (MANDEKOV VINOGRAD)
10. PODGRAĐE – GRAC (u šumi Jasenje ili Jasinje)
11. PRIVLAKA – GRADINA
12. RETKOVCI – GRADINA (RKT. GROBLJE)
13. ROKOVCI – GRADINA (JEMRIĆA STAN)
14. SLAKOVCI – GRADINA (U ATARU TOPOLOVAC)
15. STARI MIKANOVCI – DAMIĆA GRADINA

tioned locations (with the exception of Sopot, where any agricultural cultivation is prohibited) is that regardless of being listed and protected archaeological sites, they are being deeply ploughed and are 100% endangered due to the depth of ploughing (from 0.30 to 0.80 metres). Unfortunately, soon many of these sites will be destroyed for any future scientific research.

LIST OF SOPOT CULTURE SITES IN THE VINKOVCI AREA
Multi-layered fortified settlements or tells:

1. SOPOT
2. ANDRIJAŠEVCI – GORIČICE (ULICA V. NAZORA)
3. ANTIN – BAĆINO (ĆILIJE)
4. IVANKOVO – DREN
5. IVANKOVO – KRIŽIN STAN
6. KOMLETINCI – GRADINA (ROMAN-CATHOLIC CEMETERY)
7. NUŠTAR – ZVERINJAK
8. OROLIK – GRADINA
9. OTOK – GRADINA (MANDEKOV VINOGRAD)
10. PODGRAĐE – GRAC (in Jasenje or Jasinje Forest)
11. PRIVLAKA – GRADINA
12. RETKOVCI – GRADINA (ROMAN-CATHOLIC CEMETERY)
13. ROKOVCI – GRADINA (JEMRIĆA STAN)
14. SLAKOVCI – GRADINA (IN THE TOPOLOVAC HATÁR)
15. STARI MIKANOVCI – DAMIĆA GRADINA

16. STARI MIKANOVCI – ULJANSKO (ČANIĆA STAN)
17. TORDINCI – VINOGRADSKA/ PETROVAČKA MLAKA
18. VINKOVCI – MARICA
19. VOĐINCI – NADIŠEVCI

Jednoslojna naselja (otvorena ravna naselja):

20. GABOŠ – MIŠLJENOVCI
21. IVANKOVO – PALANKA
22. KARADŽIĆEVO – BANOVCI (šuma DURGUTOVICA)
23. MARKUŠICA – BROŠOV SALAŠ, NOVOŠEVCI I ČERETINCI GORNJI
24. NUŠTAR – ŽEŽNICA
25. MARINCI – SEGETAC
26. OTOK – STARA SKELA / PENAVE (rekognoscirano)
27. VINKOVCI – BORINCI – BLATO
28. VINKOVCI – ERVENICA
29. VINKOVCI – JOŠINE
30. VINKOVCI – TRBUŠANCI
31. VINKOVCI – KRNJAŠ
32. VINKOVCI – PJESKANA
33. VINKOVCI – VINKOVAČKO NOVO SELO – ZABLAĆE (BLATO – VINKA)
34. VINKOVAČKO NOVO SELO / A. STEPINCA BB (LDC-HLADNJAČA)
35. MIRKOVCI – MALAT
36. VINKOVAČKI BANOVCI – ŠUMA i RENOVAC

Ograđeni prostori (pretpostavljeni sopotski lokaliteti):

37. ANDRIJAŠEVCI – GORNJE NJIVE (na desnoj obali Bosuta)
38. IVANKOVO – MATAKOVICA
39. IVANKOVO – SLATINA (na lijevoj obali Bosuta)
40. NUŠTAR – ZVERINJAK (ISTOČNA STRANA)

Pretpostavljeni ili uništeni lokaliteti ubicirani na osnovi slučajnih nalaza:

41. GABOŠ – „GRADINA“
42. IVANKOVO – Tabla 46 (slučajni nalaz –

16. STARI MIKANOVCI – ULJANSKO (ČANIĆA STAN)
17. TORDINCI – VINOGRADSKA/ PETROVAČKA MLAKA
18. VINKOVCI – MARICA
19. VOĐINCI – NADIŠEVCI

One-layered settlements (open flat settlements):

20. GABOŠ – MIŠLJENOVCI
21. IVANKOVO – PALANKA
22. KARADŽIĆEVO – BANOVCI (DURGUTOVICA Forest)
23. MARKUŠICA – BROŠOV SALAŠ, NOVOŠEVCI AND ČERETINCI GORNJI
24. NUŠTAR – ŽEŽNICA
25. MARINCI – SEGETAC
26. OTOK – STARA SKELA / PENAVE (prospected)
27. VINKOVCI – BORINCI – BLATO
28. VINKOVCI – ERVENICA
29. VINKOVCI – JOŠINE
30. VINKOVCI – TRBUŠANCI
31. VINKOVCI – KRNJAŠ
32. VINKOVCI – PJESKANA
33. VINKOVCI – VINKOVAČKO NOVO SELO – ZABLAĆE (BLATO – VINKA)
34. VINKOVAČKO NOVO SELO / A. STEPINCA BB (LDC-HLADNJAČA)
35. MIRKOVCI – MALAT
36. VINKOVAČKI BANOVCI – ŠUMA and RENOVAC

Enclosed spaces (presumed Sopot sites):

37. ANDRIJAŠEVCI – GORNJE NJIVE (right bank of the Bosut)
38. IVANKOVO – MATAKOVICA
39. IVANKOVO – SLATINA (left bank of the Bosut)
40. NUŠTAR – ZVERINJAK (EAST SIDE)

Presumed or destroyed sites, identified on the basis of chance finds:

41. GABOŠ – “GRADINA”
42. IVANKOVO – Plate 46 (chance find –

kamena sjekira)
43. IVANKOVO – SLATINA (Rudina Ravna greda – slučajni nalaz)
44. MARKUŠICA – KRČENIK (slučajni nalaz – kamena sjekira)
45. NIJEMCI – „GRADINA“ [124](danas se ne zna točna pozicija)
46. NOVI JANKOVCI – JOŠINA (slučajni nalaz – kamena sjekira)
47. OROLIK – VINOGRADI
48. OTOK – RUDINA BRANJEVINA (južno 800 m od otočke Gradine, slučajni nalaz)
49. PRKOVCI – MIJINO BRDO (slučajni nalaz – kamena sjekira)
50. ROKOVCI – PRODANOVCI (slučajni nalaz – kamena sjekira)
51. SLAKOVCI – PETROVAČICA (istočno od slakovačke Gradine, slučajni nalaz)
52. SRIJEMSKE LAZE – Oborci blizu Bosuta (slučajni nalaz – kamena sjekira)
53. VINKOVCI – BARICA I (V. Vlahovića bb, danas Ulica kneza Zdeslava)[125]
54. VINKOVCI – LISIČAK (rekognosciran)

stone axe)
43. IVANKOVO – SLATINA (Rudina Ravna Greda – chance find)
44. MARKUŠICA – KRČENIK (chance find – stone axe)
45. NIJEMCI – “GRADINA“ [124](exact position is not currently known)
46. NOVI JANKOVCI – JOŠINA (chance find – stone axe)
47. OROLIK – VINOGRADI
48. OTOK – RUDINA BRANJEVINA (800 m south of Otok Gradina, chance find)
49. PRKOVCI – MIJINO BRDO (chance find – stone axe)
50. ROKOVCI – PRODANOVCI (chance find – stone axe)
51. SLAKOVCI – PETROVAČICA (east of Slakovci Gradina, chance find)
52. SRIJEMSKE LAZE – Oborci near the Bosut (chance find – stone axe)
53. VINKOVCI – BARICA I (V. Vlahovića bb, today Ulica kneza Zdeslava)[125]
54. VINKOVCI – LISIČAK (prospected)

Translation and proof-reading: ETNOtrend d.o.o.

[124] J. Korda prvi spominje prapovijesno naselje na desnoj obali Bosuta u Nijemcima (KORDA 1954: 89). Pri „gradnji“ nogometnog igrališta 1961. na desnoj obali Bosuta, sjeverno od crkve sv. Katarine uništen je bagerom, prema pisanju M. Klajna, prapovijesni tel visine 1,5 m. U ostatcima zemunica i ognjišta našao je između ostalog glinene kugle, litičke alatke i keramiku (KRZNARIĆ ŠKRIVANKO 2006a: 51; 2012b: 36). Probni arheološki iskop na 50 m^2 u tri istražne sonde proveden 2018. za izgradnju novog vatrogasnog doma pokazao je zanimljivu stratigrafiju. Ispod sloja recentnog šuta i zemlje pojavljuje se smeđe-sivi masni sloj bez nalaza, a tek na dubini od oko 2 m pojavljuje se predzdravični kulturni sloj s kućnim lijepom i sporadičnim ulomcima keramike. Na kraju iskopa na dubini od 3 m u zdravici se ocrtavaju jamski objekti (KRATOFIL 2018: 73–74).

[125] DIMITRIJEVIĆ 1979a: 135, K-II-5. Dimitrijević piše da je naselje na „Barici I“ bilo skromnijeg opsega i kratkog trajanja. Nažalost, o ovom lokalitetu znamo samo iz literature. Iako je ovo područje u arheološkoj zoni, novija istraživanja još nisu ubicirala točnu poziciju sopotskog naselja na lijevoj obali potoka Ervenice/Barice.

[124] J. Korda was the first to mention a prehistoric settlement on the right bank of the Bosut in Nijemci (KORDA 1954: 89). During the construction of a football field in 1961 on the right bank of the Bosut, north of St. Catherine's Church, a 1.5-metre-high prehistoric tell was destroyed by a digger, according to M. Klajn. In the remains of pit dwellings and hearths, among other artefacts, he found clay balls, lithic implements and pottery (KRZNARIĆ ŠKRIVANKO 2006a: 51; 2012b: 36). Archaeological trial excavations over a 50-m^2 area in three trial trenches, conducted in 2018 prior to the construction of a new fire station, revealed an interesting stratigraphy. Below the recent rubble and earth layer appeared a brown-grey fatty layer without any finds, and only at a depth of c. two metres appeared the pre-sterile cultural layer with house daub and sporadic fragments of ceramics. At the end of the dig, at a depth of three metres, contours of pit structures became visible in sterile soil (KRATOFIL 2018: 73-74).

[125] DIMITRIJEVIĆ 1979a: 135, K-II-5. Dimitrijević wrote that the settlement at “Barica I” was rather small and of short duration. Unfortunately, the site is only known from literature. Although the area is in an archaeological zone, in recent excavations the exact position of the Sopot settlement on the left bank of the Ervenica/Barica brook could not be determined.

Literatura / References

BAKRAČ, K., MIKO S., ILIJANIĆ, N., HASAN, O., KRZNARIĆ ŠKRIVANKO, M. 2015, Preliminary palynological results from the archaeological site Sopot, Croatia, *Geologia Croatica*, 68/3, 303–311.

BALEN, J. 2004, Sopot, *Hrvatski arheološki godišnjak*, 1, 26–28.

BALEN, J., KRZNARIĆ ŠKRIVANKO, M. 2006, Osma, deveta i deseta sezona sustavnog istraživanja gradine Sopot (godina 2003., 2004., 2005.), *Obavijesti Hrvatskog arheološkog društva*, XXXVIII(1), 51–60.

BALEN, J., ČATAJ, L. 2014, *Sopotska kultura*, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 59–74.

BORIĆ, D. 2014, *Pokapanje i antropološki podaci*, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 208–220.

BORIĆ, D., HANKS, B., ŠLJIVAR, D., KOČIĆ, M., BULATOVIĆ, J., GRIFFITHS, S., DOONAN, R., JACANOVIĆ, D. 2018, Enclosing the Neolithic World: A Vinča Culture Enclosed and Fortified Settlement in the Balkans, *Current Anthropology*, 59, 336–346.

BOTIĆ, K. 2012, Dječje igračke i minijaturne posude Sopotske kulture s lokaliteta Krčavina – Novi Perkovci / Children's Toys and Miniature Vessels of the Sopot Culture from the Krčavina – Novi Perkovci Site, *Histria Antiqua,* 21, 281–293.

BOTIĆ, K. 2016, Vinkovačko područje (Vinkovci – Blato, Vinkovci – Sopot, Marinci – Segetac, Bršadin – Pašnjak pod selom), *Hrvatski arheološki godišnjak*, 13, 88–90.

BOTIĆ, K. 2016a, Neolitizacija savsko-dravsko-dunavske interfluge na kraju razdoblja brzog klimatskog Changa od 6600. do 6000. godine prije Krista: novo rješenje starog problema, *Documenta Praehistorica*, 43, 183–208. https://doi.org/10.4312/dp.43.9

BOTIĆ, K. 2017, *Neolitička naselja na prostoru sjeverne Hrvatske*, neobjavljena disertacija / Unpublished PhD Thesis, Zagreb: Sveučilište u Zagrebu.

BOTIĆ, K. 2017a, Preliminarni rezultati geofizičkih istraživanja i geoloških uzorkovanja na lokalitetima istočne Slavonije 2016. godine, *Annales Instituti Archaeologici*, XIII, 141–151.

BRUNŠMID, J. 1888, Tragovi prethistorijskih naseobina u Srijemu, *Vjesnik Hrvatskog arheološkog društva*, n.s., X, 5–71.

BRUNŠMID, J. 1899-1900, Gradine na Vuki između Nuštra i Gaboša, *Vjesnik Hrvatskog arheološkog društva*, n.s., IV.

BRUNŠMID, J. 1899-1900a, Prethistorijski predmeti željeznoga doba iz Šarengrada u Srijemskoj županiji, *Vjesnik hrvatskog arheološkog društva*, n.s., IV, 59–70.

BRUNŠMID, J. 1902, Colonia Aurelia Cibalae – Vinkovci u staro doba, *Vjesnik Hrvatskog arheološkog društva*, n.s. VI, 117–166.

BUNČIĆ, M. 2005, *Keramički predmeti s nalazišta Sopot (sezone 1996.-2004. g.)*, diplomski rad (nepubliciran), Zagreb: Filozofski fakultet.

BURIĆ, M. 2011, *Gradac u Bapskoj – slika života istočne Hrvatske prije 7000 godina*, Zagreb: Sveučilište u Zagrebu.

BURIĆ, M. 2014, *Vinčanska kultura*, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheo-

loški muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 40–59.
DIMITRIJEVIĆ, S. 1961, Problem neolita i eneolita u sjeverozapadnoj Jugoslaviji, *Opvscvla archaeologica*, V, 7–78.
DIMITRIJEVIĆ, S. 1966, *Rezultati arheoloških iskopavanja na području vinkovačkog muzeja od 1957. do 1965*., Acta musei Cibalensis, 1, Vinkovci: Gradski muzej Vinkovci.
DIMITRIJEVIĆ, S. 1968, *Sopotsko-lenđelska kultura*, Monographiae Archaeologicae I, Zagreb: Arheološki institut, Filozofski fakultet, Sveučilište u Zagrebu.
DIMITRIJEVIĆ, S. 1970, Neolit u Slavoniji i Srijemu, u/in: *Zbornik radova I. znanstvenog sabora Slavonije i Baranje*, Radauš, V. (ur./ed.), Osijek: Jugoslavenska akademija znanosti i umjetnosti, 23–61.
DIMITRIJEVIĆ, S. 1972, Das Neolithikum in Syrmien, Slawonien und Nordwestkroatien – Einführung in den Stand der Forschung, *Archaeologica Iugoslavica*, X, 39–77.
DIMITRIJEVIĆ, S. 1979a, Arheološka topografija i izbor arheoloških nalaza s vinkovačkog tla, u/in: *Corolla memoriae Iosepho Brunšmid dicata*, Izdanja Hrvatskog arheološkog društva 4, Vinkovci: Hrvatsko arheološko društvo, 133–282.
DIMITRIJEVIĆ, S. 1979b, Sjeverna zona – Sopotska kultura. u/in: *Praistorija jugoslavenskih zemalja II (Neolitsko doba)*, Benac, A (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, 263–303.
DIZDAR, M. 1998, Nekropola keltsko-latenske kulture u Vinkovcima, *Obavijesti Hrvatskog arheološkog društva*, XXX (1), 38–43.
DIZDAR, M. 2001, *Latenska naselja na vinkovačkom području*, Dissertationes et Monographie 3, Zagreb: Arheološki zavod Odsjeka za arheologiju Filozofskog fakulteta Sveučilišta u Zagrebu.
DIZDAR LOŽNJAK, D., DIZDAR, M. 2016, Vinkovački Banovci, *Hrvatski arheološki godišnjak*, 13, 84–86.
DURMAN, A. 1995, Psihologija naseljavanja telova, *Histria Antiqua*, 1, 153–158.
FORMULAR ARHEOLOŠKI LOKALITETI NA PODRUČJU ISTOČNE HRVATSKE 1999-2010., *Topografija nalaza i nalazišta bivše Općine Vinkovci*, (interna dokumentacija), Gradski muzej Vinkovci.
FRKOVIĆ, F. 1989, *Feud Hravati i druge crtice za povijest Mikanovaca*, Vinkovci: Izdanja Privlačice.
GALE, I. 2003, Rezultati sustavnih i zaštitnih arheoloških istraživanja Arheološkog Odjela Gradskog muzeja Vinkovci u 2002., *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja)*, 20, 329–347.
GRGURIĆ, M. 2012, Prvi rezultati analiza koštanih alatki s lokaliteta Sopot, *Acta Musei Cibalensis*, *5*, 47–63.
GYUCHA, A., PARKINSON, W. A., YERKES R. W. 2019, The Evolution of a Neolithic Tell on the Great Hungarian Plain: Site Formation and Use at Szeghalom-Kovácshalom, *Journal of Field Archaeology* 44(77), 458–479.
GYUCHA, A., PARKINSON, W. A., FÜZESI, A., RACZKY, P. 2022, Communities and Monuments in the Making: Neolithic Tells on the Great Hungarian Plain, u/in: *First Kings of Europe: From Farmers to Rulers in Prehistoric Southeastern Europe*, Gyucha, A., Parkinson, W. A. (ur./eds.), Los Angeles: UCLA Cotsen Institute of Archaeology.
ISKRA-JANOŠIĆ, I. 1984, Arheološka istraživanja na području općine Vinkovci, u/in: *Arheološka istraživanja u istočnoj Slavoniji i Baranji*, Majnarić Pandžić, N. (ur./ed.), Izdanja Hrvatskog arheološkog društva 9, Zagreb: Hrvatsko arheološko društvo, 143–151.
ISKRA-JANOŠIĆ, I. 1985, Naftovod Ilača-Vinkovci, *Glasnik slavonskih muzeja*, 50/51, 40–41.

ISKRA-JANOŠIĆ, I. 1994, Zaštitna arheološka iskopavanja u 1994., *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 12, 59–64.

ISKRA-JANOŠIĆ, I. 1995, Rezultati arheoloških istraživanja u Vinkovcima 1995. godine, *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 13, 125–131.

ISKRA-JANOŠIĆ, I. 1996, Zaštitna arheološka iskopavanja u Vinkovcima tijekom 1996., *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 14, 163–167.

ISKRA-JANOŠIĆ, I., KRZNARIĆ ŠKRIVANKO, M. 1997, Sustavno istraživanje neolitičkog naselja Sopot pokraj Vinkovaca, *Obavijesti Hrvatskog arheološkog društva*, XXIX(1), 20–24.

KALAFATIĆ, H., ŠILJEG, B. 2018, Krugovi parnjaci: Novi uvidi u neolitičke obrasce naseljavanja, *Prilozi Instituta za arheologiju*, 35, 71–111.

KALAFATIĆ, H., ŠOŠIĆ KLINDŽIĆ, R., ŠILJEG, B. 2020, Being Enclosed as a Lifestyle: Complex Neolithic Settlements of Eastern Croatia Re-Evaluated through Aerial and Magnetic Survey, *Geosciences*, 10(10), 384.

KIENLIN, T. L. 2015, *Bronze Age Tell Communities in Context. An Exploration into Culture, Society, and the Study of European Prehistory – Part 1*, Archaeopress Archaeology, Oxford: Archaeopress.

KIENLIN, T. L. 2020, *Bronze Age Tell Communities in Context. An Exploration into Culture, Society, and the Study of European Prehistory – Part 2*, Archaeopress archaeology, Oxford: Archaeopress.

KLAJN, M. 1950-1966, *Terenski dnevnik*, Interna dokumentacija Gradskog muzeja Vinkovci.

KLAJN, M. 1961, *Moj amatersko-muzejski rad*, Vinkovci: Gradski muzej Vinkovci.

KOPRIVNJAK, V. 2011, Vinkovci – Jošine, *Hrvatski arheološki godišnjak*, 8, 79–82.

KOPRIVNJAK, V. 2014, Vinkovci – Jošine, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 106–107.

KORDA, J. 1954, *Vinkovci i okolica*, Vinkovci: Vinkovačke novosti.

KORDA, J. 1960, *Tragom prošlosti Vinkovaca* (Kroz zbirke gradskog muzeja), Vinkovci: Gradski muzej Vinkovci.

KRATOFIL, B. 2016, Rezultati zaštitnih arheoloških istraživanja i drugih aktivnosti Arheološkog odjela Gradskog muzeja Vinkovci za 2014. i 2015. godinu, *Godišnjak Ogranka Matice hrvatske u Vinkovcima*, 33, 145–169.

KRATOFIL, B. 2018, Izvještaj s probnog arheološkog istraživanja u Nijemcima, na lokalitetu gradina (k. č. br. 210, k. o. Nijemci), *Hrvatski arheološki godišnjak*, 15, 73–74.

KRATOFIL, B., KRZNARIĆ ŠKRIVANKO, M., RAPAN PAPEŠA, A., VULIĆ, H. 2023, Arheološka topografija Općine Rokovci-Andrijaševci, *Monografija Općine Andrijaševci*, Rokovci: Općina Andrijaševci, 11–18.

KRZNARIĆ-ŠKRIVANKO, M. 1997., Prapovijesno naselje na Ervenici u Vinkovcima., *Opvscvla archaeologica*, 21, 205–215.

KRZNARIĆ ŠKRIVANKO, M. 1998a, Druga etapa sustavnog istraživanja gradine Sopot, *Obavijesti Hrvatskog arheološkog društva*, XXX(1), 30–34.

KRZNARIĆ ŠKRIVANKO, M. 1998b, Treća sezona iskopavanja na gradini Sopot, *Obavijesti Hrvatskog arheološkog društva*, XXX(3), 71–74.

KRZNARIĆ ŠKRIVANKO, M. 1998c, Rezultati sustavnih i zaštitnih arheoloških iskopavanja

Arheološkog odjela Gradskog muzeja Vinkovci za 1997. i 1998. godinu, *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 6, 319–337.
KRZNARIĆ ŠKRIVANKO, M. 2000, Četvrta sezona sustavnog istraživanja gradine Sopot, *Obavijesti Hrvatskog arheološkog društva*, XXXII(2), 49–53.
KRZNARIĆ ŠKRIVANKO, M. 2001, Rezultati sustavnih i zaštitnih arheoloških iskopavanja Arheološkog odjela Gradskog muzeja Vinkovci za 1999., 2000. i 2001. godinu, *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 19, 201–220.
KRZNARIĆ ŠKRIVANKO, M. 2002a, Peta i šesta sezona sustavnog istraživanja gradine Sopot (godina 2000. i 2001.), *Obavijesti Hrvatskog arheološkog društva*, XXXIV(1), 36–45.
KRZNARIĆ ŠKRIVANKO, M. 2002b, Rezultati sustavnih i zaštitnih arheoloških iskopavanja Arheološkog odjela Gradskog muzeja Vinkovci za 1999., 2000. i 2001. godinu, *Godišnjak ogranka Matice hrvatske Vinkovci* (*Godišnjak za kulturu, umjetnost i društvena pitanja*), 19, 201–220.
KRZNARIĆ ŠKRIVANKO, M. 2003a, Sedma sezona sustavnog iskopavanja gradine Sopot (godina 2002.), *Obavijesti Hrvatskog arheološkog društva*, XXXV(1), 37–46.
KRZNARIĆ ŠKRIVANKO, M., 2003b, Arheološka topografija nalaza i nalazišta na području Ivankova, u/in: *Monografija Ivankovo*, Landeka, M. (ur./ed.), Ivankovo: Općina Ivankovo, 15–28.
KRZNARIĆ ŠKRIVANKO, M., 2003c, Neki naseobinski pokazatelji na eponimnom lokalitetu sopotske kulture, *Opvscvla archaeologica*, 27, 49–63.
KRZNARIĆ ŠKRIVANKO, M. 2005a, Sopot, *Hrvatski arheološki godišnjak*, 2, 30–31.
KRZNARIĆ ŠKRIVANKO, M. 2005b, Rekognosciranje vinkovačkog područja, *Hrvatski arheološki godišnjak*, 2, 40–43.
KRZNARIĆ ŠKRIVANKO, M. 2006a, Rekognosciranje vinkovačkog područja, *Hrvatski arheološki godišnjak*, 3, 48–51.
KRZNARIĆ ŠKRIVANKO, M. 2006b, Sopot, u/in: *Stotinu hrvatskih arheoloških nalazišta*, Durman, A. (ur./ed.), Zagreb: Leksikografski zavod Miroslav Krleža, 246–247.
KRZNARIĆ ŠKRIVANKO, M. 2006c, Istraživanja na Sopotu, u/in: *Od Sopota do Lengyela: prispevki o kamenodobnih in bakrenodobnih kulturah med Savo in Donavo / Between Sopot and Lengyel: contributions to stone age and copper age cultures between the Sava and the Danube*, Tomaž, A. (ur./ed.), Piran: Univerza na Primorskem; Univerzitetna založba Annales; Inštitut za dediščino Sredozemlja, Znanstveno raziskovalno središče Koper, Univerza na Primorskem, 11–19.
KRZNARIĆ ŠKRIVANKO, M. 2006d, Vinkovci – Ružina ulica 37, *Hrvatski arheološki godišnjak*, 3, 52–53.
KRZNARIĆ ŠKRIVANKO, M. 2007a., Sustavno arheološko iskopavanje eponimnog lokaliteta Sopot pokraj Vinkovaca za 2005. i 2006. godinu (deseta i jedanaesta godina istraživanja), *Godišnjak ogranka Matice hrvatske Vinkovci*, 24, 273–284.
KRZNARIĆ ŠKRIVANKO, M. 2007b, Sopot, *Hrvatski arheološki godišnjak*, 3, 45–46.
KRZNARIĆ ŠKRIVANKO, M. 2008a, Kanal Dunav – Sava, *Hrvatski arheološki godišnjak*, 4, 58–60.
KRZNARIĆ ŠKRIVANKO, M., 2008b, Sopot, *Hrvatski arheološki godišnjak*, 4, 60–62.
KRZNARIĆ ŠKRIVANKO, M. 2009a, Sopot, *Hrvatski arheološki godišnjak*, 5, 89–92.
KRZNARIĆ ŠKRIVANKO, M. 2009b, Arheološki park Sopot, u/in: *Arheologija i turizam u Hrvatskoj / Archaeology and tourism in Croatia*, Mihelić, S. (ur./ed.), Zagreb: Arheološki muzej u Zagrebu, 286–295.
KRZNARIĆ ŠKRIVANKO, M. 2009c, Sustavno arheološko iskopavanje eponimnog lokaliteta Sopot pokraj Vinkovaca za 2007. i 2008. godinu (dvanaesta i trinaesta godina istraživanja), *Go-*

dišnjak Matice hrvatske Vinkovci, 26, 201–213.
KRZNARIĆ ŠKRIVANKO, M. 2010a, Arheološki park Sopot, u/in: T*urizam i arheološki parkovi*, Vinkovci: 14. Sajam zdravlja Vinkovci, 278.
KRZNARIĆ ŠKRIVANKO, M. 2010b, Vinkovci u prapovijesti, u/in: *Vinkovci*, Landeka, M., Švagelj, D. (ur./eds.), Vinkovci: Ogranak Matice hrvatske Vinkovci, 10–23.
KRZNARIĆ ŠKRIVANKO, M. 2011a, Radiokarbonski datumi uzoraka sa Sopota, u/in: *Panonski prapovijesni osviti, Zbornik radova posvećen Korneliji Minichreiter uz 65. obljetnicu života*, Dizdar, M. (ur./ed.), Zagreb: Institut za arheologiju u Zagrebu, 209–227.
KRZNARIĆ ŠKRIVANKO, M. 2011b, Nastavak projekta sustavnoga istraživanja eponimnog lokaliteta Sopot (14. godina istraživanja), Rezultati geofizičke prospekcije i geološkoga sondiranja, *Godišnjak Matice hrvatske Ogranak Vinkovci*, 27, 93–106.
KRZNARIĆ ŠKRIVANKO, M. 2012a, Nuštar-Zverinjak, *Hrvatski arheološki godišnjak*, 9, 47–49.
KRZNARIĆ ŠKRIVANKO, M. 2012b, Nalazišta sopotske kulture na Vinkovačkom području, u/in: *Acta Musei Cibalensis 5, n.s. 3*, *Zbornik: Arheološki i povijesno-topografski radovi*, Petković, D. (ur./ed.), Vinkovci: Gradski muzej Vinkovci, 11–46.
KRZNARIĆ ŠKRIVANKO, M. 2014a, Sopot, u/in: *Darovi zemlje: neolitik između Save, Drave i Dunava*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 85–88.
KRZNARIĆ ŠKRIVANKO, M. 2014b, Vinkovačko Novo Selo-Zablaće, *Hrvatski arheološki godišnjak*, 11, 70–74.
KRZNARIĆ ŠKRIVANKO, M. 2015a, Rezultati Dimitrijevićevih istraživanja Sopota u svjetlu novih istraživanja, *Opvscvla archaeologica*, 37/38 (2013/2014.), 371–395.
KRZNARIĆ ŠKRIVANKO, M. 2015b, Preliminarno izvješće s arheološkog istraživanja sopotskog sela na poziciji Vinkovačko Novo Selo – Zablaće (Borinci-Vinka-Blato), *Godišnjak Matice hrvatske Ogranak Vinkovci*, 32, 197–216.
KRZNARIĆ ŠKRIVANKO, M. 2015c, Izvještaj sa zaštitnog arheološkog istraživanja u Vinkovcima – Vinkovačko Novo Selo – Zablaće, k. č. br. 160/4, k. o. Vinkovačko Novo Selo, *Hrvatski arheološki godišnjak*, 12, 96–98.
KRZNARIĆ ŠKRIVANKO, M. 2015d, Vinkovci – J. Kozarca bb odvojak (k. č. 3386/2), *Hrvatski arheološki godišnjak*, 12, 105–109.
KRZNARIĆ ŠKRIVANKO, M. 2016a, Izvještaj sa zaštitnog arheološkog istraživanja u Vinkovcima – Vinkovačko Novo Selo – Zablaće, k. č. br. 160/4, k. o. Vinkovačko Novo Selo, *Hrvatski arheološki godišnjak*, 13, 86–88.
KRZNARIĆ ŠKRIVANKO, M. 2016b, Vinkovačko područje – geofizika, *Hrvatski arheološki godišnjak*, 13, 92–95.
KRZNARIĆ ŠKRIVANKO, M. 2016c, Vinkovci Dirov brijeg, *Hrvatski arheološki godišnjak*, 13, 101–103.
KRZNARIĆ ŠKRIVANKO, M. 2021, Vinkovci-Zablaće: novootkriveni lokalitet sopotske kulture na Vinkovačkom prostoru, u/in: *Homo universalis, Zbornik radova posvećen Zorku Markoviću povodom 65. obljetnice života*, Dizdar, M. (ed.), Zagreb: Institut za arheologiju u Zagrebu, 127–139.
KRZNARIĆ ŠKRIVANKO, M. 2023, Rezultati zaštitnih arheoloških istraživanja i drugih aktivnosti Arheološkog odjela Gradskog muzeja Vinkovci u 2022. godini, *Godišnjak Matice hrvatske Vinkovci*, 40, 191–219.
KRZNARIĆ ŠKRIVANKO, M. 2024, Rezultati zaštitnih arheoloških istraživanja i drugih aktiv-

nosti Arheološkog odjela Gradskog muzeja Vinkovci u 2023. godini, *Godišnjak Matice hrvatske Vinkovci*, 41, 141–63.

KRZNARIĆ ŠKRIVANKO, M., RAPAN PAPEŠA, A. 2006, Arheološki park Sopot, *Živi muzej – Eksperimentalna arheologija*, Umag: Muzej grada Umaga, 11–17.

KRZNARIĆ ŠKRIVANKO, M., RAPAN PAPEŠA, A., VULIĆ, H. 2012, Rekognosciranje vinkovačkog područja, *Hrvatski arheološki godišnjak*, 9, 55–60.

LOŽNJAK DIZDAR, D., DIZDAR, M. 2016, Arheološka istraživanja u Vinkovačkim Banovcima, *Hrvatski arheološki godišnjak*, 13, 84–86.

LOŽNJAK DIZDAR, D., DIZDAR, M. 2017, Arheološka istraživanja u Sotinu i Vinkovačkim Banovcima u 2016., *Annales Instituti Archaeologici*, XIII, 26–33.

MAJNARIĆ PANDŽIĆ, M. 1969, Gradina Orolik – kasnolatensko naselje, *Arheološki pregled***,** 11, 79–81.

MAJNARIĆ PANDŽIĆ, M. 1980, Gradina u Privlaci – utvrđeno kasnolatensko naselje, *Arheološki pregled*, 22, 45–48.

MALJKOVIĆ, B. 2011, Vinkovci – Ervenica – Poljski jarak, *Hrvatski arheološki godišnjak*, 8, 73–77.

MALJKOVIĆ, B. 2014, Vinkovci – Ervenica, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološku muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 102–105.

MARIČIĆ, S., ŠRENG, Ž. 2016, Velike vode Pobosuća, u/in: *Proceedings of the First B&H Water Congress*, Mehić, A., Jašarević, E. (ur./eds.), Sarajevo: Association of consulting engineers Bosnia and Herzegovina, 1–8.

MARKOVIĆ, Z. 1994, *Sjeverna Hrvatska od neolita do brončanog doba, Problem kontinuiteta stanovništva i kultura sjeverne Hrvatske od ranog neolita do početka brončanog doba*, Koprivnica: Muzej grada Koprivnice.

MARKOVIĆ, Z. 2012, Novija razmatranja o nekim aspektima sopotske kulture u sjevernoj Hrvatskoj / Neuere Betrachtungen über bestimmte Aspekte der Sopot-Kultur in Nordkroatien, *Prilozi Instituta za arheologiju u Zagrebu*, 29, 57–69.

MAYER, C. 2017, *Geophysical prospection works at several archaeological sites in the Vinkovci region, Croatia*, Berlin: Eastern Atlas GMBH&Co.KG. (Izvještaj)

MAYER, C. 2018, *Geophysical prospection works at archaeological sites of Gradina (Otok, Vukovar-Srijem county, Croatia*, Berlin: Eastern Atlas GMBH&Co.KG. (Izvještaj)

MAYER, C. 2020, *Magnetic prospection at the Neolithic site of Sopot (Vinkovci, Vukovar-Srijem county, Croatia)*, Berlin: Cornelius Meyer Prospection – CMP. (Izvještaj)

MAYER, C., CARLETTI, M. 2018, *Magnetic prospection at the archaeological sites of Malat (Mirkovci) and Marica (Vinkovci), Vukovar-Srijem county, Croatia*, Berlin: Eastern Atlas GMBH&Co. KG. (Izvještaj)

MAYER, C., CARLETTI, M. 2023, *Magnetic prospection at the Neolithic site of Retkovci (Vinkovci, Vukovar-Srijem county, Croatia)*, Berlin: Cornelius Meyer Prospection - CMP. (Izvještaj)

MILOGLAV, I. 2016, *Keramika u arheologiji – Lončarstvo vučedolske kulture na Vinkovačkom području / Ceramics in Archaeology – Pottery of the Vučedol Culture in Vinkovci Region*, Acta Musei Cibalensis 7, Zagreb, Vinkovci: Filozofski fakultut Sveučilišta u Zagrebu.

MILOGLAV, I., MUŠIČ, B. 2016, Stari Mikanovci-Damića gradina, *Hrvatski arheološki godišnjak*, 13, 78–79.

MUŠIČ, B., KRZNARIĆ ŠKRIVANKO, M., MEDARIČ, I. 2011a, Sopot, *Hrvatski arheološki*

godišnjak, 7, 84–87.
MUŠIČ, B., KRZNARIĆ ŠKRIVANKO, M., MEDARIČ, I. 2011b, *Sopot – geofizikalna raziskava 2010*, Arheologija v letu 2010, Arheologija za javnost, Strukovno srečanje Slovenskega arheološkega društva, Ljubljana: Mestni muzej, 37.
MUŠIČ, B., MEDARIČ, I., BASAR, P. 2017, *Izvješće o geofizičkim istraživanjima na arheološkom lokalitetu Stari Mikanovci – Damića gradina*, neobjavljeno izvješće, Gearh d.o.o., Maribor.
NUMOV, G. 2020, Domestacion of Tells: Settlements of the First Farmers in Pelagonia (Macedonia), u/in: *Current Approaches to Tells in the Prehistoric Old World: A cross-cultural comparison from Early Neolithic to the Iron Age*, Blanco-González, A., Kienlin, T. L. (ur./eds.), Oxford: Oxbow Book, 111-124.
NAUMOV, G. 2020, Neolithic wetland and lakeside settlements in the Balkans, u/in: *Settling Waterscapes in Europe. The Archaeology of Neolithic and Bronze Age Pile-Dwellings*, Hafner, A., Dolbunova, E., Mazurkevich, A., Pranckenaite E., Hinz, M. (ur./eds.), Open Series in Prehistoric Archaeology 1. Bern and Heidelberg: Propylaeum, 111–135.
OBELIĆ, B., KRZNARIĆ ŠKRIVANKO, M., MARIJAN, B., KRAJCAR-BRONIĆ, I. 2004, Radiocarbon dating of Sopot Culture Sites (Late Neolithic) in Eastern Croatia. *Radiocarbon*, 46, 245–258.
OŽANIĆ, I. 2003, Rezultati sustavnih i zaštitnih arheoloških istraživanja Arheološkog odjela Gradskog muzeja Vinkovci u 2003. godini, *Godišnjak ogranka Matice hrvatske Vinkovci***,** 21, 177–191.
PASARIĆ, M. 2014, Od zoomorfne plastike do žrtvene životinje – životinje i neolitičke kultne prakse, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 220–234.
PETKOVIĆ, D. 2006, *Srednjovjekovna naselja sjeverozapadnog dijela vinkovačkog kraja*, Acta musei Cibalensis, 3, n. s., 1, Vinkovci: Gradski muzej Vinkovci.
RAJIĆ ŠIKANJIĆ, P., PREMUŽIĆ, Z., KRZNARIĆ ŠKRIVANKO, M. 2017, Rib anomalies in a Neolithic period skeleton from Croatia, *Antropologischer anzeiger*, 74(2), 123–130.
RAPAN PAPEŠA, A. 2006, Vinkovci – J. Kozarca 62, *Hrvatski arheološki godišnjak*, 3, 60–61.
REED, K. 2012, *Farmers in Transition (The archeobotanical analysis of the Carpathian Basin from the Late Neolithic to the late Bronze Age (5000.-900. BC))*, neobjavljena doktorska disertacija / unpublished PhD thesis, Leicester: University of Leicester.
REED, K. 2014, Prehrana i poljoprivreda u neolitičkoj Hrvatskoj: arheobotanički ostaci, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 156–166.
REED, K., KRZNARIĆ ŠKRIVANKO, M., MIHALJEVIĆ, M., VULIĆ, H. 2017, Diet and subsistence at the late Neolithic tell sites of Sopot, Slavča and Ravnjaš, eastern Croatia, *Documenta Prehistorica*, XLIV, 326–337.
RUNTIĆ, D. 1969, Iz rada arheološke sekcije u Oroliku, *Glasnik slavonskih muzeja*, 12 (prosinac).
ŠARANOVIĆ-SVETEK, V. 1966-1968, *Rekognosciranje vinkovačkog terena*, *Dnevnik* (interna dokumentacija Gradskog muzeja Vinkovci).
ŠARANOVIĆ-SVETEK, V. 1967, Orolik-Rajterovo brdo, *Arheološki pregled*, 9, 108–111.
ŠILJEG, B., KALAFATIĆ, H. 2015., Zračna arheologija u istočnoj Slavoniji, *Annales Instituti Archaeologici*, XI, 135–141.
ŠILJEG, B., KALAFATIĆ, H. 2016, Zračno rekognosciranje, Osječko-baranjska županija 2015.

godine, *Annales Instituti Archaelogici*, 12, 213–222.
ŠOŠIĆ KLINDŽIĆ, R., KALAFATIĆ, H., ŠILJEG, B., HRŠAK, T. 2019, Krugovi i keramika kroz stoljeća: značajke naselja sopotske kulture, / Circles and ceramics through the centuries: Characteristics of Neolithic Sopot culture settlements *Prilozi Instituta za arheologiju*, 36, 41–84.
ŠOŠIĆ KLINDŽIĆ, R., ŠILJEG, B., KALAFATIĆ, H. 2023, Multiscale and Multitemporal Remote Sensing for Neolithic Settlement Detection and Protection – Case of Gorjani, Croatia, *Remote Sensing*, 16. https://doi.org/10.20944/preprints202311.1557.v1
TOMIČIĆ, Z. 1996, *Monasterium-Monuštar-Nuštar-korijeni prošlosti*, Zagreb: Hrvatsko-američko društvo, 19–53.
TEŽAK-GREGL, T. 1995, Prilog poznavanju neolitičkih naselja i naseobinskih objekata u središnjoj Hrvatskoj, *Opvscvla archaeologica*, 19, 11–15.
TRBUHOVIĆ, V., VASILJEVIĆ, M., 1974., *Obrovci, poseban tip neolitskih naselja u zapadnoj Srbiji*, Beograd: Arheološki institut.
TRIPKOVIĆ, B. 2014, Stanovanje i organizacija naselja, u/in: *Darovi zemlje Neolitik između Save, Drave i Dunava, Drugi dio – kataloške jedinice*, Balen, J., Ivanković G. M., Boras, D. (ur./eds.), Zagreb: Arheološki muzej Zagreb, Muzej Slavonije Osijek, Sveučilište u Zagrebu – Filozofski fakultet, 129–156.
TRIPKOVIĆ, B., PENEZIĆ, K. 2017, On-site and off-site in western Serbia: A geoarchaeological perspective of Obrovac-type settlements, *Quaternary International*, Volume 429, Part A, 35–44. https://doi.org/10.1016/j.quaint.2015.12.004.
VIRC, Z. 1979, Damića gradina u Starim Mikanovcima, *Godišnjak ogranka Matice hrvatske Vinkovci*, 8, 269–281.
VIRC, Z. 1983, *Retkovci nekad i sad*, Retkovci: Mjesna zajednica Retkovci.
VULIĆ, H., DIZDAR, M., RAPAN PAPEŠA, A. 2010, Borinci-Blato**,** *Hrvatski arheološki godišnjak*, 7, 74–77.
VULIĆ, H., KRATOFIL, B., KRZNARIĆ ŠKRIVANKO, M., RAPAN PAPEŠA, A. 2016, Vinkovačko područje**,** *Hrvatski arheološki godišnjak*, 13, 90–92.

Internetski izvori / Internet sources

https://geoportal.dgu.hr/
https://earth.google.com/web/
https://maps.arcanum.com/en/synchron/
Geoportal DGU LIDAR

Zračno snimanje / Aerial photo

Gradski muzej Vinkovci ožujak 2024. / Vinkovci Municipal Museum, March 2024 (Ivan Sokola)

UKRASNI PREDMETI OD ŠKOLJKI S LOKALITETA OSIJEK – HERMANOV VINOGRAD

MOLLUSC-SHELL DECORATIVE ITEMS FROM THE OSIJEK – HERMANOV VINOGRAD SITE

DRAGANA RAJKOVIĆ

Arheološki muzej Osijek
Archaeological Museum Osijek
Trg Sv. Trojstva 2
HR-31000 Osijek
dragana.rajkovic@amo.hr

SELENA VITEZOVIĆ

Arheološki institut
Institute of Archaeology
Kneza Mihaila 35/IV
RS-11000 Beograd
s.vitezovic@ai.ac.rs

UDK: 903.25(497.543)"634"
DOI: 10.15291/archeo.4683
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-8-1
Prihvaćeno / Accepted: 2024-10-15

Ključne riječi:
neolitik, sopotska kultura, Hermanov vinograd, ukrasni predmeti, školjke, recikliranje

Ljušture mekušaca među najranijim su sirovinama kojim se ljudska vrsta koristila za izradu ukrasa. Privlačile su pripadnike roda Homo još od srednjeg paleolitika svojim bojama, oblicima, teksturom površine, kao i podrijetlom (s obale mora, s velike udaljenosti i sl.). Tijekom neolitika i eneolitika školjke se nastavljaju upotrebljavati za izradu različitih predmeta, prije svega za dekorativne svrhe, a osobito su marinske školjke Spondylus i Glycymeris bile široko rasprostranjene u većem dijelu Europe. Njihova distribucija pokazuje živu mrežu trgovine i razmjene koja je postojala među prapovijesnim zajednicama, ali i oslikavala simboličke vrijednosti. Rasprostranjenost nakita od ljuštura mekušaca, njegovi oblici, način korištenja, simboličko značenje, stalno se dopunjuju novim nalazima i novim podatcima, i na taj način doprinose boljem razumijevanju fenomena nakita od ovih sirovina. U ovom radu bit će predstavljeni ukrasni predmeti od školjki otkriveni tijekom arheoloških istraživanja na lokalitetu Hermanov vinograd u Osijeku, iz cjelina koje pripadaju sopotskoj kulturi.

Key words:
Neolithic, Sopot culture, Hermanov Vinograd, decorative objects, shells, recycling

Mollusc shells are among the earliest raw materials used by humans for production of ornaments. They attracted the members of the Homo genus since the Middle Palaeolithic with their colours, shapes, surface texture, as well as their origin (from sea shores, from large distances, etc.). During the Neolithic and Eneolithic period, shells continued to be used for production of diverse objects, especially decorative, and marine shells Spondylus and Glycymeris were particularly widespread in most of Europe. Their distribution shows a vivid trade and exchange network that existed

among the prehistoric communities, but also reflects symbolic values. The distribution of the mollusc shell jewellery, their shapes, modes of use, symbolic values, are constantly being enlarged by new findings and new data, thus contributing to a better understanding of the mollusc shell ornament phenomenon. In this paper, decorative objects made from shells will be presented that were discovered during the archaeological research activities at the site of Hermanov Vinograd in Osijek, from contexts attributed to the Sopot culture.

NAKIT OD LJUŠTURA MEKUŠACA U PRAPOVIJESTI

Tijekom prapovijesti ukrasni predmeti izrađivani su od različitih materijala – od kamena, kostiju, rogova, zubi različitih životinja, ljuštura mekušaca, gline, metala, kao i od različitih organskih sirovina koje se nisu očuvale.[1] Među najstarije ukrasne predmete spadaju oni izrađeni od tvrdih sirovina životinjskog podrijetla, osobito oni izrađeni od ljuštura mekušaca. Određeni podatci sugeriraju da su ljušture mekušaca privlačile pozornost još pripadnika vrste *Homo neanderthalensis*, koji su katkad prikupljali školjke i nosili ih sa sobom do udaljenih mjesta, premda se pouzdani nalazi korištenja školjki u neutilitarne svrhe povezuju s modernim čovjekom.[2] Među najstarijim nalazima mogućih ukrasa od ljuštura mekušaca mogu se izdvojiti *Glycymeris* školjke s perforacijama koje su nastale prirodnim putem, a koje su nađene na lokalitetu Qafzeh Cave u današnjem Izraelu. Njihova je starost procijenjena na oko 120 000 godina. Tragovi na perforacijama pokazuju da su ove školjke bile nanizane na neku vrpcu, odnosno, da je odabir školjki s već postojećim perforacijama bio svjestan i namjeran.[3] S još jednog lokaliteta u Izraelu, Mugharet es-Skhul, potječu nalazi perforiranih mekušaca *Nassarius gibbosulus*, procijenjene starosti više od 100 000 godina, a takvi su ukrasi poznati i s nalazišta u sjevernoj Africi, poput Oued Djebbana u današnjem Alžiru.[4]

U gornjem paleolitiku u Europi ukrasi su izrađivani od perforiranih zuba, kostiju, kamena, a osobito su ukrasi od ljuštura mekušaca bili raznovrsni i široko rasprostranjeni.[5] Zastupljene su brojne vrste, uključujući *Dentalium* sp., *Conus* sp., *Glycymeris* sp., *Littorina*

1 TABORIN 1974; 1993; CATTELAIN 2012; BAYSAL 2019.
2 BAR-YOSEF MAYER 2020 s bilješkama.
3 BAR-YOSEF MAYER et al. 2020.
4 VANHAEREN et al. 2006; CATTELAIN 2012: 7.
5 TABORIN 1993; ÁLVAREZ-FERNÁNDEZ 2005; ÁLVAREZ-FERNÁNDEZ, JÖRIS 2007; CVITKUŠIĆ et al. 2024.

MOLLUSC-SHELL JEWELLERY IN PREHISTORY

In the prehistoric period, ornamental objects were made from various materials – stone, bone, horn/antler, animal teeth, mollusc shells, clay, metal, as well as different organic materials that have not been preserved.[1] Among the oldest ornamental objects are those made from hard materials of animal origin, especially mollusc shells. Certain data suggest that mollusc shells also attracted the attention of members of the *Homo neanderthalensis* species, who sometimes collected shells and transported them to distant places, although reliable confirmation of shell use for non-utilitarian purposes is linked to modern humans.[2] Among the oldest finds of what are presumed to be ornaments made from mollusc shells are *Glycymeris* shells with naturally created perforations, recovered at the Qafzeh Cave site in present-day Israel. Their age is estimated at about 120,000 years. Traces on the perforations demonstrate that the shells were beaded on some sort of ribbon and that the selection of naturally perforated shells was conscious and deliberate.[3] Finds of perforated *Nassarius gibbosulus* molluscs originate Mugharet-es-Skhul, another site in Israel; their age is estimated to be over 100,000 years. Such ornaments are also known from sites in North Africa, such as Oued Djebban in present-day Algeria.[4]

In the Upper Palaeolithic in Europe, decorations were made of perforated teeth, bones and stones, but those of mollusc shells were particularly diverse and widespread.[5] Many species are represented, among which are *Dentalium* sp., *Conus* sp., *Glycymeris* sp., *Littorina obtusata*, *Nassarius gibbosulus*, *Nassarius reticulatus*, *Cyclope neritea*, *Columbella rustica* and many more; both specimens with

1 TABORIN 1974; 1993; CATTELAIN 2012; BAYSAL 2019.
2 BAR-YOSEF MAYER 2020, with references.
3 BAR-YOSEF MAYER et al. 2020.
4 VANHAEREN et al. 2006; CATTELAIN 2012: 7.
5 TABORIN 1993; ÁLVAREZ-FERNÁNDEZ 2005; ÁLVAREZ-FERNÁNDEZ, JÖRIS 2007; CVITKUŠIĆ et al. 2024.

obtusata, *Nassarius gibosulus*, *Nassarius reticulatus*, *Cyclope neritea*, *Columbella rustica* i mnoge druge, te obuhvaćaju i iskorištene primjerke s prirodnim rupama i one s antropogenim modifikacijama.[6] Ovi su predmeti bez dvojbe bili osobni ukras, samostalan ili dio odjeće, o čemu svjedoče nalazi poput onog s lokaliteta Arene Candide u Italiji, gdje je otkriven skelet iz vremena *gravettiena* s iznimno bogatim nalazima, uključujući i ukrase od mekušaca *Cypraea*, *Nassarius*, *Trivia* i *Mitrella*, kao i nekoliko stotina perforiranih ljuštura vrste *Cyclope*, koji su bili pričvršćeni na pokrivalo za glavu.[7] Korištenje ljuštura mekušaca nastavlja se i u holocenu.[8] Tijekom neolitika u Europi najčešći ukrasni predmeti jesu oni izrađeni od tvrdih sirovina životinjskog podrijetla (kosti, rogovi, zubi, ljušture mekušaca), potom od kamena i u manjoj mjeri od keramike,[9] dok se početkom eneolitika počinje javljati i nakit od zlata i bakra.[10]

Osim estetske, odnosno dekorativne funkcije, ovi su predmeti mogli imati apotropejsku, profilaktičku, iscjeliteljsku ulogu, mogli su oslikavati status, prestiž, biti oznaka grupnog ili individualnog identiteta itd.;[11] međutim, o ovim se simboličkim značenjima i vrijednostima ne mogu donijeti bliži zaključci. Izbor određene sirovine bio je najvećim dijelom uvjetovan kulturnim razlozima – osobito su mogle biti cijenjene rijetke, teško dostupne sirovine pristigle s velikih udaljenosti, sirovine od životinjske vrste kojoj je pripisana određena simbolička vrijednost,[12] i slično; osim toga, tražene su i specifične fizičko-kemijske karakteristike, kao što su tvrdoća, izgled površine, poput sjajnih, glatkih površina, i drugo, a osonatural perforations and others with anthropogenic modifications were used.[6] The items undoubtedly served as personal embellishment, worn as an independent ornament or as part of apparel, as evidenced by finds from the Arene Candide site in Italy, where a Gravettian-period skeleton with extraordinarily opulent finds was uncovered, including ornaments made from *Cypraea*, *Nassarius*, *Trivia* and *Mitrella* molluscs, along with several hundred perforated *Cyclope* shells affixed to a headdress.[7] The use of mollusc shells then continued into the Holocene.[8] During the Neolithic period in Europe, the most common ornamental objects were made from hard raw materials of animal origin (bones, horns/antlers, teeth, mollusc shells), then of stone, and (to a lesser extent) ceramics,[9] while at the beginning of the Aeneolithic, gold and copper jewellery began to appear.[10]

In addition to their aesthetic or ornamental function, the objects could have had an apotropaic, prophylactic, healing role; they could have suggested status and ranking; they could have been a sign of group or individual identity, and much more;[11] however, it is not possible to draw more detailed conclusions as to these symbolic meanings and values. The selection of a specific raw material was largely a result of cultural preferences: particularly appreciated may have been rare, hard-to-provide raw materials from distant regions, those obtained from animal species that bore a certain symbolic value[12], and the like; in addition, specific physical-chemical characteristics, such as hardness, or surface appearances, such as glossy, smooth surfaces, were in high demand,

6 Cf. TABORIN 1993; BORRELLO 2004; ÁLVAREZ-FERNÁNDEZ, JÖRIS 2007; CVITKUŠIĆ et al. 2024.
7 BORRELLO 2004 s bilješkama.
8 TABORIN 1974; ÁLVAREZ-FERNÁNDEZ 2010; KOMŠO et al. 2019; CVITKUŠIĆ et al. 2024.
9 HAUZEUR, CAUWE 2012; IFANTIDIS 2019; VITEZOVIĆ, ANTONOVIĆ 2020; YELÖZER, CHRISTIDOU 2020; RAJKOVIĆ, ANTONOVIĆ *u tisku*.
10 TODOROVA, VAJSOV 2002; MICHELI 2020.
11 CATTELAIN 2012; BAYSAL 2019.
12 CHOYKE 2010.

6 TABORIN 1993; BORRELLO 2004; ÁLVAREZ-FERNÁNDEZ, JÖRIS 2007; CVITKUŠIĆ ET AL. 2024.
7 BORRELLO 2004, with references.
8 TABORIN 1974; ÁLVAREZ-FERNÁNDEZ 2010; KOMŠO et al. 2019; CVITKUŠIĆ ET AL. 2024.
9 HAUZEUR, CAUWE 2012; IFANTIDIS 2019; VITEZOVIĆ, ANTONOVIĆ 2020; YELÖZER, CHRISTIDOU 2020. RAJKOVIĆ, ANTONOVIĆ *in press*.
10 TODOROVA, VAJSOV 2002; MICHELI 2020.
11 CATTELAIN 2012; BAYSAL 2019.
12 CHOYKE 2010.

bito je bitna bila boja.[13]

Nakit izrađivan od morskih školjki iz razreda školjkaša (*Bivalvia*) – *Spondylus* sp., *Glycymeris* sp., *Cardidae* osobito je karakterističan za neolitik i eneolitik Europe. Ukrasni predmeti poput narukvica, privjesaka, perli i aplikacija pronalaze se na lokalitetima udaljenim i do nekoliko stotina kilometara od mjesta podrijetla ovih mekušaca,[14] i često se susreću kao nalazi u grobovima.[15] Zbog toga je i ponuđena hipoteza o gustoj, razgranatoj mreži razmjene u Europi, kao i o tome da su ti predmeti bili iznimno cijenjeni, moguće i korišteni za pokazivanje prestižnog statusa, bogatstva i drugog.[16]

S novim nalazima i ponovnim analizama starih zbirki, slika o distribuciji, tipovima i načinu korištenja nakita od ljuštura mekušaca tijekom neolitika u Europi dosta se usložnjava. Naime, J. Chapman je, na primjer, sugerirao prije nekoliko desetljeća, na osnovi tada raspoloživih nalaza, da su glavni putovi razmjene išli duž rijeke Dunava na centralnom Balkanu i u južnom Karpatskom udolinom.[17] No, s nalazima s lokaliteta Pločnik kod Prokuplja na jugu Srbije,[18] ili s lokaliteta Cerje – Govrlevo u Sjevernoj Makedoniji,[19] pokazalo se da je mreža distribucije znatno gušća.[20]

Pitanje podrijetla ukrasa od *Spondylus* školjki u Europi još uvijek se diskutira, međutim, većina autora smatra da ove školjke potječu s Mediterana, a ne iz fosilnih depozita na Crnom moru.[21] Prapovijesne zajednice na području Slavonije do *Spondylus* školjki mogle su doći putem kontakata sa zajednicama vinčanske kulture, ali i preko kontakata sa srednjo-

13 ANTONOVIĆ, VITEZOVIĆ, DIMIĆ 2018; BAR-YOSEF MAYER 2020.
14 WILLMS 1985; MÜLLER 1997; SCHUSTER 2002; SÉFÉRIADÈS 2010.
15 JOHN 2011; SIKLÓSI, CSENGERI 2011; MĂRGĂRIT, DIMACHE 2019.
16 MÜLLER 1997; SIKLÓSI 2004; SÉFÉRIADÈS 2010.
17 CHAPMAN 1981.
18 VITEZOVIĆ 2021a; 2021b; Pogledati i kod VITEZOVIĆ 2016.
19 FIDANOSKI 2012.
20 VITEZOVIĆ 2016.
21 SÉFÉRIADÈS 2010:180: Također vidjeti BAJNÓCZI et al. 2013.

and of particular importance was the colour.[13]

Jewellery made of sea shells from the shellfish class (*Bivalvia*) – *Spondylus* sp., *Glycymeris* sp. and *Cardiidae* was typical of the European Neolithic and Aeneolithic periods. Decorative objects such as bracelets, pendants, beads or appliqués are often recovered at sites up to several hundred kilometres away from the place of origin of the molluscs[14] and are frequently encountered as grave finds.[15] This is why, according to the proposed hypothesis, there existed a dense, highly branched exchange network in Europe, and these objects were highly valued and possibly used also to demonstrate prestigious ranking, wealth and the like.[16]

New finds and renewed analyses of old collections add to the complexity of the picture of distribution, types and usage of mollusc-shell jewellery during the Neolithic period in Europe. For example, on the basis of finds available at the time, J. Chapman suggested a few decades ago that the main routes of exchange went along the River Danube in the central Balkans and the southern Carpathian Basin.[17] However, new finds outside the Danube Region, for example from the Pločnik site near Prokuplje in southern Serbia[18] or from the Cerje – Govrlevo site in North Macedonia[19] suggest a significantly denser distribution network.[20] The origin of the *Spondylus* shell ornament in Europe is still being discussed; however, most authors believe that the shells originated from the Mediterranean rather than from Black Sea fossil deposits.[21] Prehistoric communities in Slavonia could obtain *Spondylus* shells through contacts with Vinča-culture communities, but also through contacts with cen-

13 ANTONOVIĆ, VITEZOVIĆ, DIMIĆ 2018; BAR-YOSEF MAYER 2020.
14 WILLMS 1985; MÜLLER 1997; SCHUSTER 2002; SÉFÉRIADÈS 2010.
15 JOHN 2011; SIKLÓSI, CSENGERI 2011; MĂRGĂRIT, DIMACHE 2019.
16 MÜLLER 1997; SIKLÓSI 2004; SÉFÉRIADÈS 2010.
17 CHAPMAN 1981.
18 VITEZOVIĆ 2021a; 2021b; cf. and VITEZOVIĆ 2016.
19 FIDANOSKI 2012.
20 VITEZOVIĆ 2016.
21 SÉFÉRIADÈS 2010: 180, also e.g., BAJNÓCZI et al. 2013.

bosanskim poveznicama s područja jadranske obale,[22] gdje su prisutni nalazi gotovog nakita i neobrađenih *Spondylus* školjki.[23]

Pored toga, brojne novije analize zbirki nakita, bilo s nedavnih iskopavanja ili iz muzejskih zbirki, pokazale su da je raznolikost vrsta mekušaca koje su korištene u jugoistočnoj Europi znatno veća, kao i da su morfološki tipovi raznovrsniji.[24]

Nakit izrađen od morskih mekušaca iz perioda neolitika na području Hrvatske poznat je od kraja 19. stoljeća.[25] Bogati nalazi ukrasa od ljuštura mekušaca na Jadranu pronađeni su već u starijem neolitiku – na lokalitetu Smilčić nađene su dvije *Cardium* i jedna *Venus* školjka s perforacijama.[26] Osim toga, bogati nalazi potječu s lokaliteta kao što je Benkovac – Barice, gdje su nađene perle od morskih pužića *Columbella rustica*, narukvice i privjesci od školjke *Spondylus*, ali i školjke s tragovima početne obrade,[27] na lokalitetu Crno vrilo nađeni su ukrasi izrađeni od *Cardiuma* i *Columbellae rusticae*,[28] dok s nalazišta Kargadur u Istri potječe nekoliko školjki *Cardium* s perforacijama.[29] Posljednjih nekoliko godina sve se više upotpunjavaju naša znanja o pojavi ove školjke na području međurječja Save, Drave i Dunava. Pojedinačni nalazi izrađeni od *Spondylusa* na području savsko-dravskog međurječja u kontekstu starčevačke kulture pronađeni su na lokalitetima Vinkovci – Tržnica[30] i Kneževi vinogradi,[31] dok je njihova pojava u kontekstu kasnog neolitika učestalija. Prve nalaze ukrasa od *Spondylusa* u sopotskoj kulturi spominje Stojan Dimitrijević.[32] On navodi kako je na lokalitetu Bapska, u jami 305, datiranoj u prijelaz od I.B stup-

[22] TEŽAK GREGL 2001, 29.
[23] KUKOČ 2012 s bilješkama.
[24] MĂRGĂRIT, MIREA, RADU 2018; MĂRGĂRIT 2020.
[25] BRUNŠMID 1902.
[26] BATOVIĆ 1966: 53, T. XXIV/11–13, XXV/11–13.
[27] KUKOČ 2012.
[28] MARIJANOVIĆ 2009: T. XIX.
[29] KOMŠO 2007.
[30] DIMITRIJEVIĆ 1979: 241.
[31] RAJKOVIĆ, VITEZOVIĆ 2020.
[32] DIMITRIJEVIĆ 1968: 41.

tral-Bosnia links from the Adriatic coast,[22] where both finished jewellery and unworked *Spondylus* shell finds are present.[23]

In addition, numerous recent analyses of jewellery collections, whether yielded by recent excavations or found in museum collections, have shown that the diversity of mollusc species used in southeast Europe was significantly higher, and that the morphological types were more diverse.[24]

Jewellery from the Neolithic period in Croatia made from sea molluscs has been known since the end of the 19th century.[25] Abundant finds of mollusc shell ornaments in the Adriatic region have been recovered from as early as the Early Neolithic period – two *Cardium* shells and a *Venus* shell with perforations were found at the Smilčić site.[26] In addition, extensive finds are known from sites such as Benkovac – Barice, where beads made from *Columbella rustica* sea snail, bracelets and pendants made from *Spondylus* shell as well as shells with traces of initial processing[27] were unearthed; recovered from the Crno Vrilo site were ornaments made from *Cardium* and *Columbella rustica*[28], while several *Cardium* shells with perforations originated from the Kargadur site in Istria.[29] In the last couple of years, our knowledge about the appearance of this shell in the Sava, Drava and Danube interfluve has been significantly supplemented. Individual artefacts made from *Spondylus* in the Sava – Drava interfluve have been found at the Vinkovci – Tržnica[30] and the Kneževi Vinogradi[31] sites, in the context of the Starčevo culture; however, they occur more frequently in the context of the Late Neolithic. The first finds of *Spondylus* ornaments in the Sopot culture were mentioned by Stojan Dimitrije-

[22] TEŽAK GREGL 2001, 29.
[23] KUKOČ 2012, with references.
[24] MĂRGĂRIT, MIREA, RADU 2018; MĂRGĂRIT 2020.
[25] BRUNŠMID 1902.
[26] BATOVIĆ 1966: 53, Pl. XXIV/11-13, XXV/11-13.
[27] KUKOČ 2012.
[28] MARIJANOVIĆ 2009: Pl. XIX.
[29] KOMŠO 2007.
[30] DIMITRIJEVIĆ 1979: 241.
[31] RAJKOVIĆ, VITEZOVIĆ 2020.

nja u II. stupanj, pronađen fragmentirani ulomak narukvice od *Spondylusa*, i on ujedno predstavlja prvu registriranu pojavu ovog nakita na jednom sopotskom lokalitetu.[33] Novija istraživanja na lokalitetu Bapska potvrdila su prisutnost ovog nakita.[34] S. Dimitrijević spominje pojavu nakita od *Spondylusa* i u mlađem stupnju sopotske kulture, i to na lokalitetima Sopot i Hermanov vinograd – privjeske ovalnog i trapezastog oblika s dvjema rupicama i kanalima za provlačenje uzice.[35] Među ostalim lokalitetima na kojima su zabilježeni nalazi ovog tipa spadaju Čepin – Bare, Vukovar i Osijek – Filipovica / Hermanov vinograd. Do sada najveća količina ove vrste nalaza pronađena je na lokalitetu Čepin – Ovčara, gdje je otkrivena ostava s nekoliko privjesaka i perli od vrsta *Spondylus gaederopus* i *Antalis vulgaris*.[36]

Nedavna istraživanja lokaliteta Hermanov vinograd donijela su još nekoliko nalaza ukrasnih predmeta od školjki, koji će biti prikazani u ovom radu.

LOKALITET HERMANOV VINOGRAD: ARHEOLOŠKI OKVIRI

Lokalitet Hermanov vinograd nalazi se na Filipovici, jugozapadnom rubnom dijelu Osijeka, na niskom, gotovo pravilnom brežuljku površine 12 018 m² (sl. 1). U 19. i početkom 20. stoljeća na ovom brežuljku nalazio se vinograd, te su se pri obradi zemlje učestalo pojavljivali raznovrsni arheološki nalazi, od koji su neki dospjeli u tadašnji Muzej slobodnog i kraljevskog grada Osijeka. Na temelju tih nalaza tadašnji kustos, prof. Vjekoslav Celestin 1897. godine proveo je manje sondažno istraživanje. Ukupna veličina sonde iznosila je 794 m²,

33 DIMITRIJEVIĆ 1968: 41, sl. 11/11.
34 BURIĆ 2014: 9.
35 DIMITRIJEVIĆ 1968: 47.
36 RAJKOVIĆ 2014: 22–28; TRIPKOVIĆ, DIMITRIJEVIĆ, RAJKOVIĆ 2016: 343–362.

vić.[32] He stated that at the Bapska site, in Pit 305, dated to the transition from stage I-B to stage II, a *Spondylus* bracelet fragment was unearthed, representing the first registered occurrence of this jewellery type at a Sopot site.[33] Recent excavations at the Bapska site have confirmed the presence of this jewellery type.[34] S. Dimitrijević mentioned the occurrence, at the Sopot and Hermanov Vinograd sites, of *Spondylus* jewellery also in the late-stage Sopot culture: oval and trapezoidal pendants with two holes and cord channels.[35] Among other sites with recorded finds of this type are Čepin – Bare, Vukovar, and Osijek – Filipovica / Hermanov Vinograd. The largest number was at the Čepin – Ovčara site, where a hoard with several pendants and beads made from the *Spondylus gaederopus* and *Antalis vulgaris* species was uncovered.[36]

Recent excavations at the Hermanov Vinograd site produced several more finds of ornamental objects made from shells, which will be presented in this paper.

THE HERMANOV VINOGRAD SITE: ARCHAEOLOGICAL FRAMES

The Hermanov Vinograd site is located at Filipovica, in the southwestern outskirts of Osijek, on a low, almost regular hill with a surface area of 12,018 m² (Fig. 1). In the 19th and early 20th century, a vineyard stood on this hill; routine cultivation of the land frequently threw up various archaeological finds, some of which arrived at what was then the Museum of the Free and Royal Town of Osijek. Due to these finds, its curator, professor Vjekoslav Celestin, instigated trial trenching in 1897. The overall trial trench size was 794 m², but its exact position is unknown.[37] These excava-

32 DIMITRIJEVIĆ 1968: 41.
33 DIMITRIJEVIĆ 1968: 41, Fig. 11/11.
34 BURIĆ 2014: 9.
35 DIMITRIJEVIĆ 1968: 47.
36 RAJKOVIĆ 2014: 22-28; TRIPKOVIĆ, DIMITRIJEVIĆ, RAJKOVIĆ 2016: 343-362.
37 CELESTIN 1897: 104-109; s. also HRŠAK, LOS 2014: 38-42.



Slika 1. *Lokalitet Hermanov Vinograd* (izradio: M. Mađerić)
Figure 1 *Hermanov vinograd site* (made by M. Mađerić)

ali nam njezin položaj nije poznat.[37] S tog istraživanja potječe veliki broj nalaza, a već tada su prikupljeni i nalazi izrađeni od školjki. Prema keramičkom materijalu, S. Dimitrijević je Hermanov vinograd opredijelio u II. i III. fazu svoje podjele sopotske kulture.[38]

Sljedeće istraživanje provedeno je 1998. godine prije izgradnje kolektora gradske kanalizacije. Ukupno istražena površina iznosila je 638 m². Iskopavanje je obuhvatilo rubni dio naselja te nisu pronađeni stambeni objekti, već otpadne jame, ognjišta, te grob s pokojnikom u zgrčenom položaju. Tada je otkriven i dio opkopa koji je okruživao naselje.[39] Zaštitno arheološko istraživanje 2007. godine provedeno je prije polaganja kabelskog dalekovoda. Ovaj iskop presjekao je lokalitet od

[37] CELESTIN 1897: 104–109; Vidjeti također HRŠAK, LOS 2014, 38–42.
[38] DIMITRIJEVIĆ 1968.
[39] ŠIMIĆ 1999: 30–33.

tions yielded a large number of finds; from the start shells were among the material collected. Based on the ceramic material, S. Dimitrijević attributed Hermanov Vinograd to phases II and III of his Sopot-culture classification.[38]

The next excavation campaign was carried out in 1998, prior to the construction of the municipal sewage collector. The total area excavated was 638 m². The excavation covered the marginal part of the settlement and no residential buildings were found, but rather waste pits, fireplaces and a grave with a deceased individual in a crouched position. At the same time, a part of the moat enclosing the settlement was also discovered.[39] In 2007, archaeological rescue excavations were conducted prior to the laying of a cable transmission line. The dig cut the site from its eastern to its western margins over a length of

[38] DIMITRIJEVIĆ 1968.
[39] ŠIMIĆ 1999: 30-33.

istočnog do zapadnog ruba u dužini od 115 metara, a širina mu je varirala između 0,80 m i 1 m. Uočeno je kako je gustoća objekata mnogo veća u središnjem dijelu naselja, dok njihov broj prema rubovima naselja znatno opada, a neki od njih pokazuju i više faza izgradnje.[40] Manje sondažno istraživanje provedeno je 2011. godine na jugoistočnom rubu kružnog humka. Pronađen je niz dugačkih, uskih kanala orijentiranih u smjeru S-J i rupa od stupova. Istražen je i dio većega, dubljeg kanala ili jarka, koji je prema svojoj veličini i orijentaciji vjerojatno bio dio opkopa iz neke od faza naselja na Hermanovu vinogradu.[41]

Prije izgradnje južnog kolnika južne obilaznice grada Osijeka 2013. godine provedeno je zaštitno arheološko istraživanje ukupne površine od 2670 m². Pronađene su mnogobrojne arheološke strukture koje upućuju na prisutnost cjelina stambenog i obrambenog karaktera. Uvidom u stratigrafiju, ustvrđene su četiri građevinske faze lokaliteta, a radiokarbonsko datiranje provedeno je na kosturnim ostatcima groba 2.[42] U zaštitnome arheološkom istraživanju 2013. godine pronađeno je ukupno šest predmeta izrađenih od školjki.

UKRASI OD ŠKOLJKI S LOKALITETA HERMANOV VINOGRAD

U zbirci predmeta s lokaliteta Hermanov vinograd u Arheološkom muzeju u Osijeku danas se čuva sedamnaest ukrasa od školjki, koji su pronađeni tijekom ovih istraživanja (Tablica 1). Prisutne su importirane morske školjke, ali i lokalno dostupne riječne školjke. Jasan arheološki kontekst može se opisati tek za nalaze iz istraživanja 2013. godine, jer je to istraživanje provedeno prema suvremenim metodama bilježenja pronalaska nalaza.

[40] ŠIMIĆ 2007.
[41] RAJKOVIĆ 2011: 27–30.
[42] LOS 2020.

115 m, its width varying between 0.80 m and 1 m. It was observed that the density of structures was much higher in the central part of the settlement, while towards its margins their number significantly decreased. Some of them also indicated several construction phases.[40] A small trial trench was dug in 2011 on the southeastern margin of the circular mound. A series of long, narrow channels oriented north–south as well as pillar holes were found. A part of a larger, deeper channel or ditch was excavated, whose size and orientation suggest that it was probably a part of the moat from some of the phases of the settlement at Hermanov Vinograd.[41]

Before the construction of the eastbound carriageway of the southern Osijek by-pass in 2013, rescue archaeological excavations were conducted over an overall surface area of 2,670 m². Numerous archaeological structures were found, indicating the existence of units of a residential and defensive character. An examination of the stratigraphy revealed four construction phases of the site; skeletal remains from Grave 2 were radiocarbon dated.[42] In archaeological rescue excavations in 2013, six artefacts made of shells were found.

SHELL ORNAMENTS FROM THE HERMANOV VINOGRAD SITE

The collection of artefacts from the Hermanov Vinograd site displayed in the Archaeological Museum in Osijek currently includes seventeen ornaments made of shells, which were uncovered during this campaign (Table 1). Represented were imported sea shells, but also locally available freshwater shells. A clear archaeological context can only be described for finds from the 2013 campaign, as the excavations were then conducted using modern find-recording methods.

[40] ŠIMIĆ 2007.
[41] RAJKOVIĆ 2011: 27-30.
[42] LOS 2020.

TABLICA 1. *Nalazi od Spondylus i Unio školjki sa lokaliteta Hermanov Vinograd* (izradile: S. Vitezović i D. Rajković)
TABLE 1 *Finds made of Spondylus and Unio shells from Hermanov Vinograd site* (made by S. Vitezović and D. Rajković)

Inv. broj. / Inv. No.	Godina / Year	Arheološki kontekst / Archaeological context	Dimenzije / Dimensions	Vrsta / Species	Tip nalaza / Type of object
AP-1455	1897	/	35 x 36 x 4 mm	Spondylus sp.	aplikacija
AP-1464	1897	/	28 x 32 x 3 mm	Spondylus sp.	aplikacija
AP-P-1987	1998	/	21 x 32 x 3 mm	Spondylus sp.	aplikacija
inv. 156397	2007	Sj 13	18 x 38 x 3 mm	Spondylus sp.	aplikacija
AP-1467	1897		26 x 16 x 3 mm	Unio sp.	aplikacija
AP-1465	1897		25 x 11 x 3 mm	Unio sp.	aplikacija
AP-1454	1897	/	29 x 32 x 3 mm	Spondylus sp.	aplikacija
PN-20	2013	Sj 27 - kanala	24 x 32 x 4 mm	Spondylus sp.	aplikacija
PN-22	2013	Sj 43 - kulturni sloj -I. faza	25 x 32 x 4 mm	Spondylus sp.	aplikacija
PN-353	2013	Sj195-kulturni sloj II. faza	30 x 38 x 5 mm	Spondylus sp.	aplikacija
AP-1452	1897		65 x 3 mm	Unio sp.	aplikacija ili nedovršeni predmet
PN-518	2013	Sj 340-zid objekta 10	29 x 32 x 3 mm	Unio sp.	moguće fragmentirani ili nedovršeni predmet
Ap-1457	1897	/	70 x 33 x 5 mm	Spondylus sp.	narukvica
inv. 156132	2007	Sj 92	47 x 32 x 6 mm	Spondylus sp.	narukvica
PN-196	2013	Sj 103-kulturni sloj-hodna površina II. faza	60 x 31 x 4 mm	Spondylus sp.	narukvica
PN-409	2013	Sj 623-kulturni sloj	64 x 31 x 5 mm	Spondylus sp.	narukvica
Ap-1476	1897	/	19 x 12 mm	Spondylus sp.	perlica
AP-1453	1897	/	80 x 20 x 5 mm	Spondylus sp.	privjesak
AP-1456	1897	/	33 x 36 x 4 mm	Spondylus sp.	privjesak
inv. 156377	2007	Sj 71	44 x 36 x 5 mm	Spondylus sp.	privjesak

Ukrasi od Spondylus *školjki*

Zastupljeno je nekoliko tipova ukrasa: 1) fragmentirane narukvice, odnosno predmeti u obliku obruča, 2) privjesci, s perforacijom na jednom kraju, načinjeni od fragmenata narukvica, 3) aplikacije, odnosno ukrasi ovalnoga ili nepravilnoga četverokutnog oblika, obično s dvjema perforacijama i 4) perlica, odnosno cilindrični ukras s vertikalnom perforacijom (Tablica 1).[43]

Narukvice, odnosno ukrasi u obliku zatvorenog obruča izrađivali su se od valve školjke tako što bi se uklonio centralni dio dok se ne

[43] Za tipološku klasifikciju kod CAMPS-FABRER (ed.) 1991; IFANTIDIS 2019; VITEZOVIĆ, ANTONOVIĆ 2020.

Decorations made from Spondylus *shells*

Represented are several types of ornament: 1) fragmented bracelets, or hoop-shaped objects; 2) pendants with a perforation at one end, made of bracelet fragments; 3) appliqués or ornaments of oval or irregular rectangular shape, usually with two perforations; and 4) beads or cylindrical ornaments with a vertical perforation (Table 1).[43]

The bracelets, or ornaments in the form of a closed hoop, were made from shell valves by removing the central part until the desired bracelet shape was obtained. Usually, the ven-

[43] For a typological classification, cf. CAMPS-FABRER (ed). 1991; IFANTIDIS 2019; VITEZOVIĆ, ANTONOVIĆ 2020.

dobije željena forma narukvice. Obično bi se prvo ostrugali ventralni rubovi školjke, potom bi se struganjem vanjske površine stanjila debljina školjke, nakon čega bi se formirala rupa, struganjem ili bušenjem, koja bi se dalje proširila perkusijom, sve dok se ne dobiju željeni oblik i dimenzije narukvice. Finalni se oblik dobivao struganjem i glačanjem pomoću nekog abrazivnog kamenog alata, ili pomoću pijeska i tkanine.[44]

Ukupno je pronađeno četiri fragmenta narukvica, a svi su oštećenih krajeva (AP-1457, inv. 156132, PN-196, PN-409, sl. 2/5, 6; 3/2). Uglavnom su mliječno bijele boje, s manjim tragovima crvene. Tragovi obrade nisu očuvani, dok se može uočiti izvjesna ispoliranost i uglačanost od korištenja. Ovi su predmeti vrlo vjerojatno korišteni zaista kao narukvice, o čemu svjedoče njihove dimenzije, primjerene za nošenje na zglobu ruke. Također, poznati su nalazi cijelih narukvica u grobnim cjelinama – takve su narukvice nađene u grobovima istraženim krajem 19. stoljeća u Vukovaru,[45] a također su poznate s lokaliteta Botoš – Živanića Dolja u Banatu,[46] Cernica[47] i Chirnogi-Şuviţa[48] u Rumunjskoj, Kisköre-Gát[49] u Mađarskoj, između ostalih.

Nekoliko fragmenata narukvica je naknadno modificirano dodavanjem perforacije; odnosno, nakon loma su reciklirane u novi oblik ukrasa (AP-1453, AP-1456, inv. 156377, sl. 3/1, 3-4). Tako predmet inv. AP-1453 ima perforaciju na jednom kraju, R = 5 mm, koja je dobivena bušenjem kremenim svrdlom i dijelom istrošena od uporabe (sl. 3/1). Na sredini predmeta primjećuje se plitak žlijeb – možda trag uporabe, a možda i početak rezanja da se od ovog fragmenta načine dva. Predmet inv. AP-1456 je manjih dimenzija, s perforacijom koja također ima tragove istrošenosti (sl. 3/4).

tral edges of the shell were scraped first; then the shell was thinned by scraping the outer surface; after that, a hole was formed by scraping or drilling; it was then further expanded by percussion until the desired shape and size of the bracelet were obtained. The final shape was obtained by scraping and smoothing using an abrasive stone tool or sand and cloth.[44]

In total, four bracelet fragments were found, all of which had damaged ends (AP-1457, inv. 156132, PN-196, PN-409, Fig. 2/5, 6; 3/2). They were mostly milky-white, with minor traces of red. Traces of workmanship have not been preserved, although polishing and smoothing as a result of use can be observed. These items were probably indeed used as bracelets, as evidenced by their size, suitable for wearing on the wrist. What is more, finds of whole bracelets are known in collective burials: such bracelets were found in graves excavated in the late 19th century in Vukovar[45] and are also known from the sites of Botoš – Živanića Dolja in Banat,[46] Cernica[47] and Chirnogi – Şuviţa[48] in Romania, and Kisköre – Gát in Hungary,[49]among others.

Several bracelet fragments were subsequently modified by the adding of perforations; that is, after being fractured they were recycled into a new form of ornament (AP-1453, AP-1456, inv. 156377, Fig. 3/1, 3-4). Thus, the artefact numbered AP-1453 in the inventory has a five-millimetre perforation at one end, drilled with a flint drill, and partly worn from use (Fig. 3/1). In the middle of the artefacts is a shallow groove – perhaps a trace of use, or possibly the beginning of a cut made to split the fragment in two pieces. The artefact numbered AP-1456 is somewhat smaller, with a perforation that also has use-wear traces (Fig. 3/4).

44 TSUNEKI 1989.
45 CHAPMAN, GAYDARSKA, BALEN 2012.
46 MARINKOVIĆ 2010.
47 SCHUSTER 2002.
48 MĂRGĂRIT, DIMACHE 2019.
49 TÓTH 2020.

44 TSUNEKI 1989.
45 CHAPMAN, GAYDARSKA, BALEN 2012.
46 MARINKOVIĆ 2010.
47 SCHUSTER 2002.
48 MĂRGĂRIT, DIMACHE 2019.
49 TÓTH 2020.

Ovi reciklirani ukrasi imaju intenzivne tragove uporabe,[50] i mogli su biti samostalno nošeni kao dio nakita (ogrlice, narukvice), kombinirani s drugim privjescima ili biti prišiveni na odjeću.

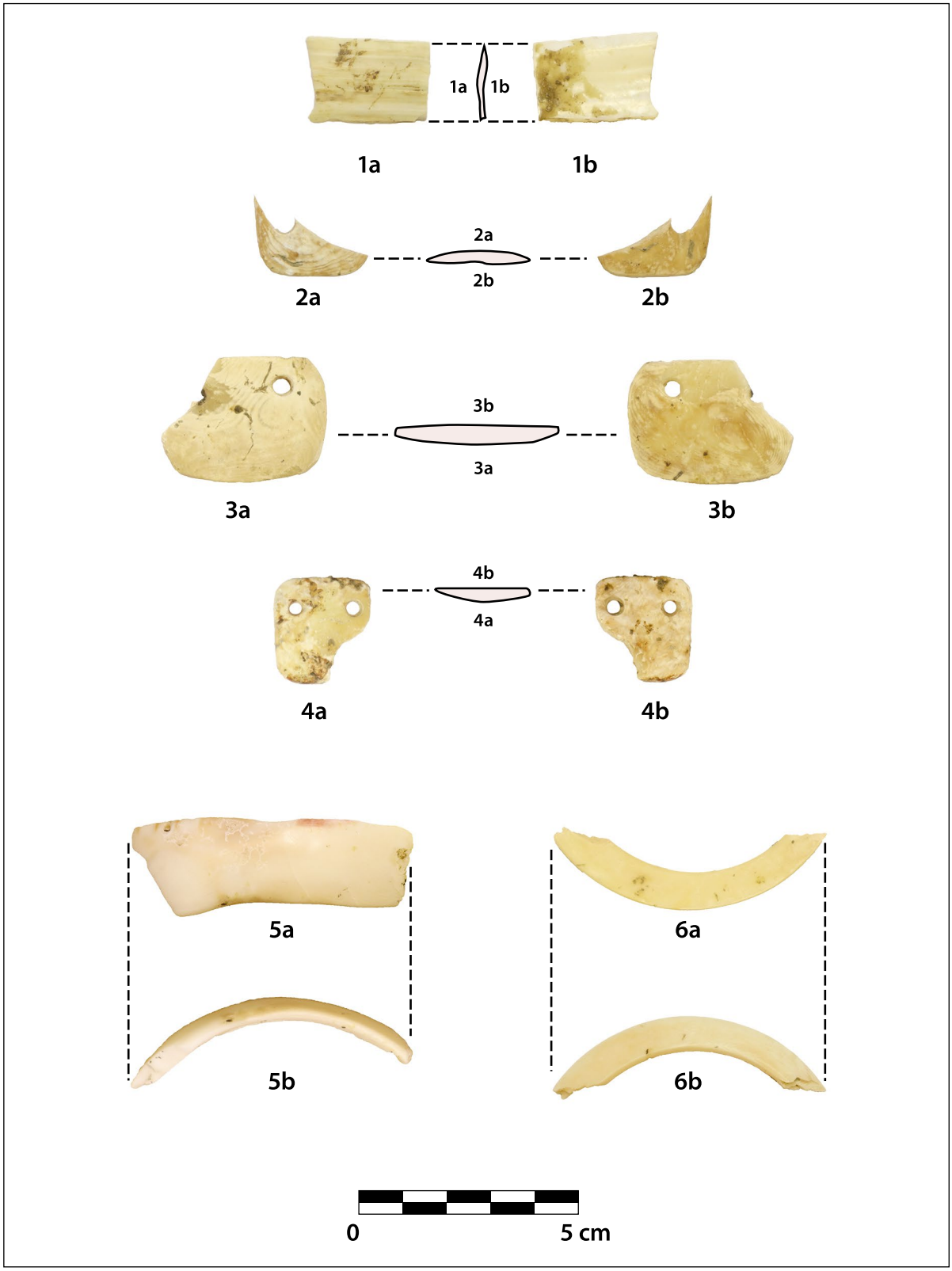
Kao što je već napomenuto, narukvice izrađivane od segmenata valvi školjki *Spondylus* i *Glycymeris* sp. bile su među najrasprostranjenijim ukrasnim predmetima tijekom neolitika i eneolitka u većem dijelu Europe. Sreću se na lokalitetima u Grčkoj, kao što su Dikili Tash,[51] Dispilio,[52] ili Sitagroi,[53] na jadranskoj obali, na lokalitetima kao što je Benkovac – Barice,[54] potom u Bugarskoj, na lokalitetima poput Karanova,[55] Yabalkova,[56] Nove Nadezhde,[57] zatim, na lokalitetima Vinča – Belo Brdo,[58] Vitkovo,[59] Selevac,[60] Potporanj[61] u Srbiji, Cerje –Govrlevo[62] u Sjevernoj Makedoniji, Alba Iulia – Lumea Nouă,[63] Cernica,[64] Chirnogi-Şuviţa,[65] Cernavodă – Columbia D,[66] Parţa[67] u Rumunjskoj, na lokalitetima Kisköre-Gát[68] i Alsónyék[69] u Mađarskoj, i mnogim drugim (također v. gore). U Slavoniji narukvice od *Spondylusa* dosad su otkrivene na lokalitetima Čepin – Ovčara[70] i Kneževi vinogradi[71]. Ove se narukvice često nalaze fragmentirane kada je riječ o nalazima iz naselja, dok se cijele narukvice mogu naći u grobnim cjelinama, koje svjedoče da su u pitanju zaista bili osobni

These recycled ornaments have traces suggesting their frequent use[50]; they could have been worn independently as part of jewellery pieces (necklaces and bracelets) or combined with other pendants, or sewn onto clothes.

As already mentioned, bracelets made from valve segments of the *Spondylus* and *Glycymeris* sp. shells were among the most widespread ornamental objects during the Neolithic and Aeneolithic in most of Europe. They are found at sites such as Dikili Tash,[51] Dispilio,[52] and Sitagroi[53] in Greece; at sites such as Benkovac – Barice[54] on the Adriatic coast; at sites such as Karanova,[55] Yabalkova and[56] Nove Nadezhde[57] in Bulgaria; at the sites of Vinča – Belo Brdo,[58] Vitkovo,[59] Selevac and[60] Potporanj[61] in Serbia; at Cerje – Govrlevo[62] in Northern Macedonia; Alba Iulia – Lumea Nouă,[63] Cernica,[64] Chirnogi – Şuviţa,[65] Cernavodă – Columbia D and[66] Parţa[67] in Romania; at sites of Kisköre – Gát[68] and Alsónyék[69] in Hungary; and many more (see also above). In Slavonia, *Spondylus* bracelets have been discovered at the sites of Čepin – Ovčara[70] and Kneževi Vinogradi[71]. The bracelet finds are often fragmented when recovered from settlements, while in collective burials whole bracelets are unearthed, suggesting that they were indeed personal ornaments

50 Analiza prema d'ERRICO 1993: BONARDIN 2009.
51 KARALI YANNACOPOULOS 1992: 163f, Pl. 207/g, h.
52 IFANTIDIS 2019: 350–358.
53 NIKOLAIDOU 2003: 338, Pl. 9/2–6.
54 KUKOČ 2012.
55 BĂČVAROV, 2002: Taf. VII.2/11.
56 VASILEVA, HADZHIPETKOV 2014: Fig. 3d, k.
57 VITEZOVIĆ et al. 2017.
58 DIMITRIJEVIĆ, TRIPKOVIĆ 2002; 2006.
59 VITEZOVIĆ 2016.
60 RUSSELL 1990.
61 MILLEKER 1938: 47–48.
62 FIDANOSKI 2012.
63 MĂRGĂRIT et al. 2020.
64 SCHUSTER 2002.
65 MĂRGĂRIT, DIMACHE 2019.
66 MĂRGĂRIT 2012.
67 SCHUSTER 2002.
68 TÓTH 2020.
69 OROSS et al. 2014: 154, 156.
70 RAJKOVIĆ 2014: 27, Cat. 65.
71 RAJKOVIĆ, VITEZOVIĆ 2020: 162, Fig. 7.

50 Analyses after d'ERRICO 1993: BONARDIN 2009.
51 KARALI YANNACOPOULOS 1992: 163f, Pl. 207/g, h.
52 IFANTIDIS 2019: 350-358.
53 NIKOLAIDOU 2003: 338, Pl. 9.2-6.
54 KUKOČ 2012.
55 BĂČVAROV, 2002: Taf. VII.2/11.
56 VASILEVA, HADZHIPETKOV 2014: Fig. 3d, k.
57 VITEZOVIĆ et al. 2017.
58 DIMITRIJEVIĆ, TRIPKOVIĆ 2002; 2006.
59 VITEZOVIĆ 2016.
60 RUSSELL 1990.
61 MILLEKER 1938: 47-48.
62 FIDANOSKI 2012.
63 MĂRGĂRIT et al. 2020.
64 SCHUSTER 2002.
65 MĂRGĂRIT, DIMACHE 2019.
66 MĂRGĂRIT 2012.
67 SCHUSTER 2002.
68 TÓTH 2020.
69 OROSS et al. 2014: 154, 156.
70 RAJKOVIĆ 2014: 27, Cat. 65.
71 RAJKOVIĆ, VITEZOVIĆ 2020: 162, Fig. 7.



Slika 2. *Ukrasi od Spondylus i Unio školjki pronađeni 2007. godine: 1) mogući poluproizvod od Unio školjke PN 518; 2) aplikacija PN 20; 3) aplikacija PN 353; 4) aplikacija PN 22; 5) narukvica PN 409 i 6) narukvica PN 196* (izradio: A. Lovrinčević)

Figure 2 *Ornament made of Spondylus and Unio shells found in 2007. 1) possible semi-finished product made of Unio shell; 2) appliqué PN 518; 3) appliqué PN 20; 4) appliqué PN 353; 5) bracelet PN 409; 6) bracelet PN 196* (made by A. Lovrinčević)

ukrasi i da su korištene kao narukvice.[72]

Narukvice od *Spondylus* školjki katkad su nakon loma reciklirane, odnosno, pretvorene u neki drugi oblik ukrasnih predmeta, najčešće dodavanjem perforacije. Na primjer, na lokalitetu Vinča – Belo Brdo,[73] gdje je nađen iznimno veliki broj ukrasnih predmeta od školjki, uočava se i nemali broj primjeraka fragmentiranih narukvica s perforacijom.

Drugi tip predmeta jesu aplikacije, ukupno osam primjeraka, uglavnom četverokutnog ili ovalnog oblika, različitog stupnja očuvanosti. Predmeti PN 20/2007 (sl. 2/2) i AP 156397 najviše su oštećeni; kod PN 20 samo je donji rub očuvan, dok je od AP 156397 očuvana otprilike polovica. Bolje su očuvani predmeti PN 22/2007 (sl. 2/4) i PN 353/2007 (sl. 2/3), AP-1454 i AP-1464, kojima su samo minimalno oštećeni krajevi, dok su AP-1455 i AP-P-1987 očuvani u cijelosti. PN 22 je četverokutna, s dvjema perforacijama smještenim na jednom (gornjem) kraju, dok je drugi kraj oštećen. PN 353 je četverokutne forme s blago zaobljenim krajevima, s dvjema perforacijama smještenim na jednom (gornjem) kraju – jedna je slomljena, dok je druga očuvana u cijelosti. Gotovo su identični AP-1454 i AP-1464, četverokutnog oblika, s po dvjema perforacijama na jednom (gornjem) kraju. AP-1455 je ovalne forme, a AP-P-1987 polukružne, ove aplikacije također imaju na jednom kraju dvije perforacije. Ove su pločice dobivene iz valve školjke; točan proces izrade nije moguće rekonstruirati, ali je finalna forma dobivena struganjem i glačanjem abrazivnim kamenim alatom.

Promjeri ovih perforacija su 3 – 4 mm, i dobivene su bušenjem kremenim svrdlom uz dodavanje pijeska.[74] Na svim se perforacijama mogu uočiti intenzivni tragovi korištenja; koncentrične linije koje nastaju tijekom bušenja su naglašeno uglačane, i sa zadnje strane

used as bracelets.[72]

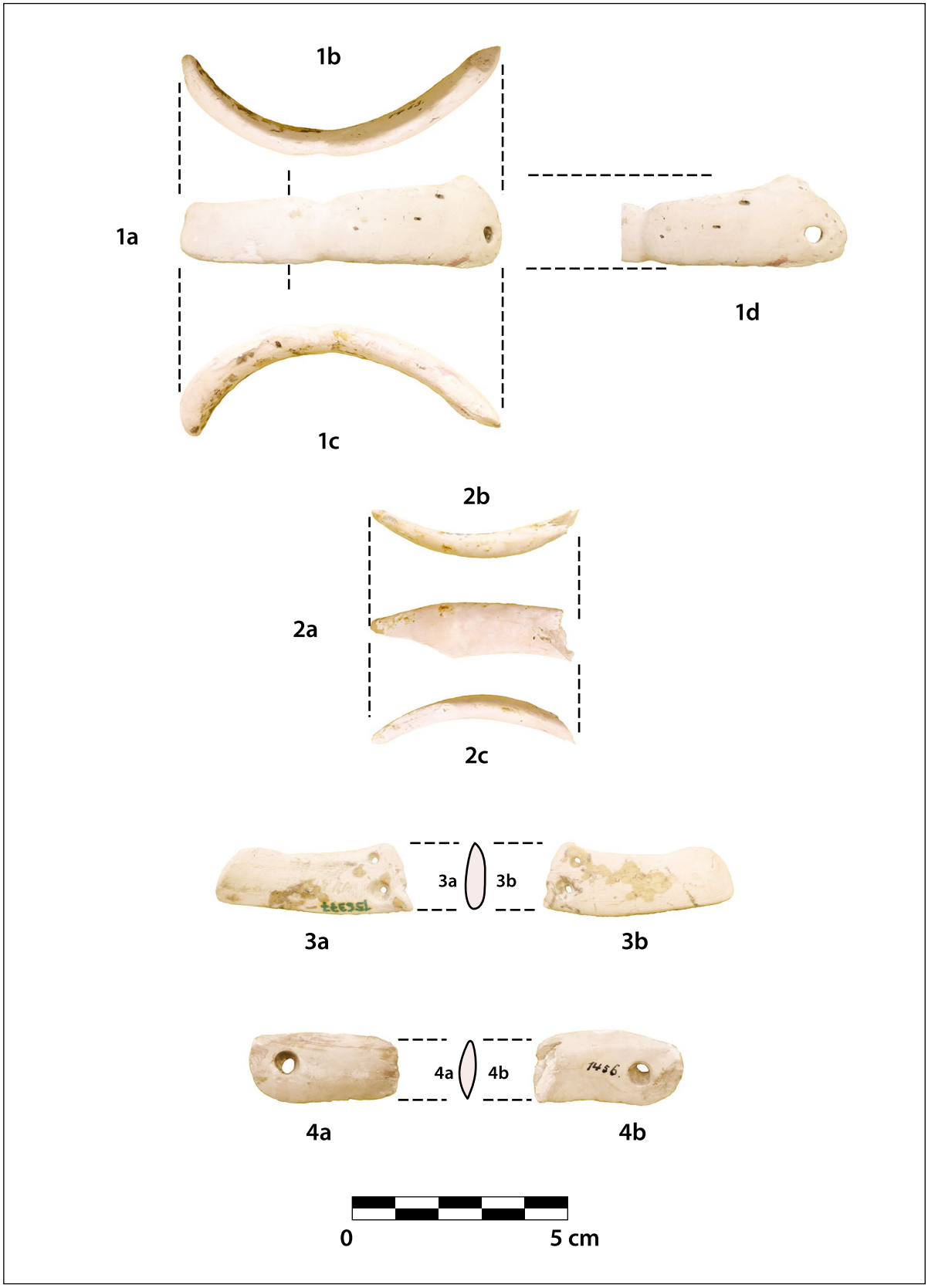
Spondylus shell bracelets were sometimes recycled after breaking, meaning that they were converted into another form of ornamental object, most often by the addition of a perforation. For example, at the Vinča – Belo Brdo site,[73] where an extremely large number of ornamental objects made from shells were found, a small number of specimens of fragmented bracelets with perforations were also recovered.

The second type of objects are appliqués, in total eight specimens, mostly rectangular or oval, in varying degrees of preservation. Artefacts PN 20/2007 (Fig. 2/2) and AP 156397 are the most damaged; PN 20 only has a preserved bottom edge, while approximately half of AP 156397 has been preserved. Better preserved are artefacts PN 22/2007 (Fig. 2/4) and PN 353/2007, AP-1454 and AP-1464, with only minimal damage at the ends, while AP-1455 and AP-P-1987 have been entirely preserved. PN 22 is rectangular, with two perforations located on one (the upper) end, while the other end is damaged. PN 353 is rectangular with slightly rounded ends and two perforations located on one (the upper) end; one of them is broken, while the other has been entirely preserved. Almost identical are AP-1454 and AP-1464: rectangular, each with two perforations at one (the upper) end. AP-1455 is oval, and AP-P-1987 semi-circular; these appliqués also have two perforations at one end. The plates were obtained from the shell valve; it was not possible to reconstruct their exact manufacture process, but the final form was obtained by scraping and smoothing with an abrasive stone tool.

The diameters of the perforations are 3–4 mm, and were obtained by drilling with a flint drill, adding sand.[74] Intensive use-wear traces can be observed on all perforations; concentric lines formed by drilling were obviously smoothed,

[72] Vidi gore.
[73] DIMITRIJEVIĆ, TRIPKOVIĆ 2006.
[74] SÉNÉPART, CHOI, GIOMI 2004.

[72] S. above.
[73] DIMITRIJEVIĆ, TRIPKOVIĆ 2006.
[74] SÉNÉPART, CHOI, GIOMI 2004.



Slika 3. *Ukrasi od Spondylus školjki: 1) privjesak AP-1453; 2) narukvica MSO-156132; 3) privjesak 156377; 4) privjesak AP-1456* (izradio: A. Lovrinčević)
Figure 3 *Ornament made of Spondylus shells: 1) pendant AP-1453; 2) bracelet MSO-156132; 3) pendant 156377; 4) pendant AP-1456* (made by A. Lovrinčević)

se može uočiti i izvjesna lateralna deformacija perforacija, koja pokazuje da ove aplikacije nisu bile obješene, već pričvršćene (prišivene) sa strane. Najbliže analogije ovim aplikacijama, po formi i po uočenim tragovima korištenja, nalazimo na lokalitetu Čepin – Ovčara, gdje je čak bilo moguće rekonstruirati položaj svake od nađenih aplikacija u odjevnom predmetu (pojasu) za koji su bile prišivene.[75] Razlika se uočava i na primjercima s Hermanova vinograda, međutim, kako nisu nađeni zajedno, za razliku od čepinskih ukrasa, nije moguće ustvrditi jesu li dio istoga, ili različitih ukrasnih predmeta.

Slične aplikacije poznate su i s lokaliteta Dispilio u Grčkoj,[76] a dosta su bliski i nalazi s lokaliteta Cernavodă – Columbia D[77] u Rumunjskoj, kao i nalazi s lokaliteta Obre[78] u Bosni i Hercegovini.

Pronađena je samo jedna fragmentirana perla, cilindrične forme, AP-1476. Očuvani su gornji i donji rub, odnosno puna duljina, s tim da je moguće da je u nekom trenutku bila i većih dimenzija, pa je poslije reciklirana. Perle od *Spondylus* školjki manje su učestale od drugih tipova nakita, ali su poznate s lokaliteta u Rumunjskoj,[79] dok je na lokalitetu Pločnik nađena jedna perla dosta velikih dimenzija.[80]

Ukrasi od Unio školjki

Predmeti inv. AP-1452, 1467 i 1465 izrađeni su od rječnih *Unio* školjki.

Predmet inv. AP-1452 izrađen je od gotovo cijele valve *Unio* školjke; na centralnom dijelu ima veću perforaciju, R = 18 mm. Vanjska je površina školjke strugana dok se nije formirala perforacija, blago nepravilnoga kružnog oblika. Tragovi uporabe nisu

[75] TRIPKOVIĆ, DIMITRIJEVIĆ, RAJKOVIĆ 2016: 349, sl. 7.
[76] IFANTIDIS 2019: 386.
[77] MĂRGĂRIT 2012: Fig. 12.
[78] MARIJANOVIĆ 1979.
[79] MĂRGĂRIT 2020.
[80] VITEZOVIĆ 2021b.

and on the back side, distinct lateral deformation of the perforations can be observed, suggesting that the appliqués were not hanging, but rather attached (sewn) to the side. The closest analogies to these appliqués, both in terms of form and the observed use-wear traces, were found at the Čepin – Ovčara site, where it was even possible to reconstruct the position of each of the recovered appliqués in the apparel item (a belt) to which they had been sewn.[75] The difference can be seen also on the specimens from Hermanov Vinograd; however, since they were not found together it was not possible to determine whether they were part of the same ornamental object, or of different ones, as could be demonstrated with the Čepin ornaments.

Similar appliqués are also known from the Dispilio[76] site in Greece, and quite similar are also finds from the Cernavodă – Columbia D[77] site in Romania, as well as the Obre site in Bosnia and Herzegovina.[78]

Only one fragmented bead of cylindrical form – AP-1476 – was found. The upper and lower edges have been preserved to their full length; possibly, at some point it had been larger and subsequently recycled. Beads from *Spondylus* shells are less common than other types of jewellery, but they are known from sites in Romania,[79] while at the Pločnik site, a single, comparatively large bead was found.[80]

Unio shell ornaments

The artefacts numbered AP-1452, 1467 and 1465 were made from *Unio* freshwater shells.

The artefact numbered AP-1452 was made from an almost entire *Unio* shell valve; in its central part it has a comparatively large 18-millimetre perforation. The outside shell surface was scraped until the perforation, of a

[75] TRIPKOVIĆ, DIMITRIJEVIĆ, RAJKOVIĆ 2016: 349, Fig. 7.
[76] IFANTIDIS 2019: 386.
[77] MĂRGĂRIT 2012: Fig. 12.
[78] MARIJANOVIĆ 1979.
[79] MĂRGĂRIT 2020.
[80] VITEZOVIĆ 2021b.

vidljivi. Moguće je da su lokalni majstori pokušali od *Unio* školjke napraviti ukrasni predmet koji bi nalikovao na *Spondylus* narukvice (premda bi bio znatno manjih dimenzija, odnosno ne bi bio primjeren za nošenje kao narukvica), ali nisu ga dovršili, te je ovaj ukras ostao neiskorišten ili je bio slabo korišten kao neka vrsta aplikacije. Slični nalazi poznati su iz Grčke, s lokaliteta Dispilio,[81] kao i iz Rumunjske, s lokaliteta Măgura Buduiasca.[82]

Ukras inv. AP-1452 dobiven je izrezivanjem valve *Unio* školjke; gotovo je pravokutnog oblika i ima na sredini manju perforaciju, R = 3 mm, dobivenu nepravilnim probijanjem i bušenjem. Tragovi korištenja su umjereni. Ukras inv. AP-1467 dosta je sličan, u obliku nepravilne polovice kruga, s manjom perforacijom u centralnom dijelu. Ova dva predmeta mogla su biti neka vrsta aplikacije na odjeći, sudeći po položaju i malim dimenzijama perforacija. Tragovi korištenja nisu naglašeni, premda je moguće i da nisu očuvani. Predmet PN 518 ima pravilnu četverokutnu formu i moguće je da predstavlja poluproizvod, odnosno nedovršeni predmet (sl. 2/1).

Ukrasni predmeti od *Unio* školjki manje su privlačili pozornost istraživača od predmeta od *Spondylusa*, tako da su i u manjoj mjeri publicirani. Također, s obzirom na to da su ove školjke nešto tanjih stijenki, te su zbog toga češće fragmentirane u depozitu, moguće je i da su manje primjećivane tijekom istraživanja. Međutim, u novije vrijeme sve su učestalije publikacije ukrasa od *Unio* školjki, na primjer s nekoliko lokaliteta u Rumunjskoj,[83] što pokazuje da su u prošlosti bile češće korištene nego što se čini na osnovi trenutačnog stanja istraživanja.

slightly irregular round shape, was formed. No use-wear traces are visible. Possibly the local craftsmen had tried to turn the *Unio* shell into an ornamental object resembling a *Spondylus* bracelet (although it would have been significantly smaller, or unsuitable for wearing as a bracelet), but did not complete it, leaving the ornament unused or poorly used as a sort of an appliqué. Similar finds are known from the Dispilio,[81] site in Greece, as well as Romania, from the Măgura Buduiasca site.[82]

The ornament numbered AP 1467 was obtained by cutting the *Unio* shell valve; it has an almost rectangular shape and a smaller, three-millimetre perforation in the middle, obtained by irregular punching and drilling. Use-wear traces are moderate. The ornament numbered AP-1465 is quite similar, in the form of an irregular semicircle, with a smaller perforation in the central part. The position and smallness of the perforations suggest that these two artefacts might have been some kind of appliqué on clothes. Traces of use are not particularly marked, although it is possible that they have not been preserved. Artefact PN 518, with a regular rectangular shape, possibly represents a semi-product or an unfinished object (Fig. 2/1).

Decorative objects made from *Unio* shells seem to have been less appealing to researchers than these of *Spondylus*, so they have tended to be less frequently published. In addition, these shells have somewhat thinner walls and are therefore more often found fragmented in the deposits; it is possible that they were less noticeable during excavations. Nevertheless, publications of ornaments made from *Unio* shells have recently become more frequent, for example, from several sites in Romania,[83] indicating that in the past they were used more often than research to date has suggested.

[81] IFANTIDIS 2019: 390–391.
[82] MĂRGĂRIT, MIREA, RADU 2018: Fig. 6/6.
[83] MĂRGĂRIT, MIREA, RADU 2018: MĂRGĂRIT 2020.

[81] IFANTIDIS 2019: 390–391.
[82] MĂRGĂRIT, MIREA, RADU 2018: Fig. 6/6.
[83] MĂRGĂRIT, MIREA, RADU 2018: MĂRGĂRIT 2020.

DISKUSIJA I ZAKLJUČNA RAZMATRANJA

Nalazi ukrasnih predmeta od ljuštura mekušaca s lokaliteta Hermanov vinograd donijeli su nove spoznaje o ovom tipu dekorativnih predmeta tijekom neolitika na teritoriju Hrvatske. Naime, mapa distribucije nalaza od *Spondylus* školjki proširena je ovim nalazima, a otkriveni su i ukrasi od *Unio* školjki. Izbor sirovina pokazuje dva modela nabave sirovina – dok su *Spondylusi* egzotičnog podrijetla, nabavljeni putem razmjene s veće udaljenosti, *Unio* školjke su, po svemu sudeći, nabavljene lokalno.

Pitanje podrijetla, odnosno putova razmjene preko kojih su *Spondylus* i druge morske školjke stigle do sopotskih zajednica u Slavoniji za sada mora ostati otvoreno, u nedostatku pouzdanijih podataka, prije svega kemijskih analiza. Jedna je mogućnost da su *Spondylus* nabavljali putem kontakata sa zajednicama vinčanske kulture sa centralnog Balkana, odnosno da je riječ o podunavskom i vardarsko-moravskom putu razmjene, s mogućim podrijetlom iz Egejskog mora. Nalazi *Spondylusa* su, kao što je već spomenuto, iznimno bogati na teritoriju današnje Grčke,[84] gdje su otkrivene i radionice,[85] kao i na teritoriju današnje Sjeverne Makedonije[86] i Srbije[87]. Druga mogućnost jest nabava ovih školjki preko kontakata sa srednjobosanskim poveznicama s područja jadranske obale,[88] gdje su prisutni nalazi i gotovog nakita i neobrađenih *Spondylus* školjki.[89] Na moguće jadransko podrijetlo upućivale bi veze Jadrana s balkanskim zaleđem iz vremena mezolitika, o čemu najbolje svjedoče nalazi iz pećine Zale

[84] NIKOLAIDOU 2003; IFANTIDIS 2019.
[85] TSUNEKI 1989.
[86] FIDANOSKI 2012.
[87] DIMITRIJEVIĆ, TRIPKOVIĆ 2002; 2006; VITEZOVIĆ 2016.
[88] TEŽAK GREGL 2001: 29; Također vidjeti KOMŠO et al. 2019. i VUKOSAVLJEVIĆ, KARAVANIĆ 2012 za razmjenu u ranijim razdobljima.
[89] KUKOČ 2012 s bilješkama.

DISCUSSION AND FINAL CONSIDERATION

Finds of mollusc-shell ornaments from the Hermanov Vinograd site shed a new light on this type of ornamental object in the course of the Neolithic period in the territory of present-day Croatia. Specifically, these artefacts expanded the distribution map of *Spondylus* shell finds, while ornaments made from *Unio* shells were also discovered. The selection of raw materials suggests two models of raw material purchasing – while the *Spondylus* is of exotic origin and was acquired via long-distance exchange, the *Unio* shells were, to all appearances, acquired locally.

In the absence of more reliable data, primarily chemical analyses, the question of origin, and in particular of the exchange routes via which *Spondylus* and other sea shells reached the Sopot communities in Slavonia, will have to remain open for the time being. One possibility is that *Spondylus* was obtained from the central Balkans through contacts with the communities of the Vinča culture, possibly via the Danube and Vardar – Morava exchange routes, with a presumed origin in the Aegean Sea. *Spondylus* finds are, as previously mentioned, extremely abundant in the territory of present-day Greece,[84] where workshops were also discovered,[85] as well as in the territory of present-day North Macedonia[86] and Serbia.[87] Another possibility is that the shells were purchased through contacts with the central Bosnian links from the Adriatic coast,[88] where finds of both ready-made jewellery and unworked *Spondylus* shells have been confirmed.[89] The links between the Adriatic and the Balkan hinterland from the Mesolith-

[84] NIKOLAIDOU 2003; IFANTIDIS 2019.
[85] TSUNEKI 1989.
[86] FIDANOSKI 2012.
[87] DIMITRIJEVIĆ, TRIPKOVIĆ 2002; 2006; VITEZOVIĆ 2016.
[88] TEŽAK GREGL 2001: 29; cf. also KOMŠO et al. 2019. and VUKOSAVLJEVIĆ, KARAVANIĆ 2012 on exchange in the earlier periods.
[89] KUKOČ 2012, with references.

kod Ogulina, gdje je otkriven veliki broj perforiranh mekušaca *Lithoglyphus* sp., koji su slatkovodni i pripadaju podunavskom slivu, ali i morskih perforiranih mekušaca *Columbella* sp.[90] S druge strane, mekušci *Litoglyphus* sp. pronađeni su u pećini Vlaknu na Dugom otoku.[91]

Svakako, ove dvije mogućnosti nisu međusobno isključive, točnije, postoji mogućnost da su oba puta razmjene bila aktivna tijekom ovog perioda i da su prapovijesne zajednice u Slavoniji održavale žive veze trgovine i razmjene s različitim područjima.

Narukvice od *Spondylusa* su u prapovijesno naselje na Hermanovu vinogradu najvjerojatnije dospjele kao gotovi proizvodi (kao cijele narukvice), ali su tijekom korištenja fragmentirani, i moguće lokalno reciklirani, odnosno promijenjena im je forma i namjena dodavanjem perforacije na ciljanom fragmentu. J. Chapman sugerirao je hipotezu o namjernom lomljenju predmeta tijekom neolitika, gdje onda svaki fragment ima svoju simboličku vrijednost i novi život;[92] je li ovakva praksa rezultirala slomljenim nakitom od *Spondylusa* koji je nađen na Hermanovu vinogradu, ili je pak do loma došlo slučajno, zbog dugotrajnog korištenja, nije moguće odrediti sa sigurnošću. Nastavak korištenja predmeta i nakon loma (namjernog ili ne), i popravak, odnosno prenamjena fragmentirane narukvice u privjesak svakako svjedoči o tome da je riječ o jako cijenjenom predmetu. Simbolička vrijednost, opet, teško se može rekonstruirati; odnosno, ovaj je predmet mogao imati apotropejsku, profilaktičku, iscjeliteljsku, ali i ulogu pokazatelja statusa i/ili identiteta (pojedinca ili grupe).

Prisustvo većeg broja četverokutnog/ovalnog oblika aplikacija s dvjema perforacijama na Hermanovu vinogradu, zajedno s nalazic period also point to possible Adriatic origin, as best confirmed by finds from the Zala cave near Ogulin, where a large number of not only perforated *Lithoglyphus* sp. molluscs (which are freshwater and native to the Danube basin) were recovered, but also perforated *Columbella* sp. sea molluscs.[90] On the other hand, *Lithoglyphus* sp. molluscs were unearthed in Vlakno cave on Dugi Otok.[91]

Of course, these two models need not be mutually exclusive; it is possible that both exchange routes were active during this period, and that prehistoric communities in Slavonia maintained active trade and exchange links with different regions.

Spondylus bracelets most likely arrived at the prehistoric settlement at Hermanov Vinograd as finished products (whole bracelets), but were fragmented through use and possibly locally recycled, in the sense that they were reshaped and repurposed by adding perforations on the target fragments. J. Chapman proposed a hypothesis of the deliberate fracture of the objects during the Neolithic period, where each fragment was given a symbolic value and a new life;[92] it is not possible to determine with certainty whether the fragmented *Spondylus* jewellery found at Hermanov Vinograd was a result of this practice or whether the fractures occurred accidentally, with prolonged use. The continued use of objects after their (intentional or unintentional) fracturing and the repurposing of fragmented bracelets into pendants certainly confirm that these were highly valued objects. Again, it is difficult to reconstruct the symbolic value of the objects; they might have had an apotropaic, prophylactic or healing purpose, but might just as well have served as symbols of status and/or identity (of individuals or groups).

The large number of rectangular/oval forms of appliqués with two perforations at Hermanov Vinograd, along with finds from Čepin

90 VUKOSAVLJEVIĆ, KARAVANIĆ 2012; 2015.
91 CVITKUŠIĆ, RADOVIĆ, VUJEVIĆ 2018.
92 CHAPMAN 2000.

90 VUKOSAVLJEVIĆ, KARAVANIĆ 2012; 2015.
91 CVITKUŠIĆ, RADOVIĆ, VUJEVIĆ 2018.
92 CHAPMAN 2000.

ma s Čepin – Ovčare, pokazuje da je ovaj tip ukrasa (najvjerojatnije dio odjeće, točnije, pojasa) bio rasprostranjen među sopotskim zajednicama; možda je čak oslikavao lokalne grupne identitete.

Ukrasni predmeti od *Unio* školjki izrađeni su, po svemu sudeći, lokalno, od lokalnih zanatlija. Budući da je riječ o lakše dostupnim sirovinama u odnosu na *Spondylus*, može se postaviti pitanje predstavljaju li „jeftiniju", dostupniju zamjenu za skupocjeni, rijetki *Spondylus*, ili su ove školjke iskorištene jer dijele sa *Spondylus* nakitom zajedničke odlike, kao što su podrijetlo iz vodenog svijeta, tvrdoća i sjajna površina, i/ili blistava bijela boja.[93]

***

Nakit je u prapovijesti nosio mnogo poruka, koje se, nažalost, teško mogu rekonstruirati iz fragmentiranih arheoloških ostataka. Sigurno je, međutim, da su ukrasni predmeti od školjki bili cijenjeni, važni predmeti tijekom cijele prapovijesti, uključujući i neolitički period. Ukrasi od *Spondylus* školjke, kojima se trgovalo u velikim dijelovima Europe, našli su svoj put i do prapovijesnih zajednica sopotske kulture u Slavoniji, gdje su intenzivno korišteni, prepravljani i imitirani u lokalnim sirovinama.

[93] O mogućem simboličkom značenju bijele boje u neolitiku vidjeti kod LUIK 2007; VITEZOVIĆ 2012; ANTONOVIĆ, VITEZOVIĆ, DIMIĆ 2018. D. BAR-YOSEF MAYER 2020 uočila je tri boje koje smatra bitnim pri izboru sirovina za izradu nakita, bijelu, crvenu i crnu.

– Ovčara, suggests that this type of ornament (most likely embellishment to apparel, mostly on belts) was widespread among the Sopot communities, perhaps even depicting local group identities.

It would appear that ornamental objects from *Unio* shells were made by local craftsmen. Since these raw materials were more easily accessible than the *Spondylus*, the question of whether they represented a "cheaper", more accessible substitute for the expensive and rare *Spondylus* arises, or whether these shells were used because they had other significant features in common with *Spondylus*, such as origins from the aquatic world, hardness and glossy surfaces, and/or a brilliant white colour.[93]

***

Jewellery in prehistoric times carried multiple messages; unfortunately, these can scarcely be reconstructed from fragmented archaeological remains. It is certain, however, that ornaments made of shells were highly valued, significant objects throughout prehistory, including the Neolithic period. Ornaments made from the *Spondylus* shell, traded in large parts of Europe, found their way also to the prehistoric Sopot culture communities in Slavonia, where they were intensively used, remodelled and even imitated in local raw materials.

[93] On the possible symbolic value of the colour white in the Neolithic cf. ANTONOVIĆ, VITEZOVIĆ, DIMIĆ 2018; LUIK 2007; VITEZOVIĆ 2012. D. BAR-YOSEF MAYER , 2020 noticed three colours that she considered significant in the selection of raw materials for jewellery: white, red and black.

Literatura / References

ÁLVAREZ-FERNÁNDEZ, E. 2005, La explotación y utilización de los moluscos marinos durante el Paleolítico superior y el Mesolítico en la Cornisa Cantábrica y en el Valle del Ebro: pasado y presente de la investigación. En Homenaje al Prof. Jesús Altuna. *Munibe Antropologia-Arkeologia*, 57, 5–14.

ÁLVAREZ-FERNÁNDEZ, E. 2010, Shell beads of the Last Hunther-Gatherers and Earliest Farmers in South-Western Europe, *Munibe Antropologia-Arkeologia*, 61, 129–138.

ÁLVAREZ-FERNÁNDEZ, E., JÖRIS, O. 2007, Personal Ornaments in the Early Upper Palaeolithic of Western Eurasia. An Evaluation of the record, *Eurasian Prehistory*, 5(2), 31–44.

ANTONOVIĆ, D., VITEZOVIĆ, S., DIMIĆ, V. 2018, Life in white: Symbolism and importance of the white colour in the Neolithic in the Balkans, u/in: *International Symposium of Arcaheology Vita est Vita 4. (Acta Musei Tiberiopolitani 2)*, Rujak, Z., Sekulov V., Cvetanov, D. (ur./eds.), Strumica: NI Institute for protection of cultural monuments and Museum Strumica, 26–37.

BĂČVAROV, K. 2002, Kleinfunde, u/in: *Karanovo, II. Die Ausgrabungen in O 19*, Hiller, S., Nikolov, V. (ur./eds.), Wien: Phoibos, 119–134.

BAJNÓCZI, B., SCHÖLL-BARNA, G., KALICZ, N., SIKLÓSI, ZS., HOURMOUZIADIS, G. H., IFANTIDIS, F., KYPARISSI-APOSTOLIKA, A., PAPPA, M., VEROPOULIDOU, R., ZIOTA, C. 2013, Tracing the source of Late Neolithic Spondylus shell ornaments by stable isotope geochemistry and cathodoluminescence microscopy, *Journal of Archaeological Science*, 40(2), 874–882, https://doi.org/10.1016/j.jas.2012.09.022.

BAR-YOSEF MAYER, D. 2020, Shell beads of the Middle and Upper Palaeolithic: A review of the earliest records, u/in: *Beauty and the eye of the beholder: Personal adornments across the millennia*, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 11–25.

BAR-YOSEF MAYER, D.E., GROMAN-YAROSLAVSK, I., BAR-YOSEF, O., HERSHKOVITZ, I., KAMPEN-HASDAY, A., VANDERMEERSCH, B., ZAIDNER, Y., MINA WEINSTEIN-EVRON, M. 2020, On holes and strings: Earliest displays of human adornment in the Middle Palaeolithic, *PLoS ONE*, 15(7), e0234924. https://doi.org/10.1371/journal.pone.0234924

BAYSAL, E. 2019, *Personal ornaments in prehistory. An exploration of body augmentation from the Palaeolithic to the Early Bronze Age*, Oxford: Oxbow Books.

BATOVIĆ, Š. 1966, *Stariji neolit u Dalmaciji*, Zadar: Arheološko društvo Jugoslavije, Arheološki muzej Zadar.

BONNARDIN, S. 2009, *La parure funéraire au Néolithique ancien dans les Bassins parisien et rhénan. Rubané, Hinkelstein et Villeneuve-Saint-Germain*, Paris: Mémoire XLIX de la Société Préhistorique Française.

BORRELLO, M. 2004, Le conchiglie nella preistoria e nella protostoria, *Preistoria Alpina*, suppl. 1, 40, 19–42.

BRUNŠMID, J. 1902, Nahođaji bakrenog doba iz Hrvatske i Slavonije i susjednih zemalja, *Vjesnik Hrvatskog arheološkog društva*, VI, 32–67.

BURIĆ, M. 2014, Bapska-Gradac, u/in: *Darovi zemlje – neolitik između Save, Drave i Dunava*, Balen, J., Hršak, T., Šošić Klindžić, R. (ur./eds), Zagreb, Osijek: Arheološki muzej u Zagrebu, Muzej Slavonije, Filozofski fakultet u Zagrebu, 9–11.

CAMPS-FABRER, H. (ur./ed.) 1991, *Fiches typologiques de l'industrie osseuse préhistorique. Cahier IV. Objets de parure*, Aix-en-Provence: Université de Provence.

CATTELAIN, P. 2012, Les parures au Paléolithique et au Mésolithique: coquillages, dents, os, ivoire et pierres, u/in: *La parure de Cro-Magnong à Clovis "Il n'y a pas d'Âge(s) - pour se faire beau"*, Catte-

lain, P., Bozet, N., Di Stazio, G.V. (ur./eds.), Paris: CEDARC, 7–35.
CELESTIN, V. 1897, Neolitska naseobina kraj Osijeka, *Vjesnik Hrvatskog arheološkog društva*, n.s. II, 104–107.
CHAPMAN, J. 1981, *The Vinča culture of South-East Europe, Studies in chronology, economy and society*, Oxford: BAR International Series S117, Archaeopress.
CHAPMAN, J. 2000, *Fragmentation in Archaeology: people, places and broken objects in the prehistory of south eastern Europe*, London: Routledge.
CHAPMAN, J., GAYDARSKA, B., BALEN, J. 2012, Spondylus ornaments in the mortuary zone at Neolithic Vukovar on the Middle Danube, *Vjesnik Arheološkog muzeja u Zagrebu*, 45(1), 191–210.
CHOYKE, A. M. 2010, The bone is the beast: Animal amulets and ornaments of power and magic, u/in: *Anthropological Approaches to Zooarchaeology: Colonialism, Complexity, and Animal Transformations*, Campana, D., Crabtree, P., de France, S., Lev-Tov, J., Choyke, A. M. (ur./eds.), Oxford and Oakville: Oxbow Books, 197–209.
CVITKUŠIĆ, B., RADOVIĆ, S., VUJEVIĆ D., 2018, Changes in ornamental traditions and subsistence strategies during the Palaeolithic-Mesolithic transition in Vlakno cave, *Quaternary International*, 494, 180–192, https://doi.org/10.1016/j.quaint.2017.08.053.
CVITKUŠIĆ, B., CRISTIANI, E., ZUPANCICH, A., VUJEVIĆ, D. 2024, Prehistoric ornaments in a changing environment. An integrated approach to the Late Upper Palaeolithic and Mesolithic Columbella rustica shells from the Vlakno cave, Croatia, *Journal of Archaeological Science,* 165, 105972, https://doi.org/10.1016/j.jas.2024.105972.
D'ERRICO, F. 1993, Identification des traces de manipulation, suspension, polissage sur l'art mobilier en os, bois de cervidés, ivoire, u/in: *Traces et function : les gestes retrouvés,* Anderson, P., Beyries, S., Otte, M., Plisson, H. (ur,/eds.), Études et recherches archéologiques de l'Université de Liège 50, Liège: Centre de Recherches Archéologiques du CNRS, Université de Liège, 177–188.
DIMITRIJEVIĆ, S. 1968, *Sopotsko-lenđelska kultura*, Zagreb: Monographiae Archaeologicae 1, Filozofski fakultet.
DIMITRIJEVIĆ, V., TRIPKOVIĆ, B. 2002, New Spondylus findings at Vinča–Belo Brdo 1998–2001 campaigns and the regional approach to problem, *Starinar*, n. s. 52, 48–62. https://doi.org/10.2298/STA0252047D
DIMITRIJEVIĆ, V., TRIPKOVIĆ, B. Spondylus and Glycymeris bracelets: trade reflections at Neolithic Vinča–Belo Brdo, *Documenta praehistorica*, 33, 237–252. https://doi.org/10.4312/dp.33.21
FIDANOSKI, LJ. 2012, *Cerje - Govrlevo i Milosh Bilbija*, Skopje: Muzej na grad Skopje.
HAUZEUR, A., CAUWE, N. 2012, La parure au Néolithique, u/in: *La parure de Cro-Magnong à Clovis "Il n'y a pas d'Âge(s) - pour se faire beau"*, Cattelain, P., Bozet, N., Di Stazio, G.V. (ur./eds.), Paris: CEDARC, 36–45.
HRŠAK, T., LOS, DŽ. 2014, Osijek-Filipovica – Hermanov vinograd, u/in: *Darovi zemlje – neolitik između Save, Drave i Dunava*, Balen, J., Hršak, T., Šošić Klindžić, R. (ur./eds), Zagreb, Osijek: Arheološki muzej u Zagrebu, Muzej Slavonije, Filozofski fakultet u Zagrebu, 38–42.
IFANTIDIS, F. 2019, *Practices of personal adornment in Neolithic Greece / Πρακτικες προσωπικης κοσμησης στη Νεολιθικη Ελλαδα)*, Oxford: Archaeopress.
JOHN, J. 2011, Status of Spondylus Artifacts within the LBK Grave Goods, u/in: *Spondylus in prehistory: New data and approaches – Contributions to the archaeology of shell technologies*, Ifantidis, F., Nikolaidou, M. (ur,/eds.), British Archaeological Reports, International Series 2216, Oxford: Archaeopress, 39–45.
KARALI YANNACOPOULOS, L. 1992, La coquille – Le matériel malacologique – La parure, u/in: *Dikili Tash, Village préhistorique de Macédoine orientale, I: Fouilles de Jean Desayes 1961–1975,*

Treuil, R. (ur,/ed.), Bulletin de Correspondance Hellénique, Suppl. 24, 159–164.
KOMŠO, D., 2007, Nakit na području Istre od paleolitika do neolitika, u/in: *Scripta praehistorica in honorem Biba Teržan (Situla 44),* Blečić, M., Črešnar, M., Hänsel, B., Hellmuth, A., Kaiser, E., Metzner-Nebelsick, C. (ur./eds.), Ljubljana: Narodni muzej Slovenije, 31–40.
KOMŠO, D., VUKOSAVLJEVIĆ, N., KARAVANIĆ, I., MIRACLE, P. 2019, Tragom puževa od obale ka unutrašnjosti i natrag: probušeni morski i slatkovodni puževi kao pokazatelj regionalnih sustava razmjene tijekom mezolitika u Hrvatskoj. *Histria archaeologica*, 50, 9–24.
KUKOČ, S. 2012, Spondylus gaederopus u neolitičkim kulturama na istočnom Jadranu, *Histria antiqua*, 21, 177–202.
LOS, DŽ. 2020, Rezultati zaštitnih arheoloških istraživanja lokaliteta AN 6 Hermanov vinograd 1 na trasi južne obilaznice grada Osijeka, *Annales Instituti Archaeologici*, XVI, 78–89.
LUIK, H. 2007, Dazzling white. Bone artefacts in Bronze Age society – some preliminary thoughts from Estonia, u/in: *Colours of archaeology. Material culture and society, Papers from the Second Theoretical Seminar of the Baltic Archaeologists (BASE), Held at the University of Vilnius, Lithuania, October 21–22, 2005*, Merkevičius, A. (ur./ed.), Vilnius: University of Vilnius, 49–64.
MĂRGĂRIT, M. 2012. Shell adornments from the Hamangia cemetery excavated at Cernavodă – Columbia D. Techno-typological analysis, u/in: *Homines, Funera, Astra Proceedings of the International Symposium on Funerary Anthropology 5-8 June 2011 '1 Decembrie 1918' University (Alba Iulia, Romania)*, Kogălniceanu, R., Curcă, R.-G., Gligor, M., Stratton, S. (ur./eds.), BAR International Series 2410, Oxford: Archaeopress, 97–106.
MĂRGĂRIT, M. 2020, Personal adornments in the Romanian Eneolithic: Local versus exotic raw materials, *Quaternary International*, 539, 49–61, https://doi.org/10.1016/j.quaint.2018.09.046
MĂRGĂRIT, M., DIMACHE, V. 2019, Personal adornments from the Eneolithic necropolis of Chirnogi-Suvita Iorgulescu (Romania): A picture of symbolism in prehistoric communities. *Documenta Praehistorica*, 46, 398–413. https://doi.org/10.4312/dp.46.25
MĂRGĂRIT, M., GLIGOR, M., RADU, V., BINŢINŢAN, A. 2020, About fragmentation, recycling and imitation in prehistory: adornments made of marine valves in the settlement of Alba Iulia – Lumea Nouă (Romania), u/in: *Beauty and the eye of the beholder: Personal adornments across the millennia*, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 299–321.
MĂRGĂRIT, M., MIREA, P., RADU, V., 2018, Exploitation of aquatic resources for adornment and tool processing at Măgura 'Buduiasca' ('Boldul lui Moş Ivănuş') Neolithic settlement (southern Romania), *Quaternary International*, 472, Part A, 49–59, https://doi.org/10.1016/j.quaint.2017.10.032
MARIJANOVIĆ, B. 1979, O položaju privjesaka od Spondylusa iz Obra, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n.s., XXXIV, 27–33.
MARIJANOVIĆ, B. 2009, *Crno Vrilo 1*, Zadar: Sveučilište u Zadru, Odjel za arheologiju.
MARINKOVIĆ, S. 2010, Arheološki materijal sa lokaliteta Živanićeva Dolja iz zbirke Narodnog muzeja u Zrenjaninu – vinčanska kultura, *Rad Muzeja Vojvodine*, 52, 21–36.
MICHELI, R. 2020, Items to display or to offer? Personal ornaments in Copper Age Northern Italy, u/in: *Beauty and the eye of the beholder: Personal adornments across the millennia*, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 121–150.
MILLEKER, F.1938, Vorgeschichte des Banats II. Das Neolithikum, *Starinar*, XIII, 102–166.
MÜLLER, J. 1997, Neolithische und chalkolithische Spondylusartefakte. Anmerkungen zu Verbreitung, Tauschgebiet und sozialer Funktion, u/in: *Beiträge zur prähistorischen Archäologie zwischen Nord- und Südosteuropa*. *Festschrift für Bernhard Hänsel*, Becker, C., Dunkelmann, M. L., Metzner-Nebelsick, C., Peter-Röcher, H., Roeder, M., Teržan, B. (ur./eds.), Espelkamp, 91–106.

NIKOLAIDOU, M. 2003, Items of adornment, u/in: *Prehistoric Sitagroi: Excavations in Northeast Greece, 1968–1970. Vol. 2: The final report.* Elster, E.S., Renfrew, C. (ur./eds.) Monumenta Archæologica 20, Los Angeles: Cotsen Institute of Archaeology, University of California, 331–60, 383–402.

OROSS, K., OSZTÁS, A., MARTON, T., KÖHLER, K., GÁBOR ÓDOR, J., SZÉCSÉNY-NAGY, A., BÁNFFY, E., ALT, K. W., BRONK RAMSY, C., KROMER, B., BAYLISS, A., HAMILTON, D., WHITTLE, A. 2013, The Midlife changes: the Sobot burial ground at Alsónyek, *Bericht der Römisch-Germanischen Kommision*, *Römisch-Germanische Kommission des Deutschen Archäologischen Instituts*, Band 94, 151–361.

RAJKOVIĆ, D. 2011, Osijek – Bistrička ulica, *Hrvatski arheološki godišnjak*, 8/2011, 27–30.

RAJKOVIĆ, D. 2014, Čepin-Ovčara / Tursko groblje, u/in: *Darovi zemlje – neolitik između Save, Drave i Dunava*, Balen, J., Hršak, T., Šošić Klindžić, R. (ur./eds), Zagreb, Osijek: Arheološki muzej u Zagrebu, Muzej Slavonije, Filozofski fakultet u Zagrebu Zagreb, Osijek, 22–28.

RAJKOVIĆ, D., VITEZOVIĆ, S. 2020. The Starčevo culture horizon at the site of Kneževi Vinogradi (eastern Croatia): lithic and osseous industries, *Documenta Praehistorica*, XLVII, 156–168. https://doi.org/10.4312/dp.47.9

RUSSELL, N. 1990, The bone tools, u/in: *Selevac: A Neolithic village in Yugoslavia*, Tringham, R., Krstić, D. (ur./eds) Monumenta Archaeologica, 15, Los Angeles: Cotsen Institute of Archaeology, University of California, 521–548.

SCHUSTER, C. 2002, Zu den Spondylus-Funde in Rumanien, *Thraco-Dacia*, 23(1–2), 37–84.

SÉFÉRIADÈS, M. L. 2010, *Spondylus* and long-distance trade in prehistoric Europe, u/in: *The lost world of Old Europe: The Danube Valley 5000–3500 BC*, Anthony, D. (ur./ed.), Princeton and Oxford: The Institute for the Study of the Ancient World & Princeton University Press, New York, 178–190.

SÉNÉPART, I., CHOI, S. Y., GIOMI, F. 2004, Fiche travail de l'os au Néolithique et au Chalcolithique dans le sud de la France, u/in: *Matières et techniques. Fiches de la Commission de nomenclature sur l'industrie de l'os préhistorique*, Cahier XI, Ramseyer, D. (ur./ed.), Paris: CNRS, 151–162.

SIKLOSI, ZS. 2004, Prestige goods in the Neolithic of the Carpathian basin: Material manifestations of social differentiation, *Acta Archaeologica Academiae Scientiarum Hungaricae*, 55, 1–62.

SIKLÓSI, ZS., CSENGERI, P. 2011, Reconsideration of Spondylus Usage in the Middle and Late Neolithic of the Carpathian Basinm, u/in: *Spondylus in prehistory: New data and approaches – Contributions to the archaeology of shell technologies*, Ifantidis, F., Nikolaidou, M. (ur,/eds.), British Archaeological Reports, International Series 2216, Oxford: Archaeopress, 47–62.

ŠIMIĆ, J. 1999, Osijek - Filipovica (Hermanov vinograd), zaštitno iskopavanje neolitičkog naselja, *Obavijesti Hrvatskog arheološkog društva*, XXX(1), 30–33.

ŠIMIĆ, J. 2007, *Hermanov vinograd, arheološko nalazište mlađeg kamenog doba u Osijeku*, Osijek: Arheološki muzej Osijek, Muzej Slavonije.

TABORIN Y. 1974, La parure en coquillages de l'Épipaléolithique au Bronze Ancien en France, *Gallia Préhistoire*, 17, 101–179, 307–417.

TABORIN Y. 1993, La parure en coquillages au Paléolithique, *Gallia-Préhistoire*, XXIXe suppl.

TEŽAK-GREGL, T. 2001, Veze između kontinentalne i primorske Hrvatske tijekom neo/eneolitika, *Opsucula archaeologica*, 25, 27–38.

TODOROVA, H., VAJSOV, I. 2002, *Der kupferzeitliche Schmuck Bulgariens.* Prähistorische Bronzefunde 20(6), Stuttgart: Steiner.

TÓTH, ZS. 2020, Mixing and matching social value: Personal adornments made from hard animal materials in the Late Neolithic burials of Kisköre-Gát (Hungary), u/in: *Beauty and the eye of the be-*

holder: Personal adornments across the millennia, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 383–397.

TRIPKOVIĆ, B., DIMITRIJEVIĆ, V., RAJKOVIĆ, D. 2016, Marine shell hoard from the Late Neolithic site of Čepin-Ovčara (Slavonia, Croatia), *Documenta Praehistorica*, 43, 343–362. https://doi.org/10.4312/dp.43.17

TSUNEKI, A. 1989, The manufacture of Spondylus shell objects at Neolithic Dimini, Greece, *Orient*, 25, 1–21.

VANHAEREN M., D'ERRICO, F., STRINGER, C., JAMES, S. L., TODD, J. A., MIENIS, H. K. 2006, Middle Palaeolithic Shell Beads in Israël and Algeria, *Science*, 312, 1785–1788.

VASILEVA, Z., HADZHIPETKOV, I. 2014, Ornaments, u/in: *Yabalkovo, volume 1. (Maritsa Project 2) Sofia*, Roodenberg, J., Leshtakov, K., Petrova, V. (ur/ds.), Sofia: ATE – Ars et Technica Explicatus, Sofia University "St. Kliment Ohridski", 409–414.

VITEZOVIĆ S., GORCZYK J., BACVAROV K. 2017, Exploitation of animal resources in the Early Neolithic of Thrace: preliminary results from the site of Nova Nadezhda, Bulgaria. *XIIIth International Meeting of ASWA (Archaeozoology of South West Asia)*, Nicosia, Cyprus, 7-9th June 2017, 53.

VITEZOVIĆ, S. 2016, The sea within: The use of mollusc shells as ornaments in the central Balkans Neolithic, u/in: *The sea within: the use of mollusc shells as ornaments in the central Balkans NeolithicCucuteni Culture within the European Neo-Eneolithic Context: Proceedings of the International Colloquium «Cucuteni – 130», 15–17 October 2014, Piatra-Neamţ, Romania. (In Memoriam dr. Dan Monah, In Memoriam dr. Gheorghe Dumitroaia),* Preoteasa, C., Nicola, C.-D. (eds.) Piatra-Neamţ: Constantin Matasă, 237–256.

VITEZOVIĆ, S. 2012, The white beauty – Starčevo culture jewellery, *Documenta Praehistorica*, 39, 91–203. https://doi.org/10.4312/dp.39.15

VITEZOVIĆ, S. 2021a, *Praistorijski lokalitet Pločnik kod Prokuplja: koštana industrija (istraživanja 1996–2011)*, Beograd: Arheološki institut.

VITEZOVIĆ, S. 2021b. Bone industry from Pločnik, u/in: *The Rise of Metallurgy in Eurasia. Evolution, Organisation and Consumption of Early Metal in the Balkans*, Radivojević, M., Roberts, B. W., Marić, M., Kuzmanović Cvetković, J., Rehren, T. (ur./eds.), Oxford, Archaeopress, 393–396. DOI: 10.32028/9781803270425.

VITEZOVIĆ, S., ANTONOVIĆ, D. 2020, Jewellery from osseous and lithic raw materials in the Vinča culture, u/in: *Beauty and the eye of the beholder: Personal adornments across the millennia*, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 87–100.

VUKOSAVLJEVIĆ, N., KARAVANIĆ, I. 2012, Morska malakofauna iz pećine Zale kao pokazatelj kontakata između istočnojadranske obale i unutrašnjosti tijekom kasnog gornjeg paleolitika i mezolitika, *Modruški zbornik*, 6, 3–15.

VUKOSAVLJEVIĆ, N., KARAVANIĆ, I. 2015, Kasnogornjopaleolitički i mezolitički ukrasi od probušenih morskih i slatkovodnih puževa iz špilje Zale, in/u: *Arheologija špilje Zale. Od paleolitičkih lovaca skupljača do rimskih osvajača*, Vukosavljević, N., Karavanić, I. (ur./eds.), Modruš: Katedra Čakavskog sabora Modruše, 157–174.

WILLMS, C. 1985, Neolitischer Spondylusschmuck. Hundert Jahre Forschung, *Germania*, 63(2), 331–343.

YELÖZER, S., CHRISTIDOU, C. 2020, The foot of the hare, the tooth of the deer and the shell of the mollusc: Neolithic osseous ornaments from Aşıklı Höyük (Central Anatolia, Turkey), u/in: *Beauty and the eye of the beholder: Personal adornments across the millennia*, Mărgărit, M., Boroneanţ, A. (ur./eds.), Târgovişte: Cetatea de Scaun, 197–222.

LASINJSKA KULTURA U BOSNI I HERCEGOVINI – U SVJETLU NALAZA BOČICE IZ VISOKOG BRDA U LUPLJANICI KOD DERVENTE

LASINJA CULTURE IN BOSNIA AND HERZEGOVINA – IN THE LIGHT OF A MINIATURE BOTTLE FIND FROM VISOKO BRDO IN LUPLJANICA NEAR DERVENTA

JACQUELINE BALEN

Arheološki muzej u Zagrebu
Archaeological Museum in Zagreb
Trg N. Šubića Zrinskog 19
HR-10000 Zagreb
jbalen@amz.hr

UDK: 903.23(497.6Derventa)"636"
DOI: 10.15291/archeo.4676
Stručni rad / Professional paper
Primljeno / Received: 2024-6-24
Prihvaćeno / Accepted: 2024-10-1

Ključne riječi:
lasinjska kultura, Bosna i Hercegovina, keramika, bočica

Na prostoru Bosne i Hercegovine ustanovljeno je vrlo malo lasinjskih lokaliteta te je taj prostor označen kao periferni prostor rasprostiranja ove kulture. Do sada je karakteristična lasinjska keramografija potvrđena na sedam lokaliteta u Bosni i Hercegovini: Zemunica u Radosavskoj kod Banjaluke, Visoko brdo u Lupljanici, Vis u Modranu kod Derventе, Donji Klakar kod Bosanskog Broda, Gornja Tuzla u Tuzli, Biograd u Pruscu kod Donjeg Vakufa i Stari grad Cazin. U radu se prikazuje nalaz bočice lasinjske kulture s lokaliteta Visoko brdo u Lupljanici kod Derventе, čime se potvrđuje važnost revizijskih istraživanja, kao i obrade nalaza sa starih istraživanja lasinjske kulture.

Key words:
Lasinja culture, Bosnia and Herzegovina, pottery, miniature bottle

Within the boundaries of Bosnia and Herzegovina, very few Lasinja-culture sites have been identified. The area has thus been categorised as a peripheral Lasinja-culture distribution zone. To date, Lasinja pottery characteristics have been confirmed at seven sites in Bosnia and Herzegovina: Zemunica in Radosavska near Banja Luka, Visoko Brdo in Lupljanica, Vis in Modran near Derventa, Donji Klakar near Bosanski Brod, Gornja Tuzla in Tuzla, Biograd in Prusac near Donji Vakuf and Cazin's Old Town. This paper presents the find of a miniature Lasinja-culture bottle from the Visoko Brdo site in Lupljanica near Derventa, confirming the importance of renewed excavations as well as of analysing Lasinja-culture finds from past excavations.

Bakreno doba na prostoru današnje Bosne i Hercegovine još uvijek je nedovoljno istraženo. Za poznavanje bakrenog doba Bosne i Hercegovine važan je rad nekolicine autora, A. Benca, B. Čovića, Z. Žeravice, B. Govedarice te B. Marijanovića.[1] U novije vrijeme povijest istraživanja bakrenodobnih kultura, s posebnim osvrtom na lasinjsku kulturu dala je D. Vajzović.[2]

Lasinjska kultura razmjerno je široko rasprostranjena – obuhvaća područje kontinentalne Hrvatske i Slovenije, sjeverne Bosne i Hercegovine, Štajerske, Koruške i južnog Gradišća u Austriji te mađarske Transdanubije. Lasinjska kultura pripada razdoblju srednjega bakrenog doba te je apsolutno kronološki datirana oko 4350. do 3950. god. pr. Kr. Formirala se na podlozi kasne sopotske i lenđelske kulture. Premda predstavnik bakrenog doba, ta je kultura po načinu života ostala vjerna tradicijama kasne faze mlađega kamenog doba.[3]

Na prostoru Bosne i Hercegovine ustanovljeno je vrlo malo lasinjskih lokaliteta te je taj prostor označen kao periferni prostor rasprostiranja ove kulture,[4] međutim, razlog tomu možda možemo tražiti u nedovoljnoj istraženosti kraja.

Do sada je karakteristična lasinjska keramografija potvrđena na sedam lokaliteta u Bosni i Hercegovini: Zemunica u Radosavskoj kod Banjaluke, Visoko brdo u Lupljanici, Vis u Modranu kod Dervente, Donji Klakar kod Bosanskog Broda, Gornja Tuzla u Tuzli,[5] Biograd u Pruscu kod Donjeg Vakufa,[6] te na Sta-

1 MARIJANOVIĆ 2003. U citiranoj knjizi nalazi se detaljna povijest istraživanja uz cjelokupan popis autora koji su se bavili bakrenim dobom na prostoru današnje Bosne i Hercegovine.

2 VAJZOVIĆ 2018.

3 BALEN 2008; ČATAJ 2018; 2019. U ovim radovima navedena je relevantna literatura za čitav prostor rasprostiranja lasinjske kulture.

4 BENAC 1980: 19.

5 Na nalazištu u Gornjoj Tuzli stratigrafska slika i položaj lasinjske kulture nisu sasvim jasni, na što je već upozorilo nekoliko autora, vidi: BENAC 1980: 16; BUDJA 1983: 78; MARKOVIĆ 1994: 20; BALEN, DRNIĆ 2014: 53.

6 VAJZOVIĆ 2018: 241. U radu se daje pregled šest nalazišta na kojima je ustanovljeno prisustvo lasinjske kulture. Autorica je izostavila lokalitet Cazin.

The Copper Age in the area of present-day Bosnia and Herzegovina has been insufficiently explored. The work of several authors – A. Benac, B. Čović, Z. Žeravica, B. Govedarica and B. Marijanović – is of importance for the understanding of the Copper Age there.[1] More recently, the history of research into Chalcolithic cultures, with special reference to the Lasinja culture, has been presented by D. Vajzović.[2]

The Lasinja culture was relatively widespread, occupying what is now continental Croatia and Slovenia, northern Bosnia and Herzegovina, Styria, Carinthia and southern Burgenland in Austria, as well as Hungarian Transdanubia. The culture belongs to the Middle Copper Age period and has been absolute-dated to around 4350 to 3950 BC. It developed from the Lengyel and late Sopot cultures and, despite emerging in the Aeneolithic period, in terms of lifestyle it remained faithful to late-stage Neolithic traditions.[3]

In present-day Bosnia and Herzegovina, very few Lasinja-culture sites have been identified, leading to the area's categorisation as a peripheral Lasinja-culture distribution zone.[4] However, this classification could equally be the result of the insufficient number of excavations in the area.

To date, Lasinja pottery characteristics have been confirmed at seven sites in Bosnia and Herzegovina: Zemunica in Radosavska near Banja Luka, Visoko Brdo in Lupljanica, Vis in Modran near Derventa, Donji Klakar near Bosanski Brod, Gornja Tuzla in Tuzla,[5] Bi-

1 MARIJANOVIĆ 2003. The cited book contains a detailed history of excavations, including a complete list of authors who have dealt with the Copper Age in the area of present-day Bosnia and Herzegovina.

2 VAJZOVIĆ 2018.

3 BALEN 2008; ČATAJ 2018; 2019. The works mention literature relevant to the entire Lasinja-culture distribution area.

4 BENAC 1980: 19.

5 The stratigraphic picture and position of Lasinja culture at the Gornja Tuzla site are not quite clear, as has been pointed out by several authors, s.: BENAC 1980: 16; BUDJA 1983, 78; MARKOVIĆ 1994: 20; BALEN, DRNIĆ 2014: 53.

rom gradu u Cazinu[7].

Iskopavanja na lokalitetu Visoko brdo u Lupljanici kod Dervente proveo je Đ. Basler 1958., 1959. te 1960 godine. Njegova objava uglavnom je bila orijentirana na paleolitičke nalaze iako je spomenuo i postojanje dvaju građevinskih kasnoneolitičkih slojeva.[8] Mlađe nalaze objavio je A. Benac smjestivši nalaze u kasni neolitik, odnosno povezao ih je s najmlađom fazom vinčanske kulture.[9] Materijal s druge strane povezuje i s postneolitičkim razdobljem i s Kanziaberg grupom u Austriji,[10] a smjer dolaska te grupe vidi sa sjevera, odnosno preko Save. Zanimljiva je i bilješka 53 u kojoj autor nalaze povezuje s lasinjskom kulturom i tako je zapravo i točno atribuira. Navodi također da se građa u mlađoj fazi, za koju daje i mali izbor nalaza na tabli IV, razlikuje po fakturi i ukrašavanju od keramičkog repertoara poznatog u tom dijelu Bosne.[11]

U objavi iz 1979. godine Benac nalazište Visoko brdo u Lupljanici kod Dervente pripisuje lasinjskoj kulturi.[12]

Keramički nalazi iz Visokog brda pripadaju karakterističnom repertoaru lasinjske kulture; prisutni su uglavnom dijelovi trbuha posuda i ručke od vrčeva ili šalica, a od ukrasa vidimo urezane motive kao i kombinaciju urezivanja i kratkih zareza i uboda. Zastupljene su i jezičaste aplikacije, koje su, nažalost, u objavi pogrešno okrenute.[13] Među građom koja se čuva u Zemaljskom muzeju Bosne i Hercegovine izdvojen je i jedan ulomak gornjeg dijela bočice (sl. 1; T. I).[14] Smatramo da je ulomak

7 RAUNIG 2001: 122–127.
8 BASLER 1962: 6.
9 BENAC 1964: 138.
10 BENAC 1964: 139.
11 BENAC 1964: 137.
12 BENAC 1980: 15.
13 BENAC 1964: T. IV/ 7, 9.
14 Neizmjernu zahvalu dugujem kolegama iz Zemaljskog muzeja Bosne i Hercegovine što su mi dopustili objavu bočice lasinjske kulture. Posebna hvala dr. sc. Ani Marić. Nalaz je izložen u stalnom postavu *Bosna i Hercegovina u prethistorijsko doba*, a pronađen je pri odabiru građe za stalni izložbeni postav. Za fotografiju bočice zahvalnost dugujem Adnanu Šahbazu, a za crtež Muhamedu Bešlagiću.

ograd in Prusac near Donji Vakuf[6] and Cazin's Old Town[7].

Excavation campaigns at the Visoko Brdo site in Lupljanica near Derventa were conducted by Đ. Basler in 1958, 1959 and 1960. Although he mentioned the existence of two Late Neolithic construction layers, his publication was mainly focused on Palaeolithic finds.[8] The earlier finds were published by A. Benac, who attributed them to the Late Neolithic and associated them with the final Vinča culture stage.[9] On the other hand, he associated the material also with the post-Neolithic period and the Kanzianiberg group in Austria,[10] and thought that the group had arrived from the north, across the River Sava. Also interesting is note 53, in which the author did correctly attribute the finds by associating them with Lasinja culture. In addition, he stated that the later-stage material, a small selection of which he also published in Plate IV, differed in fabric and decoration from the ceramic repertoire known from that part of Bosnia.[11]

In a 1979 paper, Benac attributed the Visoko Brdo site in Lupljanica near Derventa to Lasinja culture.[12]

Pottery finds from Visoko Brdo belong to the characteristic Lasinja-culture repertoire: fragments include mainly vessel belly parts and jug or cup handles; decorations include incised motifs, as well as a combination of incisions and short cuts and stitches. Tongue-shaped appliqués are also represented (in the plate unfortunately depicted upside down).[13] Notable among the material kept in the National Museum of Bosnia and Herzegovina is also a fragment of the upper part of a minia-

6 VAJZOVIĆ 2018, 241. The paper presents an overview of six sites at which the presence of Lasinja culture was identified. The author left out the Cazin site.
7 RAUNIG 2001: 122-127.
8 BASLER 1962: 6.
9 BENAC 1964: 138.
10 BENAC 1964: 139.
11 BENAC 1964: 137.
12 BENAC 1980: 15.
13 BENAC 1964: Pl. IV/ 7, 9.



Slika 1. *Ulomak keramičke bočice lasinjske kulture, Zemaljski muzej Bosne i Hercegovine, inv. br. 45242* (snimio: A. Šahbaz)
Figure 1 *Fragment of a miniature Lasinja-culture ceramic bottle, National Museum of Bosnia and Herzegovina, No. 45242* (photo by A. Šahbaz)

također objavljen u Benčevu radu, ali da je, kao i u slučaju jezičastih aplikacija, pogrešno okrenut.[15]

Bočice su karakterističan repertoar lasinjske kulture, međutim, zastupljene su i u nekim drugim pretpovijesnim kulturama, primjerice vinčanskoj i butmirskoj.[16] Stojan Dimitrijević bočice je datirao u IIa stupanj lasinjske kulture.[17]

Lasinjske su bočice posude manjih dimenzija čija je visina veća od maksimalnog promjera posude, često imaju vertikalno probušene ušice na rubu i prijelomu, a ukrašene su urezivanjem i/ili utiskivanjem. Lea Čataj razlikuje tri tipa bočica:[18]

B1. Bočice bikoničnog tijela s dvama parovima vertikalno probušenih ušica, ravnog i pločastog ruba usta. Često nose ukras;

[15] BENAC 1964: T. IV/ 2.
[16] KRAMBERGER, BERTHOLD, SPITERI 2021: 3, sl. 1–2.
[17] DIMITRIJEVIĆ 1979: 152–156.
[18] ČATAJ 2019: 100, 336–337.

ture bottle (Fig. 1; Pl. I).[14] Possibly the bottle fragment was also published in Benac's paper, but – as was the case with the tongue-shaped appliqués – it was reversed.[15]

Miniature bottles are characteristic of the Lasinja-culture repertoire, but they are also found in some other prehistoric cultures, such as Vinča and Butmir.[16] Stojan Dimitrijević dated the bottles to stage IIa of the Lasinja culture.[17]

The Lasinja miniature bottles are vessels of

[14] I am immensely grateful to my colleagues from the National Museum of Bosnia and Herzegovina for allowing me to publish the Lasinja-culture bottle. Special thanks go to Ana Marić, PhD. The find is part of the permanent exhibition of *Bosnia and Herzegovina in the Prehistoric Period* and was uncovered when selecting the material for the permanent exhibition. For the photo of the bottle, I owe gratitude to Adnan Šahbaz, and for the drawing to Muhamed Bešlagić.
[15] BENAC 1964: Pl. IV/ 2.
[16] KRAMBERGER, BERTHOLD, SPITERI 2021: 3, Figs. 1–2.
[17] DIMITRIJEVIĆ 1979: 152-156.

B2. Bočice izduženog bikoničnog tijela i dugog vrata s dvama parovima vertikalno probušenih ušica. Mogu biti ukrašene;

B3. Bočice širokog otvora. Imaju par vertikalno probušenih ušica uz rub.

Primjerak bočice iz Visokog brda pripao bi tako tipu B1. Riječ je o ulomku gornjeg dijela bočice s ušicama na bikoničnom prijelomu. Bočica je najvjerojatnije imala i dvije ušice na rubu, ali on je, nažalost, fragmentiran. Bočica je izrađena od nepročišćene gline, s vidljivim tragovima primjesa, te je ukrašena kratkim zarezima na bikoničnom prijelomu.[19] Nažalost, kontekst nalaza bočice ostaje nam nepoznat, jer nisu poznati, odnosno sačuvani, podatci o nalazu tijekom istraživanja.

U Visokom brdu pronađen je samo gornji dio bočice, što je često i na drugim nalazištima lasinjske kulture,[20] stoga ne iznenađuje da dio njih isprva i nije bio interpretiran kao bočice, već kao ulomak nekoga drugog tipa posude. Može se pretpostaviti stoga da bi se i njihov broj mogao povećati, te tako nadopuniti kartu rasprostranjenosti (sl. 2).

Zanimljivo je da se do nedavno smatralo da su bočice u sklopu lasinjske kulture karakterične isključivo za zapadne krajeve prostiranja lasinjske kulture,[21] međutim, nalazi bočice u Tomašancima kod Đakova,[22] kao i ovaj primjerak iz Visokog brda pomiču prostor rasprostranjenosti na istok te daju za pretpostavku da su bočice, uostalom kao i žlice, karakterističan oblik lasinjske keramografije za čitav prostor njezina rasprostiranja.

O funkciji bočica danas znamo zahvaljujući recentnim multidisciplinarnim istraživanjima na primjercima iz Slovenije koja su pokazala da su one najvjerojatnije korištene u kozmetici, a da su se nosile ovješene o pojas.[23] U analizama su identificirani minerali koji sadrže olovo kao

[19] Dimenzije bočice: visina originalnog ulomka: 4,5 cm, ukupna visina nakon rekonstrukcije: 10 cm, max. širina: 6 cm.

[20] KRAMBERGER, BERTHOLD, SPITERI 2021: sl. 3/ 2, 3, 5, 6.

[21] KRAMBERGER, BERTHOLD, SPITERI 2021: sl. 1.

[22] BALEN 2020: 122, T. 1/ 2.

[23] KRAMBERGER, BERTHOLD, SPITERI 2021.

smaller dimensions, whose height is larger than the vessel's maximum diameter, often with vertically pierced eyelets on the rim and transition, with incised and/or impressed decorations. L. Čataj distinguishes three types of bottles:[18]

B1. Miniature bottles with a biconic body and two pairs of vertically pierced eyelets, with a flat, straight mouth rim. These are often decorated;

B2. Miniature bottles with an elongated biconic body and a long neck with two pairs of vertically pierced eyelets. These are sometimes decorated;

B3. Wide-mouthed miniature bottles. These have a pair of vertically pierced eyelets along the rim.

The miniature bottle specimen from Visoko Brdo should thus be assigned to type B1. It is a fragment of the upper part of a miniature bottle with eyelets on the biconic transition. The bottle probably also had two eyelets on the rim, but unfortunately this is fragmented. The miniature bottle is made of unpurified clay, with visible traces of tempering, and is decorated with short incisions on the biconic transition.[19] Unfortunately, the context of the bottle find remains unknown, as no information about the find recorded in the course of the excavations has been preserved.

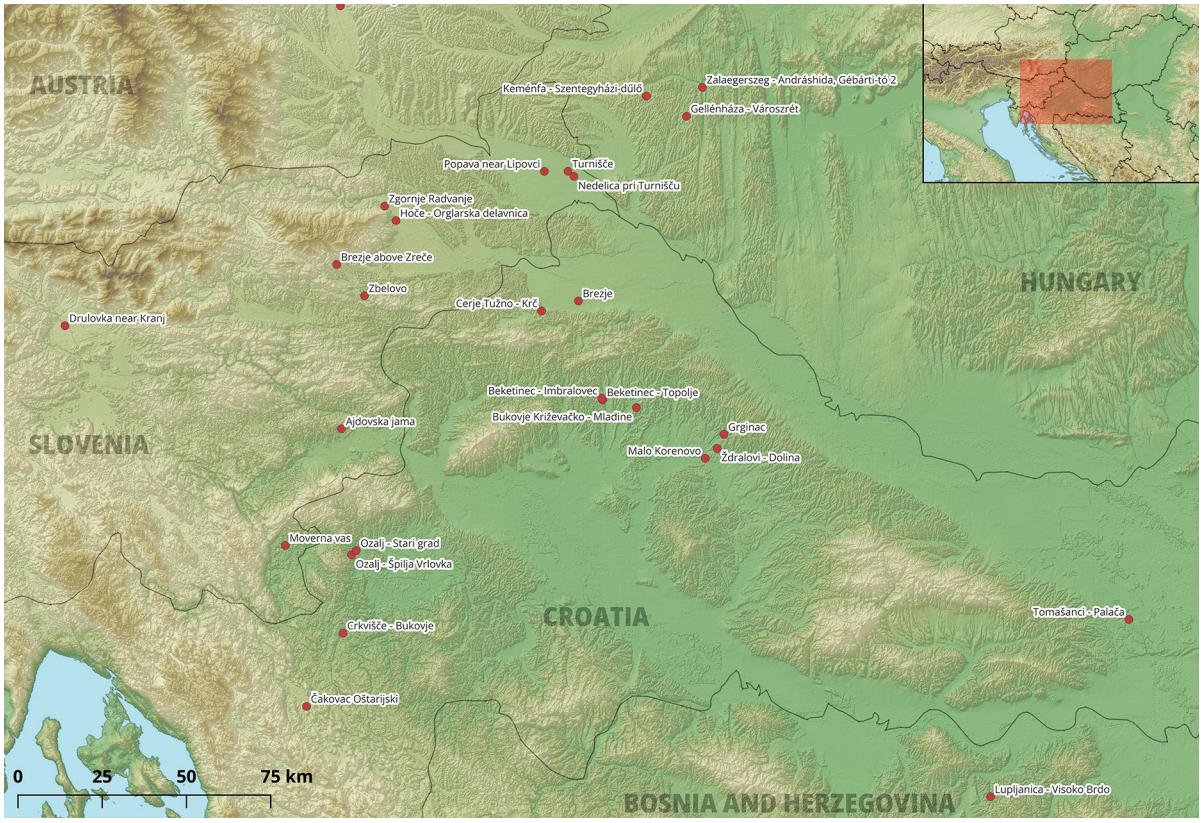
In Visoko Brdo only the upper part of a miniature bottle was found, as is often the case with finds at other Lasinja-culture sites,[20] therefore it comes as no surprise that some of these were initially not interpreted as bottles, but rather as fragments of other vessel types. Hence there is the possibility that the number of miniature bottles discovered could increase, thus complementing the distribution map (Fig. 2).

It is interesting that until recently it was

[18] ČATAJ 2019: 100, 336–337.

[19] Bottle size: height of original fragment: 4.5 cm, total height after reconstruction: 10 cm, max. width 6 cm.

[20] KRAMBERGER, BERTHOLD, SPITERI 2021: Fig. 3/ 2, 3, 5, 6.



Slika 2. *Karta rasprostiranja minijaturnih keramičkih bočica lasinjske kulture* (prema: Kramberger, Berthold, Spiteri 2021 i Čataj 2019; izradila: J. Boras)
Figure 2 *Map of the distribution of miniature Lasinja-culture ceramic bottles* (according to Kramberger, Berthold, Spiteri 2021 and Čataj 2019; map made by J. Boras)

i pčelinji vosak koji sugerira njegovu upotrebu kao organskog veziva, možda za stvaranje pigmenata za kozmetičke i/ili medicinske svrhe. S prostora Hrvatske analizirana je samo jedna bočica iz Beketinca pri čemu je utvrđena prisutnost organskih tvari u tragovima te nekih anorganskih kationa i aniona (kobalt, aluminij, cink, željezo), dok su spektri nuklearno magnetske rezonancije uputili na postojanje estera, čime se zaključilo da se u bočici najvjerojatnije držalo eterično ulje ili mirisi.[24]

Nalaz bočice s lokaliteta istraživanog daleke 1958. – 1960. godine potvrđuje nam da osim novih istraživanja, popraćenih apsolutnim datumima, i dalje važnu ulogu u sagledavanju neke pretpovijesne kulture imaju i revizija i obrada građe sa starih istraživamja, tako da bez objava nalaza sa starih istraživanja lasinjskih lokaliteta, po mogućnosti popraćenih re-

[24] HOMEN 1985; TEŽAK-GREGL 2007: 37–38.

considered that, within Lasinja culture, miniature bottles were characteristic exclusively of the western Lasinja-culture distribution areas;[21] however, bottle finds from Tomašanci near Đakovo,[22] along with the specimen from Visoko Brdo, extend the distribution area further east, suggesting that miniature bottles, as well as spoons, are a characteristic pottery form across the entire Lasinja-culture distribution area.

The function of the miniature bottles is now known, following recent multidisciplinary research of specimens from Slovenia, which suggested that they were most likely used in cosmetics, and that they were worn on belts.[23] Analyses identified minerals containing lead, as well as beeswax, probably used as an organic

[21] KRAMBERGER, BERTHOLD, SPITERI 2021: Fig. 1.
[22] BALEN 2020: 122, Pl. 1/ 2.
[23] KRAMBERGER, BERTHOLD, SPITERI 2021.

vizijskim istraživanjima, nije moguće donositi konačne zaključke o poziciji lasinjske kulture na prostoru današnje Bosne i Hercegovine.

Kako je dio minijaturnih lasinjskih bočica ustanovljen naknadnim pregledom građe, kao uostalom i bočica iz Visokog brda, može se pretpostaviti da će u konačnici i njihov broj biti veći od onog kojim do sada raspolažemo. Također, novi nalazi bočica, kao i revizija periodizacije lasinjske kulture te dobiveni apsolutni datumi sugeriraju da su bočice karakteristične za cjelokupno trajanje lasinjske kulure, a ne samo za stupanj IIa, kako je to S. Dimitrijević pretpostavio. O problemu unutarnje periodizacije lasinjske kulture prema S. Dimitrijeviću raspravlja se već neko vrijeme, te je nekolicina autora postavila pitanje je li moguće lasinjsku kulturu dijeliti na više faza isključivo na temelju keramičkih oblika i ukrašavanja ili oni ipak sugeriraju geografsku raznolikost, što dalje govori o prirodnoj smjeni stanovništva, odnosno pretapanju starijih, postojećih i novih kulturnih pojava u sklopu širih zbivanja.[25]

Sjevernobosanski prostor važan je u sagledavanju ne samo lasinjske kulture već i ostalih bakrenodobnih kultura, osobito onih iz razdoblja kasnoga bakrenog doba (badenska, kostolačka, vučedolska kultura). Ako je sjevernobosanski prostor i bio samo periferni prostor lasinjske kulture, još uvijek nemamo odgovor na pitanje kada se to dogodilo, jer, nažalost, ne posjedujemo radiokarbonske datume s bosanskohercegovačkih lasinjskih lokaliteta. Važnost bosanskohercegovačkih nalazišta sigurno možemo pretpostaviti zbog bogatstva različitim sirovinama (kamen, sol, bakrena ruda). Potraga za novim rudnim izvorima upravo je bila razlogom pokretanja migracije vučedolske kulture, i to radi održavanja metalurške tradicije koja je predstavljala jednu od važnijih grana ekonomske strukture.[26] Sigurno ne možemo

[25] ČATAJ 2019: 31–36. U doktorskoj radnji L. Čataj daje detaljan popis autora koji su se bavili temom problema unutarnje periodizacije lasinjske kulture, pa ih na ovome mjestu nećemo posebno navoditi.

[26] PRAVIDUR 2018.

binder, possibly for the creation of pigments for cosmetic and/or medical purposes. Only one miniature bottle from the area of present-day Croatia – Beketinac – has been analysed; the analysis pointed to the presence of trace organic substances, and some inorganic cations and anions (cobalt, aluminium, zinc, iron), while the spectra of nuclear magnetic resonance indicated the existence of esters, thus leading to the conclusion that the miniature bottle was most likely used to hold essential oils or fragrances.[24]

The miniature-bottle find from a site excavated as early as 1958–1960 confirms that in the consideration of a prehistoric culture, despite new excavations accompanied by absolute dates, the revision and analysis of material from past excavations still has an important role; thus, without the publication of finds from old excavations of Lasinja sites (preferably accompanied by renewed excavations), drawing final conclusions about the position of Lasinja culture in present-day Bosnia and Herzegovina would be impossible.

Given that some of the miniature Lasinja bottles were identified by subsequent inspection of the material (as was the case with the bottles from Visoko Brdo), it can be assumed that ultimately the number of identified specimens will be greater than hitherto. Also, new bottle finds, as well as a revision of the Lasinja-culture periodisation and the obtained absolute dates, suggest that miniature bottles are characteristic of the overall duration of the Lasinja culture, and not only of stage IIa, as had been assumed by S. Dimitrijević. Discussion of Dimitrijević's problematic internal periodisation of Lasinja culture has been ongoing for some time, and several authors have questioned whether it is actually possible to divide Lasinja culture into several stages solely on the basis of ceramic forms and decorations and furthermore whether these rather indicate geographical diversity, in turn suggesting nat-

[24] HOMEN 1985; TEŽAK-GREGL 2007: 37-38.

isto reći i za lasinjsku kulturu, ali ako znamo da je, prema dosadašnjem stupnju istraživanja, gospodarstvo lasinjske kulture bilo primarno orijentirano na stočarstvo, možemo pretpostaviti da je sol igrala važnu ulogu u životu nositelja lasinjske kulture, a isto možemo reći i za kamen kao sirovinu. Bakreno doba jest razdoblje kada se koristi širi spektar sirovina u odnosu na ranije razdoblje, a također, tijekom srednjega i kasnoga bakrenog doba dolazi do širenja mreže razmjene sirovina.[27]

Svakako, na dobivanje odgovora na sva ova pitanja, moramo pričekati neka buduća arheološka istraživanja lokaliteta lasinjske kulture na prostoru Bosne i Hercegovine.

[27] BARBIR 2018.

ural migrations of the population and overlapping of past, present and emerging cultural phenomena within a wider historical context.[25]

The northern Bosnian area is important for consideration not only of the Lasinja culture, but also other Chalcolithic cultures, especially those from the Late Copper Age (the Baden, Kostolac and Vučedol cultures). Even if the area of northern Bosnia was only a peripheral zone of Lasinja culture, we still do not know when, because unfortunately we have no radiocarbon dates from Lasinja sites in Bosnia and Herzegovina. The significance of Bosnian and Herzegovinian sites can certainly be assumed, on the basis of the richness of various raw materials (stone, salt, and copper ore). Precisely, the search for new ore sources was the main cause for the migration of Vučedol culture: in order to preserve the metallurgical tradition, which was one of its most important economic industries.[26] This certainly cannot be said of Lasinja culture; however, as contemporary research suggests that the Lasinja-culture economy was primarily oriented toward livestock breeding, we can assume that salt played an important role in the life of the practitioners of Lasinja culture, and this can also be said about stone as raw material. During the Copper Age a wider range of raw materials was used (in comparison to earlier periods), and in addition, during the Middle and Late Copper Age, the raw-material exchange network expanded.[27]

Before the answers to all these questions are obtained, we will obviously have to wait for some future archaeological excavations of Lasinja culture sites in Bosnia and Herzegovina.

Translation and proof-reading: ETNOtrend d. o. o.

[25] ČATAJ 2019: 31-36. In her doctoral thesis, L. Čataj presents a detailed list of authors who have addressed the issue of the internal periodisation of Lasinja culture, so we will not specifically list them here.

[26] PRAVIDUR 2018.

[27] BARBIR 2018.

Literatura / References

BALEN, J. 2008, Apsolutni datumi sa zaštitnih istraživanja na prostoru Slavonije kao prilog poznavanju kronologije srednjeg eneolitika / Absolute dates acquired from rescue excavations in Slavonija as a contribution to Middle Eneolithic chronology, *Vjesnik Arheološkog muzeja u Zagrebu*, XLI, 17–35.

BALEN, J. 2020, Naselja iz bakrenog doba / Settlements of the Copper age, u/in: *Tomašanci –Palača – naselja iz mlađega kamenog, bakrenog i brončanog doba / Tomašanci – Palača –Settlements of the Late Stone, Copper and Bronze Age*, Katalozi i monografije Arheološkog muzeja u Zagrebu, XVII, Balen, J. (ur./ed.), Zagreb: Arheološki muzej u Zagrebu, 111–155.

BALEN, J., DRNIĆ, I. 2014, Arheološka istraživanja na lokalitetu Barbarsko – novi prilog poznavanju srednjeg eneolitika na prostoru sjeverne Hrvatske / Archaeological excavations at Barbarsko – a new contribution to understanding of the Middle Copper Age in northern Croatia, *Vjesnik arheološkog muzeja u Zagrebu*, XLVII, 39–76.

BARBIR, A. 2018, Bakrenodobna kamena građa u kontinentalnoj Hrvatskoj / Copper age stone finds from continental Croatia, u/in: *Povratak u prošlost – Bakreno doba u sjevernoj Hrvatskoj / Back to the Past – Copper Age in Northern Croatia*, Balen, J., Miloglav, I., Rajković, D. (ur./eds.), Zagreb, Osijek: Arheološki muzej u Zagrebu, Filozofski fakultet Sveučilišta u Zagrebu, Arheološki muzej Osijek, 147–159.

BASLER, Đ. 1963, Paleolitska nalazišta u sjevernoj Bosni, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n.s., XVIII, 5–24.

BENAC, A. 1964, Prilozi za proučavanje neolita u sjevernoj Bosni, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n.s., XIX, 129–142.

BENAC, A. 1980, Eneolitsko doba u Bosni i Hercegovini (neka nova razmatranja), *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n.s., XXXIV (1979), 15–26.

BUDJA, M. 1983, Tri desetletja razvoja teorij o poznem neolitu in eneolitu severozahodne Jugoslavije, *Poročilo o raziskovanju paleolita, neolita in eneolita v Sloveniji*, XI, 73–83.

ČATAJ, L. 2018, Lasinjska kultura / The Lasinja Culture, u/in: *Povratak u prošlost – Bakreno doba u sjevernoj Hrvatskoj / Back to the Past - Copper Age in Northern Croatia*, Balen, J., Miloglav, I., Rajković, D. (ur./eds.), Zagreb, Osijek: Arheološki muzej u Zagrebu, Filozofski fakultet Sveučilišta u Zagrebu, Arheološki muzej Osijek, 25–47.

ČATAJ, L. 2019, *Geneza i razvoj lasinjske kulture na području središnje i gorske Hrvatske*, disertacija / PhD thesis, Zagreb: Sveučilište u Zagrebu, Filozofski fakultet. https://urn.nsk.hr/urn:nbn:hr:131:808639 (15. 9. 2024.)

DIMITRIJEVIĆ, S. 1979, Lasinjska kultura, u/in: *Praistorija jugoslavenskih zemalja. III. Eneolitsko doba*, Benac, A. (ur./ed.), Sarajevo: Svjetlost, Akademija nauka Bosne i Hercegovine, 137–181.

HOMEN, Z. 1985, Prilog proučavanju lasinjskih keramičkih bočica, *Muzejski vjesnik*, 8, 44–47.

KRAMBERGER, B., BERTHOLD, C., SPITERI, C. 2021, Fifth millennium BC miniature ceramic bottles from the south-eastern Prealps and Central Balkans: A multi-disciplinary approach to study their content and function, *Journal of Archaeological Science: Reports*, Volume 38, 102993. doi.org/10.1016/j.jasrep.2021.102993 (15. 9. 2024.)

MARIJANOVIĆ, B. 2003, *Eneolitik i eneolitičke kulture u Bosni i Hercegovini*, Mostar: Sveučilište u Mostaru, Pedagoški fakultet, Odsjek za arheologiju i povijest umjetnosti.

MARKOVIĆ, Z. 1994, *Sjeverna Hrvatska od neolita do brončanog doba: problem kontinuiteta stanovništva i kultura sjeverne Hrvatske od ranog neolita do početka brončanog doba*, Koprivnica: Muzej grada Koprivnice.

PRAVIDUR, A. 2018, Bakar u eneolitičkim kulturnim zajednicama Bosne i Hercegovine / Copper in eneolithic communities of Bosnia and Hercegovina, u/in: *Povratak u prošlost – Bakreno doba u sjevernoj Hrvatskoj / Back to the Past – Copper Age in Northern Croatia*, Balen, J., Miloglav, I., Rajković, D. (ur./eds.), Zagreb, Osijek: Arheološki muzej u Zagrebu, Filozofski fakultet Sveučilišta u Zagrebu, Arheološki muzej Osijek, 337–345.

RAUNIG, B. 2001, Prahistorijski nalazi na srednjovjekovnom gradu Cazin, *Glasnik Zemaljskog muzeja – Arheologija*, n.s., 48/49 (1996-2000), 115–163.

TEŽAK GREGL, T. 2007, Ponovo o lasinjskoj bočici iz Vrlovke, *Prilozi Instituta za arheologiju u Zagrebu*, 24, 35–40.

VAJZOVIĆ, D. 2023, Lasinjska kultura u Bosni i Hercegovini, u/in: *Arheološka istraživanja bjelovarsko-bilogorske županije i okolnih krajeva*, Izdanja Hrvatskog arheološkog društva, 32 (2018), Tončinić, D., Jakovljević, G. (ur./eds.), Zagreb: Hrvatsko arheološko društvo, 235–243.

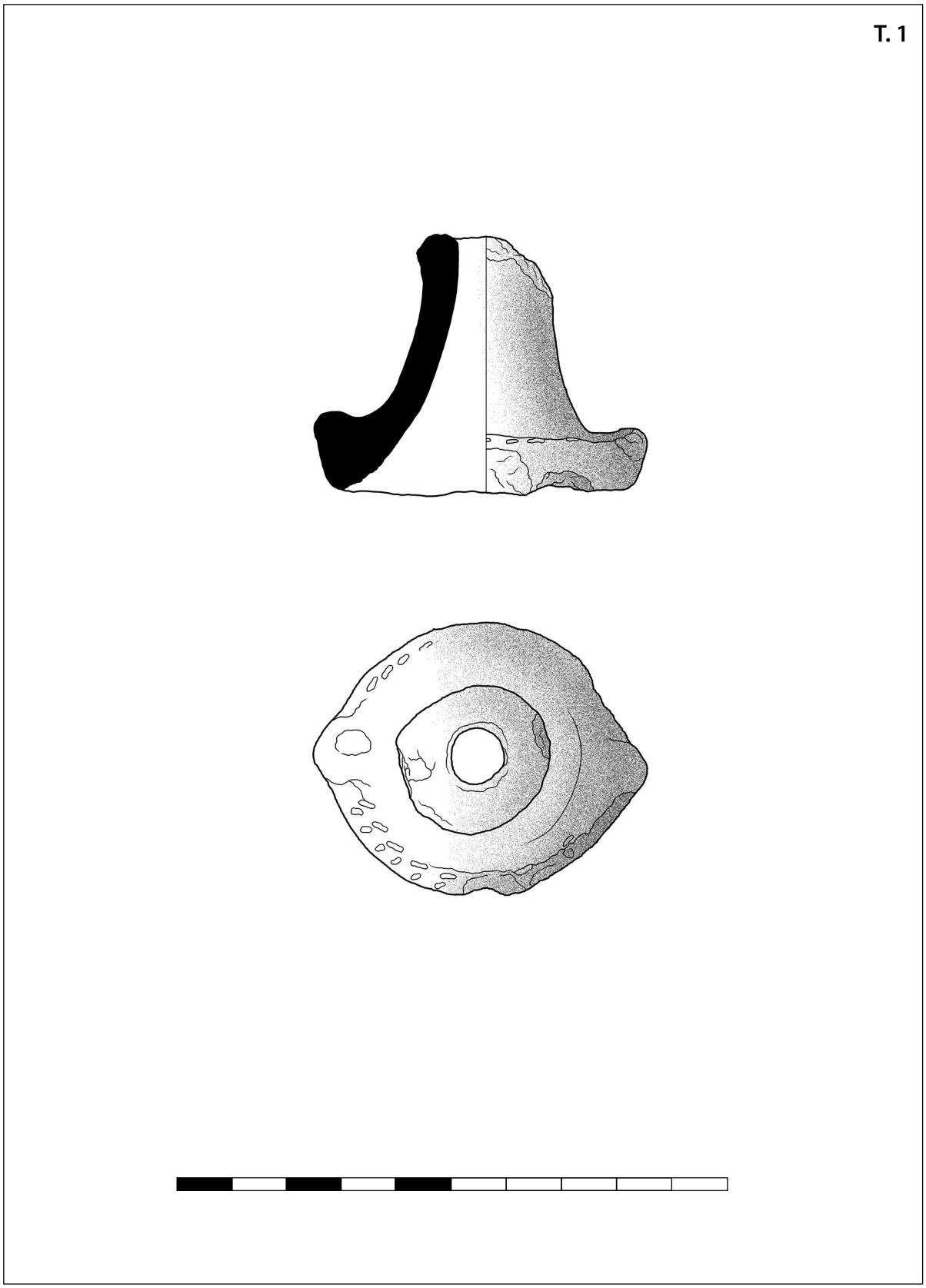


Tabla 1. *Crtež keramičke bočice lasinjske kulture, Zemaljski muzej Bosne i Hercegovine, inv. br. 45242* (nacrtao: M. Bešlagić)
Plate 1 *Drawing of a miniature Lasinja-culture ceramic bottle, National Museum of Bosnia and Herzegovina, No. 45242)* (drawing by M. Bešlagić)

„ZAJEDNICA SA SKADARSKOG JEZERA" NA PRIJELAZU IZ BAKRENOG U BRONČANO DOBA

'LAKE SKADAR COMMUNITY' AT THE TURN FROM THE COPPER TO THE BRONZE AGE

MITJA GUŠTIN

Univerza na Primorskem, Fakulteta za humanistične študije
University of Primorska, Faculty of Humanities
Titov trg 5
SI – Koper 6000,
mitja gustin@upr.si

UDK: 903.5(497.16)"636/637"
DOI: 10.15291/archeo.4677
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-6-3
Prihvaćeno / Accepted: 2024-9-15

Ključne riječi:
kneževski humci, grobnice u obliku kamenih cista, zajednica sa Skadarskog jezera

Visoki kneževski humci s velikim grobnicama u obliku cista izrađenima od vapnenačkih ploča koji sadržavaju izuzetno bogate grobove, kao i oni sa jednostavnijim grobovima koji sadržavaju samo setove keramike, ukazuju na važnost zajednice i omogućavaju preciznije definiranje njezina kulturnog konteksta. Grobnice su geografski ograničene na malo područje između Kotorskog zaljeva, Skadarskog jezera i doline rijeke Zete u Crnoj Gori. Specifična grobna arhitektura, zgrčeni položaj pokojnika te istaknuti metalni i keramički predmeti ukazuju na osobitu kulturnu pojavu s poveznicama koje moguće sežu do Bliskog istoka. Humci s grobnicama u obliku kamenih cista, i oni pripadnika elite i oni s jednostavnijim keramičkim prilozima, predstavljaju istaknutu zajednicu koja je doživjela svoj procvat u razdoblju prijelaza iz mlađeg bakrenog u starije brončano doba, između 4. i 3. tisućljeća pr. Kr.
U prošlosti su jedinstveni žigosani i urezani ukrasi na keramici doveli do pogrešnog povezivanja tih utjecajnih kneževa sa zajednicama u gornjojadranskom zaleđu i Ljubljanskom barju, kao i s vučedolskom kulturom, koja potječe iz istočne Slavonije i Srijema na desnoj obali Dunava. Uz dužno poštovanje prema trudu koji su naši znanstveni prethodnici uložili u praćenje procesâ davne prapovijesti, interpretacija „crnogorskog kneževskog horizonta", koji predstavlja jednu od prvih prapovijesnih elita iz najviših društvenih slojeva, zahtijeva preciznost i odgovarajuću hijerarhiju. Nakon otkrića nekoliko humaka s grobnicama u obliku cista i kraljevskih insignija postalo je jasno koliko je veliko bilo područje na kojem je obitavala ova zajednica za koju, među ostalim i s obzirom na humke s područja susjedne Albanije, predlažemo ime „zajednica sa Skadarskog jezera" s prijelaza iz bakrenog u brončano doba.

Key words:
Princely mounds, cist tombs, Lake Skadar community

The high princely mounds, with large cist-type tombs made of limestone slabs and containing exceptional grave groups – as well as those with simpler grave groups consisting only ceramic sets – highlight the importance of this community and allow a more precise definition of their cultural background. These tombs are geographically confined to a small area between the Gulf of Kotor, Lake Skadar and the Zeta River plain in

Montenegro. The specific funerary architecture, the crouched position of the deceased, and the remarkable metal and ceramic artefacts all point to a distinct cultural phenomenon with connections that likely extend to the Near East. These mounds with cist tombs, both those of the high elite and those with simpler ceramic offerings, represent a remarkable community that flourished during the transition from the Late Copper Age to the Early Bronze Age, between the 4th and the 3rd millennia BC.

Previously, the unique stamp-rolled and excised decorations on the ceramics led to the erroneous association of these influential princes with communities in the upper Adriatic hinterland and the Ljubljansko Barje (Ljubljana Marshes), as well as with the Vučedol Culture with its origins in eastern Slavonia and Srijem on the right bank of the Danube.

With due respect to the efforts of our scholarly predecessors in tracing the processes of distant prehistory, the interpretation of the 'Montenegrin princely horizon', which represents one of the first prehistoric elites of the highest social strata, requires precision and appropriate hierarchy. Following the discoveries of several mounds without cist tombs and royal insignia, it has become clear how large the territory of this community was, for which we propose, also with regard to the mounds in neighbouring Albanian territory, the name of the Copper/Bronze Age 'Lake Skadar community'.

U radu se na temelju provedenih arheoloških terenskih istraživanja, kao i radova širokog spektra crnogorskih i međunarodnih znanstvenika, analiziraju najstariji kneževski humci Crne Gore. Zabilježeno je nekoliko znanstvenih priloga, zahvaljujući čemu su podaci o objektima *in situ* i istaknutim grobnim cjelinama ovih crnogorskih humaka dobro dokumentirani i prepoznati. Međutim, u sklopu budućih istraživanja trebat će se rasvijetliti uvjeti koji su doveli do formiranja ove zajednice, porijeklo njezinih posebnih pogrebnih običaja i istaknutih grobnih priloga, kao i njezina povezanost s mjerodavnim civilizacijskim tokovima razdoblja u kojem je postojala.

U dalekoj prošlosti, u vrijeme prijelaza iz 4. u 3. tisućljeće pr. Kr., jadranska obala Crnogorskog primorja i njegovo zaleđe s dolinama Zete i Morače te širim područjem zapadne i istočne obale Skadarskog jezera zauzimali su strateški položaj. Za pretpostaviti je da je područje bilo vitalno na rutama koje su povezivale zajednice središnjeg i zapadnog Balkana s onima u istočnijem dijelu Podunavlja. Tijekom tog razdoblja, obilježenog prijelazom iz mlađeg bakrenog u starije brončano doba, pojavila se moćna elita, jedna od najreprezentativnijih u Europi. Svoju je gospodarsku i društvenu važnost iskazivala izgradnjom monumentalnih grobnica. U grobnicama, smještenima pod visokim humcima, katkad nalazimo iznimne grobne priloge, koji odražavaju kulturno bogatstvo i strateški značaj regije.

Otkriće i objava prvog kneževskog humka u Tivtu na crnogorskoj obali predstavljali su osobito iznenađenje zbog iznimne grobne arhitekture i pripadajućih nalaza. Znanstvenici Maja Parović-Pešikan i Vojislav Trbuhović ne samo da su pokop datirali u točan vremenski okvir, već su ga na temelju žigosanih i urezanih ukrasa na keramici pronađenoj u grobnicama i povezali sa sličnom keramikom iz Ljubljanskog Barja.[1]

Setovi keramike bili su i ostali osobito istaknuta značajka u ovim kraljevskim grobovima.

[1] PAROVIĆ-PEŠIKAN, TRBUHOVIĆ 1971.

This paper examines Montenegro's oldest princely mounds, drawing on archaeological fieldwork and reports by a wide range of Montenegrin and international researchers. Several scholarly contributions have been made, which have resulted in the architectural data in situ and the prominent grave groups of this Montenegrin mounds being well documented and recognised. However, future research must clarify the conditions that led to the formation of this community, the origins of its exceptional funeral practices and remarkable grave goods, and its connections with the relevant civilizational currents of the period.

In the distant past, the Adriatic coast of Montenegrian Primorje (coast) and its hinterland, including the Zeta and Morača river valleys and the wide surroundings of the western and eastern sides of Lake Skadar, occupied a strategic position during the transition from the 4th to the 3rd millennium BC. This location seems to have served as a vital link on the routes connecting the populations of the central and western Balkans with those further east in the Danube valley. During this period, which marks the transition from the Late Copper Age to the Early Bronze Age, a powerful elite emerged, one of the most representative in Europe. They expressed their economic and social importance through the monumental construction of their tombs. Their tombs, located under high mounds, were sometimes accompanied with exquisite grave goods, reflecting the cultural richness and strategic prominence of the region.

The discovery and publication of the first princely mound in Tivat on the Montenegrin coast came as a remarkable surprise due to the extraordinary grave architecture and objects found inside. Researchers Maja Parović-Pešikan and Vojislav Trbuhović not only placed the burial in the correct chronological frame, but also linked it to similar pottery from Ljubljansko Barje, based on the stamp-rolled and excised decorated ceramic found in the grave.[1]

[1] PAROVIĆ-PEŠIKAN, TRBUHOVIĆ 1971.

Na njih posebno upućuje Stojan Dimitrijević u *Praistoriji jugoslavenskih zemalja*, klasificirajući zajednicu kao dio „jadranskog tipa ljubljanske kulture". Kultura se, navodno, rasprostire duž istočnojadranske obale, od pećina na talijanskom kršu u tršćanskom zaleđu do humaka na lokalitetu Pazhok u Albaniji. Dimitrijević je utvrdio manje od desetak nalazišta, od čega šest pećina, jedno naselje i četiri humka, od kojih dva u Crnoj Gori. Te je lokalitete pripisao ljubljanskoj kulturi na temelju nalaza keramike koja podsjeća i na alpski i vučedolski tip i njihove dekoracije.[2]

Arheologinja Margarita Primas 90-ih je godina XX. stoljeća radila na iskapanjima drugog kneževskog humka u Tivtu i detaljno analizirala pogrebne običaje te pozorno istražila svaki predmet pronađen u grobnici u obliku ciste. Kako navodi M. Primas, karakteristična obilježja i oblici keramike naveli su je da je pripiše jedinstvenoj kategoriji. Navodi: „*Da sich zwischen der montenegrinischen Keramik (Velika und Mala Gruda, Rubeža) und der Facies Ig (Ljubljansko barje, op. autora) keine spezifische Parallelen erkennen lassen und auch die ehemals vermutete Synchronlage wohl abzulehnen ist, empfiehlt sich die Definition einer montenegrinischen Lokalfacies, die wir in folgendem Facies Kotor nennen. Von zukünftigen Forschungen in Nordalbanien ist mit großer Wahrscheinlichkeit eine Erweiterung in diese Richtung zu erwarten*" [„Budući da nisu uočljive specifične analogije između crnogorske keramike (Velika i Mala Gruda, Rubeža) i facijesa Ig (Ljubljansko barje, op. autora) te valja odbaciti negdašnje pretpostavke o sinkronosti lokaliteta, preporučljivo bi bilo uvesti pojam crnogorski lokalni facijes koji ćemo u daljnjem tekstu nazivati facijes Kotor. Velika je vjerojatnost da bi buduća istraživanja na sjeveru Albanije mogla donijeti daljnje spoznaje u tom smjeru"] te je vremenski i kulturno smješta unutar mlađeg bakrenog doba. Oprezno ih naziva „jadranskim tipom", s osobitom naglaskom na pojmu „facijes Kotor".[3]

The ceramic sets were and still are a prominent feature of these royal graves. In *Praistorija jugoslavenskih zemalja*, they were highlighted by Stojan Dimitrijević, who defined this community as part of the 'Adriatic type of the Ljubljana Culture'. This culture should be distributed along the eastern Adriatic coast from the caves in the Trieste hinterland on the Italian Karst to the Pazhok mounds in Albania. Dimitrijević identified less than a dozen sites; six are caves, one is a settlement, and four are mounds, two of which are in Montenegro. He attributed these sites to the Ljubljana Culture based on their ceramics, which are reminiscent of both Alpine and Vučedol types, and their decoration.[2]

Margareta Primas, the archaeologist who excavated the second princely mound in Tivat in the 1990s, carried out a detailed analysis of burial practices and meticulously examined each item found in the cist tomb. According to M. Primas, the ceramics have distinctive features and forms that led her to categorise them uniquely. She argued: "*Da sich zwischen der montenegrinischen Keramik (Velika und Mala Gruda, Rubeža) und der Facies Ig (Ljubljansko barje, note by the author) keine spezifische Parallelen erkennen lassen und auch die ehemals vermutete Synchronlage wohl abzulehnen ist, empfiehlt sich die Definition einer montenegrinischen Lokalfacies, die wir in folgendem Facies Kotor nennen. Von zukünftigen Forschungen in Nordalbanien ist mit großer Wahrscheinlichkeit eine Erweiterung in diese Richtung zu erwarten*" and placed it chronologically and culturally within the Late Copper Age. She cautiously refers to these as the 'Adriatic type', highlighting in particular the 'facies Kotor'.[3]

In a comprehensive monograph detailing the most significant Copper and Bronze Age finds from Montenegro,[4] the surprising

[2] DIMITRIJEVIĆ 1979: 321.
[3] PRIMAS 1996: 135.

[2] DIMITRIJEVIĆ 1979: 321.
[3] PRIMAS 1996: 135.
[4] SAVELJIĆ BULATOVIĆ, LUTOVAC 2003.

U monografiji koja donosi pojedinosti o najznačajnijim nalazima iz bakrenog i brončanog doba iz Crne Gore[4] prvi je put predstavljeno iznenađujuće otkriće humka Gruda Boljevića s početka 2000-ih u Podgorici. Ovi istaknuti vladari, pokopani u Tivtu, Podgorici i okolici Nikšića, dobili su prvo priznanje znanstvene zajednice 2006. na izložbi Aleksandra Durmana *Simbol boga i kralja* u Zagrebu.[5] Novo zanimanje za ove humke s grobnicama u obliku cista uglavnom je rezultat analiza Blagoja Govedarice i Mila Bakovića,[6] a kasnije je došlo do objavljivanja monografije o humku s lokaliteta Gruda Boljevića u Podgorici.[7] Uz njih, ističu se i humci s grobnicama u obliku cista u kojima je otkriveno keramičko posuđe (još uvijek nazvano ljubljansko-jadranskog tipa) slično onome iz Tivta i Podgorice, pronađenome prije nešto manje od desetljeća na lokalitetima Sutomore u Crnogorskom primorju i Kujava kraj Danilovgrada.[8]

Joseph Maran interpretirao je središnje grobnice s lokaliteta Velika i Mala Gruda i Gruda Boljevića kao crnogorske inačice rane vučedolske kulture tijekom starijeg brončanog doba.[9] Štoviše, sljedbenici Dimitrijevićeva učenja i dalje su te nalaze smatrali dijelom jadranske inačice ljubljansko-vučedolskog kulturnog horizonta.[10]

Na konferenciji *Kneževski grobovi između Kavkaza i Atlantika, 3500. – 2500. pr. Kr.* održanoj u listopadu 2018. u crnogorskoj prijestolnici Podgorici, Blagoje Govedarica u svom je predavanju *Hijerarhija simbola moći i statusa u grobovima 4. i 3. tisućljeća pr. Kr.* ponovno naglasio važnost tih humaka.[11]

U svojem radu, posvećenom razvojnim faza-

4 SAVELJIĆ BULATOVIĆ, LUTOVAC 2003.
5 GUŠTIN 2006.
6 GOVEDARICA 2010; BAKOVIĆ, GOVEDARICA 2009; 2010; BAKOVIĆ 2011.
7 GUŠTIN, PRELOŽNIK 2015; v. i GUŠTIN 2017.
8 ZAGARČANIN 2016; LUTOVAC 2017.
9 MARAN 1998: bilj. 243.; 2007: 8–12.
10 GOVEDARICA 2010; ZAGARČANIN 2016; LUTOVAC 2017.
11 Neobjavljeno.

discovery of the Gruda Boljevića mound at Podgorica in the early 2000s was presented for the first time. These outstanding rulers, buried at Tivat, Podgorica and in the surroundings of Nikšić, received the first scientifical appraisal in 2006 at the Aleksandar Durman´s exhibition of *Symbol of God and King* in Zagreb.[5] The renewed focus on these mounds with cist tombs is largely due to the analyses conducted by Blagoje Govedarica and Mile Baković,[6] which later resulted in the monographic publication on the mound at Gruda Boljevića in Podgorica.[7] Additionally, mounds with tomb cists, featuring ceramic vessels (still of the Ljubljana-Adriatic type) similar to those from Tivat and Podgorica, excavated less than a decade ago at Sutomore on the Montenegrin coast and at Kujava near Danilovgrad, were also highlighted.[8]

Joseph Maran proposed that the central graves of Velika and Mala Gruda and Gruda Boljevića represented Montenegrin variants of the Late Vučedol Culture during the Early Bronze Age period.[9] Furthermore, adherents of the Dimitrijević school continued to regard these discoveries as part of the Adriatic variant of the Ljubljana-Vučedol Culture horizon.[10]

At the conference *Princely Graves between the Caucasus and Atlantic, 3500-2500 BCE* held in October 2018 in Podgorica, the capital of Montenegro, Blagoje Govedarica in his lecture, titled *The Hierarchy of Power and Status Symbols in Graves of the 4th and 3rd Millennium BC*, emphasised again the significance of these mounds.[11]

In her study of the ceramic and chronological phases of Ljubljansko Barje, Elena Legisha identified strong links between the Adriatic

5 GUŠTIN 2006.
6 GOVEDARICA 2010; BAKOVIĆ, GOVEDARICA 2009; 2010: BAKOVIĆ 2011.
7 GUŠTIN, PRELOŽNIK 2015; see also GUŠTIN 2017.
8 ZAGARČANIN 2016; LUTOVAC 2017.
9 MARAN 1998: note 243; 2007: 8-12.
10 GOVEDARICA 2010; ZAGARČANIN 2016; LUTOVAC 2017.
11 Unpublished.

ma keramike i kronološkim fazama Ljubljanskog barja, Elena Legisha prepoznala je snažne veze između zajednica koje su nastanjivale jadransko priobalje i njihove inačice ljubljanske kulture na temelju ukrašavanja urezivanjem i keramičkih formi. Međutim, nije pronađena jasna poveznica sa setovima keramike iz kneževskih humaka u Crnoj Gori. Uočila je sličnost u sintaksi crnogorskog ukrasa i keramike vučedolske kulture te podržala uporabu izraza „crnogorska inačica vučedolske kulture" koji je predložio J. Maran. [12]

Sveobuhvatan pregled grobnih humaka razmještenih duž istočnojadranske obale tijekom 3. tisućljeća pr. Kr. nedavno je predstavio Stašo Forenbaher. Njegov rad također uključuje analizu pojave crnogorskih grobnih humaka s posebnim naglaskom na grobnice u obliku cista i njihovu dataciju u prvu četvrtinu 3. tisućljeća pr. Kr. U svojoj temeljitoj studiji keramičkih nalaza otkrivenih na golemom istočnojadranskom području Forenbaher kategorizira crnogorske keramičke grobne priloge prema specifičnim kriterijima, uključujući i tipove ljubljansko-jadranske te cetinske keramike.[13]

U publikaciji objavljenoj prigodom izložbe *Prvi kraljevi Europe*, dragocjeni predmeti iz humka s lokaliteta Gruda Boljevća klasificirani su u poglavlju *Prvo zlatno doba: bakreno doba*. Nemanja Radunović grobne priloge u katalogu razvrstava prema posudama korištenima za ukope kao lokalnu varijantu – (južno) jadranski tip ljubljanske kulture – i datira ih na početak razdoblja između 3100. i 3000. godine pr. Kr.[14]

Definiranje crnogorskih setova keramike (sl. 5) kao ljubljanske (vučedolske) jadranske keramike i njihovo datiranje u starije brončano doba ostaje središnja tema mnogih rasprava, odražavajući snažnu tradiciju jugoslavenske

coastal communities and their variant of the Ljubljana Culture, based on the excised ornament and ceramic forms. However, no clear connections could be found to the ceramic sets from the princely mounds in Montenegro. She observed a resemblance in the syntax of Montenegrin decoration to that of the ceramics of the Vučedol Culture and endorsed the use "Montenegrin variant of the Vučedol Culture," as proposed by J. Maran. [12]

A comprehensive examination of the burial mounds situated along the eastern Adriatic coast during the 3rd millennium BC was recently presented by Stašo Forenbaher. His work also includes an analysis of the Montenegrin mound burial phenomenon, with a particular focus on cist tombs and the dating of these to the first quarter of the 3rd millennium BC. In his thorough study of ceramic finds discovered across a vast area of the Eastern Adriatic, Forenbaher categorises the Montenegrin ceramic grave goods according to specific criteria, including the Ljubljana-Adriatic and Cetina ceramic types.[13]

In the accompanying publication for the exhibition *The first Kings of Europe,* the precious objects from the Gruda Boljevća mound are classified in the chapter: *The first Gilded Era, The Copper Age*. In catalogue, Nemanja Radunović posits the grave goods according to burial vessels – as a local variant: the (south) Adriatic type of the Ljubljana Culture and dates them to early in between 3100 and 3000 BC.[14]

The Ljubljana (Vučedol) Adriatic ceramic definition of Montenegrin ceramic sets (Fig. 5) and their dating to the Early Bronze Age remain a central theme in many discussions, reflecting a robust tradition of the Yugoslav archaeological school. Although not definitively proven, M. Primas proposed a shift in the cultural association with the pottery of the

[12] LEGHISSA 2021: 11.
[13] FORENBAHER 2023. Vidi bazične radove: GOVEDARICA 1989; 2006; MARIJANOVIĆ 1991.
[14] RADUNOVIĆ 2022: 48–50; upućuje na rad BAKOVIĆ, GOVEDARICA 2010.

[12] LEGHISSA 2021: 11.
[13] FORENBAHER 2023. See also basic works: GOVEDARICA 1989; 2006; MARIJANOVIĆ 1991.
[14] RADUNOVIĆ 2022: 48-50; he references the paper BAKOVIĆ, GOVEDARICA 2010.

arheološke škole. Unatoč pomanjkanju čvrstih dokaza, M. Primas predlaže odmak od povezivanja ove kulture s keramikom s lokaliteta Ljubljansko barje, polazeći od pretpostavke o postojanju zajednice na temelju analize metalnih nalaza iz mlađeg bakrenog doba na Bliskom istoku. S obzirom na brojne veze između kraljevskih insignija na Istoku,[15] i ja se priklanjam tom gledištu. Radi boljeg razumijevanja logike datiranja i ubiciranja ovih prvih vladara, prvo treba podsjetiti na obilježja njihovih pogrebnih običaja i grobnih cjelina.

HUMCI I GROBNICE

Gradnja velikih humaka i grobnica u obliku cista od iznimno teških vapnenačkih ploča ukazuje na visoko razvijenu socijalnu strukturu. Postojanje monumentalnih humaka, uz kraljevske insignije i druge statusne simbole, ukazuje na iznimnu ulogu ove regije u odnosu na niže slojeve u hijerarhiji u ostalim društvenim zajednicama na području Balkana i srednje Europe.

Prve grobnice elita mlađeg bakrenog doba na području Crne Gore u pravilu su građene u nekoliko faza. U prvoj fazi iskopala bi se jama dubine približno jednog metra i orijentirana u smjeru istok – zapad. Po završetku pogrebnog obreda u jamu bi se položilo pokojnika ili pokojnicu. U grobnicama načelno nije bilo priloga, izuzev pokojeg skromnijeg predmeta. Nakon toga bi se jama zapunila zemljom iskopanom iz bliže okolice, a nad njom bi se podigao visok, izgledom upečatljiv humak (sl. 1/1). Primjer takvih ranih pogrebnih običaja i arhitektonskih oblika predstavljaju humak s lokaliteta Gruda Boljevića tijekom faze 1, kao i ostali primjeri iz regije, među kojima obližnji humci s lokaliteta Shtoj (Štoj) u istočnom zaleđu Skadarskog jezera.[16] Ti humci često su okruženi manjim suhozidi-

[15] V. i DURMAN 2006: 67–76.
[16] GUŠTIN, PRELOŽNIK 2015: 34–35, sl. 17.

Ljubljansko Barje, suggesting the existence of a community based on the examination of metal finds from the Late Copper Age of the Near East. Given the numerous connections between royal insignia in the East,[15] I have also aligned with this perspective. In order to gain a deeper understanding of the rationale behind the dating and positioning of these first rulers, it is first necessary to present again the characteristics of their burial practices and grave assemblages.

THE MOUNDS AND GRAVES

The construction of large mounds and cist tombs, built with extremely heavy limestone slabs, indicates a highly developed social structure. The existence of these monumental mounds, accompanied by royal insignia and other status symbols, demonstrate the exceptional role this region played in relation to the lower strata of hierarchy in other Balkan and central European societies.

The first graves of the Late Copper Age elites in the Montenegro region were typically constructed in several stages. Initially, a pit about 1 meter deep, oriented east-west, was excavated. Once the funeral ceremony had concluded, the deceased was placed in this pit. The graves generally lacked grave goods, except for occasional modest objects. Subsequently, the pit was filled with earth sourced from the surrounding area, and a high, visually striking mound was erected over it (Fig. 1/1). An exemplary illustration of these early funerary practices and architectural forms is the mound at Gruda Boljevića during phase 1, along with other regional examples, such as the nearby mounds at Shtoj (Štoj) in Lake Skadar eastern hinterland.[16] These mounds frequently exhibit the presence of small dry-stone walls surrounding them, and are typically less sub-

[15] See also DURMAN 2006: 67-76.
[16] GUŠTIN, PRELOŽNIK 2015: 34-35, Fig. 17.

ma i manji su od humaka kasnijih generacija.

U sljedećoj fazi [ove društvene zajednice] gradile su se složenije grobnice u obliku cista od velikih vapnenačkih ploča ili drugih kamenih materijala. U samom središtu budućeg humka, izravno na zemlju postavile bi se četiri velike ploče koje su tvorile grobnu cistu dimenzija približno 1,30 x 0,80 metara. Na lokalitetu Kujava II znanstvenici su uočili postojanje zaravnatog i nabitog zemljanog platoa koji je na lokalitetu Mogila na rake izgrađen od vapnenačkih ploča ili kamenja te su po njemu razasuti manji ulomci keramike i pepela.

U sklopu pogrebnog obreda pokojnik se polagao u cistu u zgrčenom položaju u smjeru sjeveroistok – jugozapad, uz grobne priloge. Nakon polaganja pokojnika, četiri okomite ploče i cijelu komoru prekrili bi većim vapnenačkim pločama.

Nakon prekrivanja grobnica u obliku cista teškim stijenama, preko njih bi nasipali visoku zemljanu ili kamenu gomilu. Na lokalitetu Kujava II rubovi humka su ojačani velikim vapnenačkim stijenama. Zanimljivo je da, kad je riječ o kneževskom grobu s lokaliteta Gruda Boljevića (faza 2), iznenađuje da nisu otkriveni vidljivi ostaci kamenih ili vapnenačkih ploča (sl. 1/1).

Grobnice s kneževskom opremom, kao što su one na položajima Mala i Velika Gruda (sl. 1/4) te 2. faza na položaju Gruda Boljevića, obično su se gradile za jednu osobu koja je bila pripadnik društvene elite. Iznimno su u tumulu na lokalitetu Kujava II jedna uz drugu izgrađene dvije grobnice u obliku cista (sl. 1/3). U grobnici 1 ukopani su posmrtni ostaci triju osoba: adolescenta i dviju odraslih osoba. U grobnici 2 nalazio se ukop samo jedne odrasle osobe. Sličan slučaj višestrukih istodobnih ukopa zatečen je u tumulu na lokalitetu Mogila na rake (sl. 1/2), gdje su pronađeni ostaci muškarca, dječaka te, vjerojatno, žene.

U samom središtu tumula na lokalitetu Gruda Boljevića pronađena su dva ukopa. Prvi, nazvan „osnivač", položen je u raku. Jedini

stantial than those of later mound generations.

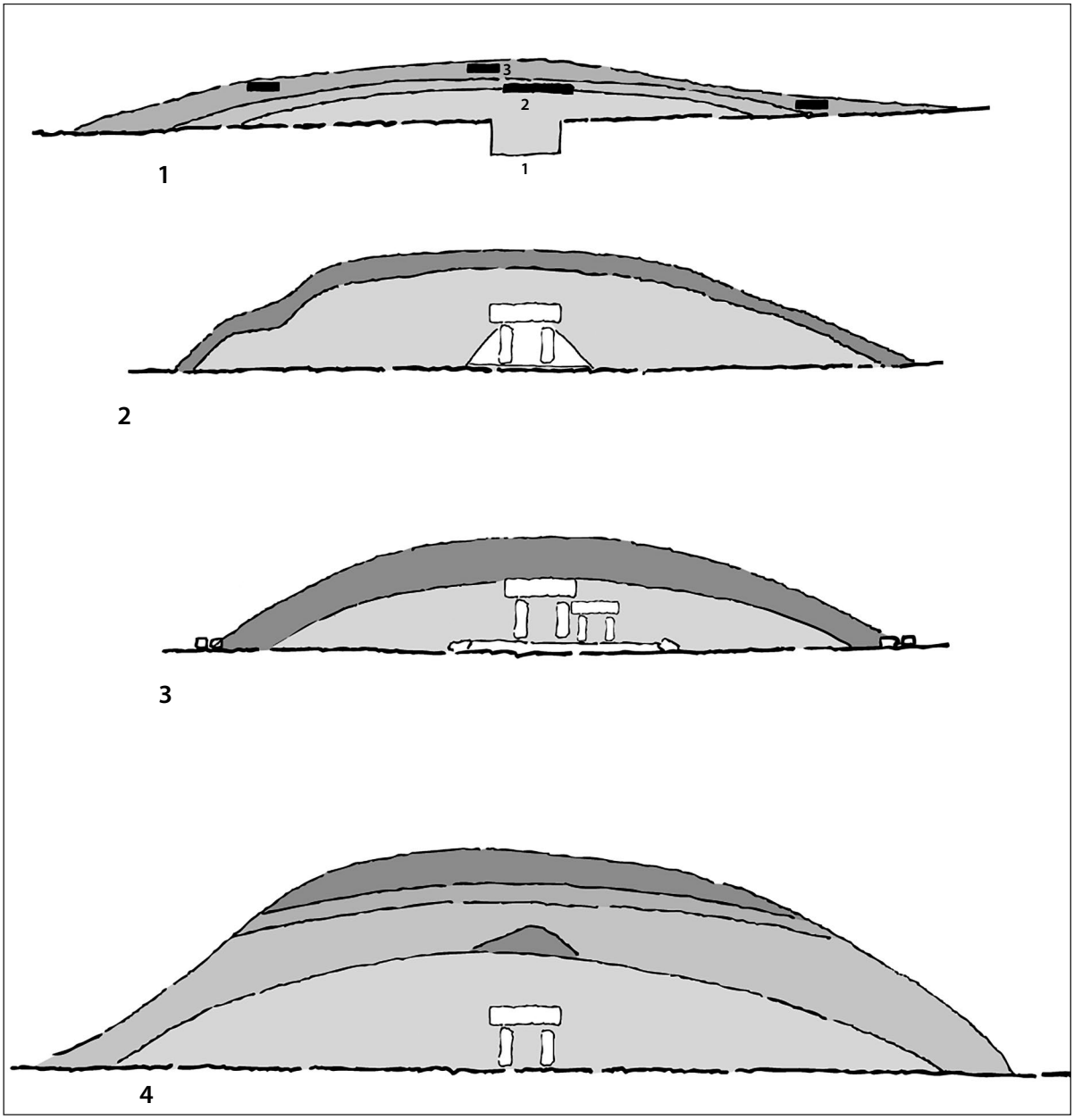
In the next phase (of this society), elaborate cists tombs were constructed from large limestone slabs or other lithic materials. At the centre of the future mound, four large slabs were placed directly on the earth, forming a tomb cist approximately 1.30 x 0.80 metres in size. Researchers observed the presence of a platform in Kujava II constructed as a prepared earthen plateau, at Mogila na Rake constructed from limestone plates or stones, scattered with small fragments of ceramics and ashes.

During the funerary ceremony, the deceased was placed inside the cist tomb, in a crouched position, from northeast to southwest, accompanied with grave goods. Once the deceased had been placed inside, the four vertical slabs and the entire chamber were covered with larger limestone slabs.

Once the cist tomb had been covered with heavy stone rocks, a high mound of earth or stones was constructed over them. In Kujava II the edges of mound were reinforced with large limestone rocks. Interestingly, in the case of the princely grave from Gruda Boljevića (phase 2), there are surprisingly no evidential remains of stone or limestone slabs (Fig. 1/1).

Tombs equipped with princely equipment, such as those in Mala and Velika Gruda (Fig. 1/4), and Gruda Boljevića, phase 2, were typically constructed for a single elite individual. Exceptionally, two cist tombs were built side by side in the Kujava II mound (Fig. 1/3). Tomb 1 contained burials of three individuals: a juvenile and two adults. Tomb 2 contained only one adult. A similar case of multiple simultaneous burials was found in the mound at Mogila na Rake (Fig. 1/2), where the remains of a man, a young boy, and possibly a woman were discovered.

In the Gruda Boljevića mound, two burials were placed in the centre of the mound. The first, referred to as 'the founder', was buried in a pit. The only artefact associated with 'the founder' was a flint tool. The pit grave under



Slika 1. *Shematski prikaz humaka mlađeg bakrenog doba u Crnoj Gori: 1. Podgorica – Gruda Boljevića* (prema: Guštin, Preložnik 2015: sl. 22)*; 2. Sutomore – Mogila na rake* (prema: Zagarčanin 2016: sl. 2a)*; 3. Kujava II kod Danilovgrada* (prema: Lutovac 2017: sl. 2)*; 4. Tivat – Velika Gruda* (prema: Della Casa 1996: sl. 18). (M = 200. Skica: Guštin 2017., sl. 2)

Figure 1 *Schematic view of Late Copper Age mounds in Montenegro: 1 Podgorica-Gruda Boljevića* (after Guštin, Preložnik 2015: Fig. 22)*; 2 Sutomore-Mogila na Rake* (after Zagarčanin 2016: Fig. 2a)*; 3 Kujava II by Danilovgrad* (after Lutovac 2017: Fig. 2)*; 4 Tivat-Velika Gruda* (after Della Casa 1996: Fig. 18). (M = 200. Sketch: Guštin 2017: Fig. 2)

predmet povezan s „osnivačem" bila je kremena alatka. Grobnica ispod humka upućuje na mogućnost da je pokojnik bio jedan od prvih pripadnika ili osnivača nove civilizacije u regiji.

Drugi ukop [bez kostiju], položen na površinu prvog humka, jedan metar iznad „osnivačeve" grobnice i poznat kao „knez", sadržavao

mound suggests that the individual may have been one of the pioneers or founders of a new civilisation in the region.

The second burial [with no bones], placed on the surface of the first mound, 1 metre above 'the founder's' pit grave and known as 'the prince', contained grave goods – a rich

je grobne priloge – bogatu zbirku predmeta, uključujući osobnu odjeću i oružje. Građa je tipična za „kneževski horizont".

Značajna promjena dogodila se u trećoj fazi razvoja humaka, što je najbolje ilustrirano na primjeru Kuća Rakića. Riječ je o humku s nekoliko grobova pripadnika iste obitelji ili plemena, s manjim razlikama u veličini i grobnim prilozima, ali bez očite diferencijacije.[17]

ORUŽJE I NAKIT

Humci s lokaliteta Mala i Velika Gruda u Tivtu te Gruda Boljevića u Podgorici sadržavali su istaknute primjerke oružja kao insignije i dragocjene osobne ornamente kao statusne simbole. Njihovo značenje ne proizlazi samo iz njihova oblika ili materijala, već i iz visokog statusa njihovih vlasnika.

Među pronađenim oružjem je zakrivljena kamena bojna sjekira iz Grude Boljevića te još jedna bojna sjekira iz grobnice s položaja Mala Gruda, izrađena od elektruma/srebra (sl. 2/ 2–3). Kamene bojne sjekire, poznate po svojim razrađenim oblicima i visokoj kvaliteti izrade, čest su nalaz u primarnim područjima rasprostranjenosti jamne kulture i kulture katakombnih grobova, kao što ilustrira primjerak sjekire iz Luganska i sjekirâ tipa Mihajlovka. Važno je napomenuti da obje sjekire imaju identične zlatne kapice koje su pokrivale gornji kraj drška, što je značajan pokazatelj njihove kronološke podudarnosti i njihova porijekla iz iste [lokalne] radionice.[18]

U oba groba otkriveni su elitni bodeži s trokutastim oštricama. Na lokalitetu Gruda Boljevića otkriven je brončani primjerak, dok je na lokalitetu Mala Gruda pronađen zlatni bodež (sl. 2/1). Ti tipovi bodeža bili su široko rasprostranjeni u geografskom smislu, pri čemu zlatni

[17] GUŠTIN, PRELOŽNIK 2015: 35, 40.

[18] O prenošenju znanja ili mobilnosti obrađivača metala i proizvodnji sjekira s cilindričnim produžetkom za nasad drška na početku starijeg brončanog doba v. TERŽAN 2023: 170–171.

collection of items including personal attire and weapons. These artefacts are typical of the 'princely horizon'.

A significant change occurred in the third phase of the development of mounds, which is best illustrated in the case of Kuće Rakića. It is a mound with several graves belonging to the same family or genus, with slight differences in size and grave goods, but without obvious differentiation.[17]

WEAPONS AND JEWELLERY

The mounds of Mala and Velika Gruda in Tivat and Gruda Boljevića in Podgorica contained outstanding weapons as insignia and precious personal ornaments as status symbols. Their meaning derived not only from their form or material but also from the high status of their owners.

Weapons found include a curved stone battle axe from Gruda Boljevića and another battle axe from the grave at Mala Gruda, made of electrum/silver (Fig. 2/ 2,3). Stone battle axes, known for their elaborate forms and high quality, are frequently discovered in the primary regions of the Yamnaya and Catacomb cultures, as exemplified by the Lugansk axe and the axes of the Mihajlovka type. It is noteworthy that both axes feature an identical golden shaft-hole cap, serving as a strong indicator of their chronological correspondence and origin from the same [local] workshop.[18]

Elite daggers with triangular blades were discovered in both graves. A bronze example was uncovered at Gruda Boljevića, while a gold dagger (Fig. 2/1) was found at Mala Gruda. These types of daggers were geographically widespread, with the golden dagger showing strong parallels at sites such as Bayindirik,

[17] GUŠTIN, PRELOŽNIK 2015: 35, 40.

[18] For the transfer of knowledge or mobility of metallurgists and production of collared axe type in the begin of Early Bronze Age see TERŽAN 2023: 170-171.



Slika 2. *Oružje crnogorskih knezova. 1–2 Mala Gruda kod Tivta, 3 Gruda Boljevića u Podgorici* (snimio: T. Lauko)
Figure 2 *The weapons of Montenegrin princes. 1-2 Mala Gruda by Tivat, 3 Gruda Boljevića at Podgorica* (photo by T. Lauko)

bodež ima značajne analogije na lokalitetima kao što su Bayindirik, Karataş i Alaca-Hüyük u Maloj Aziji. [19] Među oružjem pronađenim u Velikoj Grudi su i jednostavna plosnata sjekira, kao i razne teške alatke različitih oblika.

U sva tri „kneževska" groba pronađeni su predmeti za osobno ukrašavanje, uključujući zlatne karičice za kosu tipa Lefkada (sl. 3/1). Taj je tip karičica za kosu s preklapajućim krajevima bio rasprostranjen na širokom području od donjeg toka Dunava do Karpatske kotline. Ukrasi su pronađeni osobito uz pojedinačne ukope na lokalitetima Steno na grčkom otoku Lefkadi, Velika Gruda, kao i drugima, primjerice Kumane (Srbija), Tărnava, Venec, Jurilovca (Bugarska), Ampoiţa i Craiova (Rumunjska). Lokalna inačica, poznata kao tip Mala Gruda, sa širokim čunjastim završecima, jednoznačno je prepoznata na lokalitetima Velika i Mala Gruda u Tivtu, kao i Grudi Boljevića (sl. 3/2).[20]

[19] PRIMAS 1996: 88–91, 161.
[20] GUŠTIN, PRELOŽNIK 2015: sl. 11; DANI 2021: sl. 9.

Karataş, and Alaca-Hüyük in Asia Minor.[19] In the Velika Gruda mound, the range of weapons also includes a simple flat axe and various heavy tools of different shapes.

Items of personal adornment, including golden lockrings of the Leukas type of personal head ornament, were found in all three 'princes' mounds (Fig. 3/1). This type of lockring, with overlapping ends, was widespread over a large area from the Lower Danube to the Carpathian Basin. These ornaments were found in particular in individual burials at Steno on the Greek island of Leukas, Velika Gruda, and other sites such as Kumane (Serbia), Tărnava, Venec, Jurilovca (Bulgaria), and Ampoiţa and Craiova (Romania). A local variant, known as the Mala Gruda type with wide conical ends, has been uniquely identified at Velika and Mala Gruda in Tivat, as well as at Gruda Boljevića (Fig. 3/2).[20]

Such rings, indicating the highest social

[19] PRIMAS 1996: 88-91, 161.
[20] GUŠTIN, PRELOŽNIK 2015: fig. 11; DANI 2021: fig. 9.



Slika 3. *Zlatne karičice tipa Lefkada i Mala Gruda: Velika Gruda* (snimio: T. Lauko)
Figure 3 *Golden lockrings of Leukas and Mala Gruda types: Velika Gruda* (photo by T. Lauko)

Takve karičice, koje ukazuju na najviši društveni status, nosili su i muškarci i žene te su varirale od regije do regije. Njihova prisutnost ukazuje na veze između tih udaljenih zajednica. S obzirom na sličnost i pozamašan broj nalaza takvih karičica na Lefkadi, karičice iz Tivta i Podgorice očito su povezane s tim dijelom jonskog odnosno egejskog područja. Osim toga, pojedinačni primjeri karičica tipa Lefkada stigli su i do sjeveroistočnog Podunavlja, vjerojatno razmjenom ili kao prototipovi za lokalne zlatare, s obzirom na to da su karičice od plemenitih metala bile prepoznatljivo obilježje jamne kulture. Slično tome, zlatni ukrasi za kosu sredozemnog tipa postali su popularni diljem grčkog poluotoka, Crne Gore i južnokarpatskog područja, osobito u drugoj polovici 3. tisućljeća pr. Kr.[21]

Vrijedni grobni prilozi pronađeni u nekim kneževskim grobovima ne samo da demonstriraju zanatsko umijeće i pristup udaljenim trgovačkim mrežama,[22] nego – što je još važnije – odražavaju visok društveni status pokojnika duž crnogorskog dijela jadranske obale i u dolini Zete.

S obzirom da se ta populacija vjerojatno najvećim dijelom razvila zahvaljujući napretku metalurgije, razumljivo je da metalni predmeti pronađeni u kneževskim grobovima – uključujući i nakit i oružje – odražavaju sofisticiranost visokorazvijenih zajednica na istoku.

KERAMIKA

Ovi specifični setovi keramike ukrašene žigosanjem i urezivanjem (sl. 4–5) grobni su prilog koji je zajednički svim grobnicama u obliku cista horizonta mlađeg bakrenog / starijeg brončanog doba. Svaki grob tipično sadržava plitki tanjur s lepezastim proširenjem te krčag ili vrč, kao što je slučaj s nalazima zatečenima u tumulima Mala Gruda, Gruda Boljevića

[21] MELLER 2014: sl. 3.
[22] MARAN 2007: 11–12.

status, were worn by both men and women and varied from region to region. Their presence underlines the links between these distant communities. Given the similarity and the considerable number of such rings found on Leukas, the rings from Tivat and Podgorica should be linked to this part of the Ionian and Aegean. Additionally, individual examples of Leukas-type rings also reached the northeastern Danube region, probably through exchange or as prototypes for local goldsmiths, since precious metal lockrings were a distinctive feature of the Yamnaya culture. Similarly, golden hair ornaments of the Mediterranean type became popular across the Greek peninsula, Montenegro, and the southern Carpathian area, especially in the second half of the 3rd millennium BC.[21]

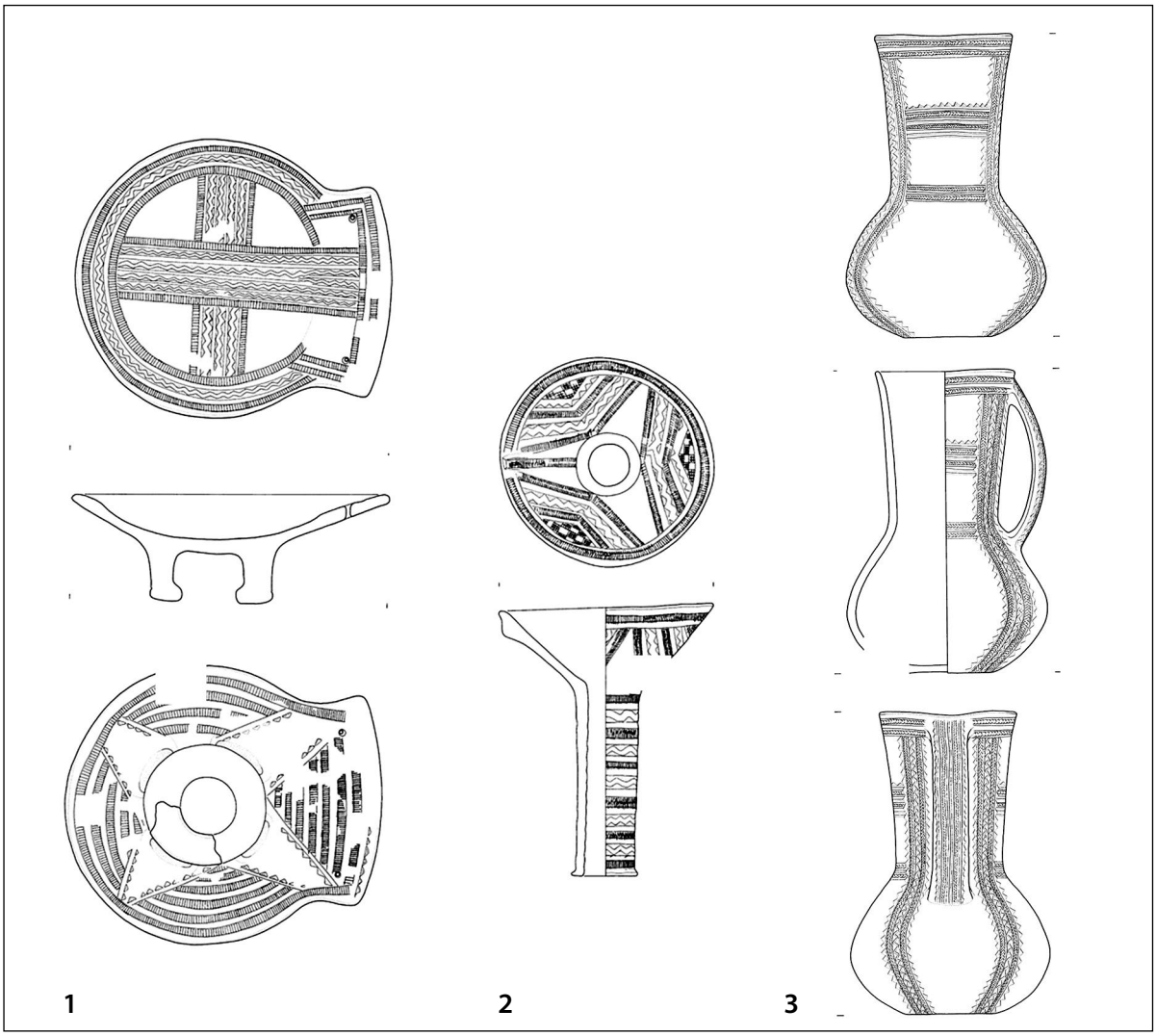
The precious grave goods found in some princely graves not only demonstrate the skills of craftsmen and access to long-distance trade networks but,[22] more importantly, reflect the high social status of the deceased along Montenegro's Adriatic coast and in the Zeta valley.

Given that this population probably developed, largely due to advances in metallurgy, it is understandable that the metal objects found in princely graves – including both jewellery and weapons – reflect the sophistication of highly developed eastern communities.

POTTERY

This distinctive ceramic sets, with stamp-rolled and excised decoration (Figs. 4-5) is a common grave good in all cist tombs of the Late Copper/Early Bronze Age mound horizon. Typically, each grave contains a platter with a fan-shaped rim extension and a pitcher or jug, as found in the mounds of Mala Gruda, Gruda Boljevića, and Mogila na

[21] MELLER 2014: fig. 3.
[22] MARAN 2007: 11-12.



Slika 4. *Gruda Boljevića u Podgorici: set keramike* (prema: Guštin 2006, sl. 2–3)
Figure 4 *Gruda Boljevića at Podgorica: pottery set* (after Guštin 2006, Figs. 2-3)

i Mogila na rake. Ulomak identičnog tanjura otkriven je u Rubeži kraj Nikšića. Keramika iz grobnice Kujava – koja se sastoji od jednostavnog plitkog tanjura i duboke zdjele s izrazito uvučenim obodom razlikuje se oblikom, ali je ukrašena istom tehnikom. Slična kombinacija, iako neukrašena te različitih oblika – manji vrčić i stožasta zdjela – poznata je iz groba 15 humka 6 lokaliteta Shtoj u istočnom zaleđu Skadarskog jezera.

Tu keramiku predstavlja poseban i trajan tip posuđa s posebnim tipom ornamentike koja, čini se, predstavlja „neku vrstu mode" tog razdoblja, koja se proteže od istočnih Alpa i Karpatske kotline do obale Jadrana. Plitki tanjuri i vrčevi bez sumnje pripadaju izvornom regi-

Rake. One identical platter fragment was discovered in Rubeži near Nikšić. The pottery from the Kujava tomb – consisting of a simplified platter and a deep bowl with a strongly inward-turned rim differs in form, but is decorated with the same technique. A similar combination, though undecorated and of different forms – a smaller jug and a conical bowl – is known from grave 15 of mound 6 at Shtoj in the eastern hinterland of Lake Skadar.

This pottery represents a special and long-lasting type of vessel, decorated with a special type of ornaments that seem to form a 'fashion trend of the era' extending from the Eastern Alps and Carpathian Basin to the Adri-

onalnom tipu koji se proizvodio u lokalnim radionicama te im je primarna namjena vjerojatno bila pogrebna.

Keramika iz crnogorskih humaka obično se klasificira kao „jadranski tip ljubljanske kulture", iako se odlikuje prepoznatljivim značajkama i oblicima koji su M. Primas naveli da ga opiše kao „facijes Kotor". No, u širem području, „jadranski" i „ljubljanski" elementi zapravo su prilično rijetki (Dimitrijević) te ih se redovito prepoznaje kao takve u slojevima lokalnih kultura (v. Forenbaher).[23]

Asimetrični plitki tanjuri s lepezastim produžetkom redom su bogato ukrašeni i iznutra i izvana, a razlikuju se pretežno po načinu na koji im je oblikovano dno, koje može poprimiti oblik niže ili više prstenaste noge, ponekad s otvorima (sl. 4/1; 5/2, 4, 7–8). Kako je pokazala M. Primas, oblikovne analogije asimetričnim posudama nalazimo uglavnom u Grčkoj, ali ne i na kontinentu.[24]

Vrčevi s dugačkom ručkom koja povezuje obod s ramenom ili trbuhom široko su rasprostranjen funkcionalan oblik u istočnoj Europi i Maloj Aziji. Među bogato ukrašenim keramičkim posuđem nailazimo na različite oblike, uključujući visok i elegantan vrč iz Grude Boljevića, kompaktniji vrčić iz Male Grude i asimetrični iz Sutomora (sl. 4/3; 5/1, 5–6). Stoga predstavljaju popularan i dugotrajan istaknuti tip regionalne keramike koja se i proizvodila u nekoliko različitih lokalnih radionica.

Moguće tumačenje ove izvrsne keramike valja tražiti u njezinoj obrednoj svrsi. Za razliku od naseobinskih slojeva, u kojima su ulomci na taj način ukrašene keramike iznimno rijetki (pećina Odmut i Ravlića pećina), [25] u kneževskim je grobovima bogato ukrašeno posuđe istog oblika redovit nalaz. Nameće se pitanje jesu li se te luksuzne inačice keramike koristile u svakodnevnom životu ili su osmišljene i

[23] DIMITRIJEVIĆ 1979: 321; FORENBAHER 2023: 17–95, fig. 11; 38, table 7.
[24] PRIMAS 1996: 57–61, Abb. 5.6.
[25] MARKOVIĆ 1985: pl. 27/ 2, 5; 28/ 4, 6–8; 29: 8; MARIJANOVIĆ 1981: pl. 36/ 6; 2012: pl. 68/ 5; 73/ 7.

atic coast. The platters and jugs are without doubt of an original regional type produced by local workshops and probably intended primarily for burial purposes.

The pottery from the Montenegrin mounds has usually been classified as belonging to the "Adriatic type of the Ljubljana Culture," although it has distinctive features and shapes that led M. Primas to describe it as "facies Kotor". In reality, the "Adriatic" and "Ljubljana" elements are quite rare in the broader region (Dimitrijević) and are always recognised as such in the layers of local cultures (Forenbaher).[23]

Asymmetrical platters with a fan-shaped extension are all richly decorated, both internally and externally and differ mainly in the modelling of the base, which can take the form of a low or high ring foot, sometimes with openings (Figs. 4/1; 5/2, 4, 7-8). As M. Primas has shown, the shape of these asymmetrical vessels has parallels mainly in Greece, but not on the continent.[24]

Jugs with a long handle that connects the rim to the shoulder or belly are a widespread functional form in Eastern Europe and Asia Minor. Among the richly decorated pottery, we can observe different shapes, including the tall and elegant jug from Gruda Boljevića, the small compact jug from Mala Gruda, and the asymmetrical one from Sutomore (Figs. 4/3; 5/1, 5-6). They therefore represent a popular and long-lasting remarkable regional ceramic type, which was also produced by several different local workshops.

The explanation for this excellent pottery may lie in its ritual purpose. In contrast to the settlement layers, where such sherds decorated in this particular style are extremely rare (Odmut Cave and Ravlića Cave),[25] the high decorated vessels of the same form are regularly

[23] DIMITRIJEVIĆ 1979: 321; FORENBAHER 2023: 17-95, fig. 11; 38, table 7.
[24] PRIMAS 1996: 57-61, Abb. 5.6.
[25] MARKOVIĆ 1985: pl. 27/ 2, 5; 28/ 4, 6-8; 29: 8; MARIJANOVIĆ 1981: pl. 36/ 6; 2012: pl. 68/ 5; 73/ 7.



Slika 5. *Keramički oblici: 1–3 Gruda Boljevića u Podgorici* (prema Guštin 2006., sl. 2)*, 4–5 Mogila na rake, Sutomore* (prema Zagarčanin 2016.)*, 6–7 Mala Gruda, Tivat* (snimio: T. Lauko) *i 7–8 Kujava II kod Danilovgrada* (prema Lutovac 2017., sl. 2)

Figure 5 *Ceramic forms: 1-3 Gruda Boljevića in Podgorica* (after Guštin 2006, Fig. 2)*: 4-5 Mogila na Rake at Sutomore* (after Zagarčanin 2016)*, 6-7 Mala Gruda in Tivat* (photo by T. Lauko) *and 7-8 Kujava II near Danilovgrad* (after Lutovac 2017, Fig. 2)

izrađene kao pogrebne posude s određenom simbolikom?

Zbog ograničene i fragmentarne naravi oblika i dekorativnih elemenata građe otkrivene duž istočne obale Jadrana, na osnovi usporedbi s poznatijim, opsežnije istraženim zajednicama poput onih iz Ljubljanskog barja i Vučedola stvoren je pretjeran dojam kulturnog jedinstva.

Najnovija distribucijska karta, koju je izradila Elena Leghissa, nije uključivala položaje s nalazištima grobnih humaka ni u njima pronađene setove keramike, kao ni ulomke keramike otkrivene na pećinskim lokalitetima. Na spomenutoj karti označena su nalazišta ljubljanske kulture i njezine jadranske inačice s karakterističnim i uglavnom ukrašenim posuđem ljubljanske kulture.[26]

APSOLUTNA I RELATIVNA KRONOLOGIJA

Prvu fazu u Crnoj Gori predstavlja grobna jama „osnivača" koja se nalazi u sklopu prvog nasipa humka s lokaliteta Gruda Boljevića. Metodom radiougljičnog datiranja, ulomak kosti iz groba smješten je približno u 3050. godinu pr. Kr. (3090. – 3044. cal BC), što ga smješta na početak trećeg tisućljeća pr. Kr. Središnji grob u Velikoj Grudi u Tivtu, čiji je inventar sličan onome „kneževskoga groba" iz Grude Boljevića, datira se u razdoblje od 2800. do 2700. godine pr. Kr. Ova dva datuma navode na zaključak da se „kneževski horizont" metodom radiougljičnog datiranja može smjestiti u prva dva ili tri stoljeća 3. tisućljeća pr. Kr.[27]

U ovaj horizont radiougljično su datirani i nalazi iz pećine Odmut, čiji je VI. sloj s odgovarajućim ulomcima keramike smješten u razdoblje 3036. – 2754. cal/1σ. Istraživanja i analogije upućuju na to da su u tom razdoblju

[26] LEGHISSA 2021: karta 1.
[27] Za ^{14}C datume v. FORENBAHER 2023: 38–40.

found in princely graves. The question arises: Were these luxury ceramic variants used in everyday life, or were they designed and produced as funerary vessels with specific symbolism?

Due to the limited and fragmentary nature of the material forms and decorative elements found along the eastern Adriatic coast, comparisons with better known and more extensively researched communities such as Ljubljansko Barje and Vučedol have led to an exaggerated impression of cultural unity.

The sites and pottery sets from mounds, as well as the sherds from the caves, were not included in the latest map created by Elena Leghissa. This map highlighted the sites of the Ljubljana Culture and its Adriatic variant, with characteristic and mainly decorated vessels of the Ljubljana Culture.[26]

ABSOLUTE AND RELATIVE CHRONOLOGY

The first phase is represented in Montenegro by the pit grave of 'the founder' within the first mound of the Gruda Boljevića mound. A bone fragment from the grave has been dated using C14 to approximately 3050 BC (3090-3044 cal BC), which places it at the beginning of the third millennium BC. In Velika Gruda in Tivat, the central grave with a similar inventory to the 'the princely grave' in Gruda Boljevića is dated to the period 2800-2700 BC. These two dates allow us to conclude that the "princely horizon" can be dated using C14 to the first two or three centuries of the 3rd millennium BC.[27]

This horizon also includes a C14 date from Odmut Cave, where Layer VI, containing corresponding ceramic fragments, is dated to 3036-2754 cal BC. According to studies and analogies, this is the time when Odmut VI,

[26] LEGHISSA 2021: Map 1.
[27] For the C14 dates see FORENBAHER 2023: 38-40.

formirani slojevi pećinskih nalazišta Odmut VI, Varvara A1, Ravlića pećina IIIa, Hateljska pećina III i Nezir IV.[28]

Prikazani datumi daljnji su dokazi u prilog hipotezi da se jadranska kultura može usporediti s klasičnom vučedolskom kulturom, datiranom između 2900. – 2600. godine pr. Kr. i ranog heladskog razdoblja EH II, kako je predložio Philippe Della Casa, te kategorizirati kao drugu fazu mlađeg bakrenog doba.[29]

Sveobuhvatna analiza cjelokupnih inventara koju je provela Margarita Primas rezultirala je smještanjem humaka s lokaliteta Velika i Mala Gruda u mlađe bakreno doba i u kronološkom i u kulturnom kontekstu.[30] Drugi autori ovaj kneževski horizont smještaju na početak starijeg brončanog doba smatrajući da je označio pojavu novih (brončanodobnih) društava.[31]

Na ovom mjestu važno je još jednom istaknuti kako smo suglasni s vremenskim određenjem „kneževskog horizonta" M. Primas. To je određenje kasnije potvrđeno ukopom „osnivača" u Grudi Boljevića, apsolutno datiranim u kraj 4. tisućljeća pr. Kr. Nakon prvog ukopa ispod humka nove crnogorske zajednice uslijedili su kontinuirani kneževski ukopi u grobnice u obliku cista.

PORIJEKLO I POVEZNICE

Kako bismo bili u mogućnosti pratiti porijeklo ove zajednice u crnogorskom zaleđu, prvo moramo razmotriti jamnu kulturu, koja je nastanjivala Pontsku stepu u mlađem bakrenom / starijem brončanom dobu te se datira u kraj 4. i prvu polovicu 3. tisućljeća pr. Kr. Prva crnogorska faza ovog „kneževskog horizonta" kulturno je povezana s grobnom jamom „osnivača" unutar prvog humka na lokalitetu Gruda

[28] DELLA CASA 1995: 572; 1996: 131, Tab. 10.
[29] DELLA CASA 1995: 572; 1996: 131, Tab. 18.
[30] PRIMAS 1996. V. i DELLA CASA 1996: 135; GUŠTIN 2006: 89; 2017; GUŠTIN, PRELOŽNIK 2015: 28–31.
[31] MARAN 2007; GOVEDARICA 2010; zatim LUTOVAC 2016; ZAGARČANIN 2016.

Varvara A1, Ravlića Cave IIIa, Hateljska Cave III, and Nezir Cave IV layers were formed.[28]

The dates presented provide further evidence to support the hypothesis that Adriatic culture can be paralleled with classical Vučedol, dated between 2900-2600 BC and EH II, as proposed by Philippe Della Casa and marked as the second phase of the Late Copper Age.[29]

A comprehensive analysis of all inventories conducted by Margareta Primas resulted in the placement of the mounds at Velika and Mala Gruda within the Late Copper Age, in terms of both chronological and cultural context.[30] Other authors see this princely horizon as the beginning of the Early Bronze Age, signifying the emergence of new (Bronze Age) societies.[31]

At this point it is important to reiterate our support for M. Primas' chronological definition of the "princely horizon". This was later confirmed by the burial of 'the founder' in Gruda Boljevića, which was absolutely dated to the end of the 4th millennium BC. This first burial under the mound of new Montenegrin community was continuously followed by princely burials in cists.

ORIGINS AND CONNECTIONS

To trace the origins of this community in the hinterland of the Montenegrin coast, we must first consider the Yamnaya culture, a Late Copper Age/Early Bronze Age culture of the Pontic steppe dating to the end of the 4th and the first half of the 3rd millennium BC. The first Montenegrin phase of this 'princely horizon' is culturally associated with the pit grave of 'the founder' within the first mound of Gruda Boljevića and similar central pit graves from

[28] DELLA CASA 1995: 572; 1996: 131, Tab. 10.
[29] DELLA CASA 1995: 572; 1996: 131, Tab. 18.
[30] PRIMAS 1996. See also DELLA CASA 1996: 135; GUŠTIN 2006: 89; 2017; GUŠTIN, PRELOŽNIK 2015: 28-31.
[31] MARAN 2007; GOVEDARICA 2010; following LUTOVAC 2016; ZAGARČANIN 2016.

Boljevića, kao i sa sličnim središnjim grobnim jamama s položaja Ljubomir – Ljeskova glavica. Povezana je i s položajima u albanskom zaleđu, uključujući Shtoj, Pazhok, Cerujë, Piskovë i Dukat.[32] Karakteristično obilježje je tip ukopa u grobnu jamu u koju je pokojnik položen u zgrčenom položaju unutar humka.

Pogrebni običaji ukapanja u grobne jame upućuju na pripadnost grobova jugozapadnom ogranku jamne kulture. Međutim, teško je utvrditi jesu li ti pogrebni običaji bili izravno povezani s migracijom pripadnika jamne kulture ili ih je jednostavno usvojilo lokalno stanovništvo.[33] U svakom slučaju, običaj ukopa u pogrebnim humcima složenije izrade, bilo u obliku grobnih jama ili cista, jedna je od najupečatljivijih značajki društvenih promjena koje su se dogodile na kraju bakrenog doba.

Sljedeća faza u razvoju bili su, kako je prethodno spomenuto, bogati „kneževski" grobovi sa statusnim simbolima kao dio nošnje vladajuće elite, kao što su zlatne karičice, te oružje s vrijednim sjekirama i bodežima. Nadalje, osobito na području Crne Gore široko su rasprostranjene druge grobnice u obliku cista koje karakteriziraju pogoleme kamene konstrukcije i središnji položaj unutar većeg humka.

Spomenute karičice za kosu tipa Lefkada i Mala Gruda, uz oružje kao što su sjekire i bodeži kao insignije, sveprisutni su i prevladavaju u egejskom zaleđu, kao i širom istočnoeuropskog prostranstva. Neki primjerci mogu se naći i na položajima jamne kulture.

Set keramike s posebnom ornamentikom obvezan je nalaz i u „kneževskim" grobovima i u grobovima bez kraljevskih insignija. Od oblika, u egejskom području uglavnom prevladavaju plitki tanjuri, dok su na širem europskom području zastupljeni vrčevi. U jednom slučaju dio seta je ukrašeni lijevak koji, među-

[32] GUŠTIN, PRELOŽNIK 2015: sl. 9; GOVEDARICA 2016: Abb. 1.

[33] V. i HARRISON, HEYD 2007; HEYD 2011; LEGHISSA 2017: 271, bilj. 1199.

Ljubomir-Ljeskova glavica. It is also linked to sites in the hinterland of the Albanian coast, including Shtoj, Pazhok, Cerujë, Piskovë, and Dukat.[32] A characteristic feature is the type of pit grave burial, in which the deceased was placed in a crouched position within mounds.

The funeral rites involving pit grave burials indicate that these graves should be part of the southwestern branch of the Yamnaya culture. However, it is difficult to determine whether this directly involves the migration of the Yamnaya groups/people or simply the adoption of their funeral rituals by the local population.[33] In any case, the practice of burial with elaborate funeral mounds, whether in the form of pit graves or cist tombs, represents one of the most striking features of the social changes that occurred at the end of the Copper Age.

The next phase in this development, as mentioned above, are the rich 'princely' graves with status symbols as part of the ruling class's attire, such as golden lockrings and weapons with precious axes and daggers. Furthermore, other cist tombs characterised by substantial stone constructions and a central position within a large mound, are particularly widespread in the Montenegro area.

The aforementioned hair lockrings of the Leukas and Mala Gruda types, along with weapons such as axes and daggers as insignia, are ubiquitous and prevalent in the hinterland of the Aegean area and across the vast expanse of Eastern Europe. Some well-known examples can also be found at Yamnaya culture sites.

Pottery set with special ornamentation is mandatory both in 'princely' graves and in graves without royal insignia. The form of platters is mostly prevalent in the Aegean area, while the jugs are representative on a broader European trend. A decorated funnel is, in one case, part of a set and as such an isolated form

[32] GUŠTIN, PRELOŽNIK 2015: Fig. 9; GOVEDARICA 2016: Abb. 1.

[33] See also HARRISON, HEYD 2007; HEYD 2011; LEGHISSA 2017: 271, note 1199.

tim, predstavlja izolirani oblik (sl. 4: 2; 5: 3).[34] Nameće se pomisao da taj bogato ukrašeni lijevak s položaja Gruda Boljevića simbolično predstavlja sapnicu, završetak mijeha koji se koristio u procesu obrade metala. Neukrašeni lijevci slične morfologije poznati su, primjerice, iz Panonije i Malića (Maliq) u Korčanskom okrugu (Korçë).[35]

Prepoznatljiva izvedba ukrasa brazdastim urezivanjem koji pokrivaju gotovo čitavu površinu keramike ponukala je znanstvenike da ovaj ukras povežu s odavno poznatom, slično ukrašenom keramikom vučedolske kulture rasprostranjene u Posavini, pa čak i s kulturom Ljubljanskog barja, daleko na zapadu. Isticanjem „ljubljanskih elemenata" i vučedolske kulture, iznimno rijetkih u jadranskom području, stvara se dojam postojanja snažnog kulturnog afiniteta i paralelnog razvoja. Međutim, trenutačno ne postoje pouzdani dokazi koji bi išli u prilog takvim zaključcima. S druge strane, u zajednicama vučedolske kulture i Ljubljanskog barja nisu potvrđeni „kneževski" elementi. Ukrašena keramika, kao i određeni detalji koji se odnose na oblike, rezultat je općih civilizacijskih dostignuća i modnih trendova na prijelazu iz bakrenoga u brončano doba u Europi.

Iznenadnom pojavom „kneževskog horizonta" na crnogorskom području nameće se pitanje je li on rezultat dolaska pridošlica koje su sa sobom donijele nove tehnološke spoznaje i otkrile rudne resurse u planinama ili, štoviše, razvile djelatnost obrade metala koju su im podarili svemogući bogovi? To pitanje o vučedolskoj metalurškoj djelatnosti postavio je Aleksandar Durman u svojem radu *Simbol boga i kralja. Prvi europski vladari*.[36] S druge strane, je li se ta visoka „kneževska" elita razvila kao rezultat svoje geografske uloge potencijalnih

[34] Slične ukrašene zdjele poznate su i iz Batine i Opatovca (GUŠTIN, PRELOŽNIK 2015: 30, sl. 12; LEGHISSA et al. 2020).

[35] HORVATH et al. 2013.; AGOLLI 2014: 395, P91–P92; v. i GUŠTIN, PRELOŽNIK 2015: 30.

[36] DURMAN 2006.

(Fig. 4/ 2; 5/ 3).[34] It is tempting to think that this high decorated funnel from Gruda Boljevića symbolically represents a nozzle, endpiece of blow pipes for bellows used in metallurgical process. Undecorated funnels with similar morphology are e.g. known from Pannonia and in Malić (Maliq) in Korçë County.[35]

The distinctive execution of the decoration with furrowed incisions, covering almost the entire surface of the pottery, has led researchers to link this ornamentation with the long-known, similarly decorated ceramics of the Vučedol Culture along the Danube/Sava River and even with the Ljubljansko Barje Culture in the far west. Emphasising the 'Ljubljana elements' and the Vučedol Culture, which are extremely rare in the Adriatic region, creates the impression of a strong cultural affinity and parallel development. However, currently, there is a lack of compelling evidence to support such conclusions. On the other hand, there is no evidence of 'princely' elements in the communities of Vučedol and Ljubljansko Barje. The decorated pottery, together with certain form details, is the result of general civilisational achievements and fashion trends at the turn of the Copper Age to the Bronze Age in Europe.

The sudden emergence of the 'princely horizon' in the Montenegrin region raises the question of whether it is the result newcomers with new technological knowledge who discovered the mineral resources in the mountains or even developed metal processing activities bestowed by the almighty gods? Aleksandar Durman posed such a question about the metallurgy of Vučedol in his work *Symbol of Good and King: The First European Rulers*.[36] On the other hand, did this high 'princely' elite develop as a result of their geographical role as potential

[34] Similar decorated bowls are known from Batina and Opatovac (GUŠTIN, PRELOŽNIK 2015: 30, Fig. 12; LEGHISSA et al. 2020)

[35] HORVATH et al., 2013; AGOLLI, 2014: 395, P91-P92; see also GUŠTIN, PRELOŽNIK, 2015: 30.

[36] DURMAN, 2006.

posrednika između istočnog Sredozemlja, osobito prostora oko Egejskog i Jonskog mora, i središnjeg Balkana, pa i dalje, sve do samog ishodišta vučedolske kulture, a ne kao posljedica utjecaja kultura sa sjevera koje se često opisuju kao ljubljanska inačica vučedolske kulture?

Očigledno tek treba pronaći sveobuhvatno objašnjenje za upečatljive sličnosti zamjetne u oblicima i ukrasima keramike Ljubljanskog barja, Vučedola te osebujnog tipa keramičkih setova. Možda bi bilo korisno osvrnuti se na keramiku tipa *Furchenstich* srednjeg bakrenog doba. Unatoč značajnom vremenskom razmaku između ranije keramike tipa *Furchenstich* i crnogorskih kneževskih grobova od preko pola tisućljeća, uzorak ovog tipa tehnike ukrašavanja ilustrira, primjerice, kipić iz Graza u austrijskom Steiermarku (sl. 6/1) koji pripada horizontu keramike kulture Retz-Gajary iz razdoblja sredine 4. tisućljeća pr. Kr.[37]

Antropomorfna plitka figurica iz Graza s karakterističnim stožastim nastavkom za glavu i istaknutim ženskim poprsjem (sl. 6/1) podsjeća na takozvane violinske idole, karakteristične za starije brončano doba. B. Govedarica je predstavio grobove iz humaka s položaja Shtoj i Kuća Rakića (sl. 6/2) u kojima je pronađeno nekoliko violinskih idola, skrenuvši pozornost na slične antropomorfne figurice s lokaliteta Cernavodă III te onih kasne tripoljske kulture, s primjercima na kojima su se mogle skinuti glave, kao što je primjer s kipićem iz Graza (sl. 6/1) i drugih iz sličnog razdoblja. Najbolje paralele s nalazima iz Shtoja i Rakića Kuća su shematsko-apstraktni violinski idoli izrađeni od mramora, koji pripadaju skupinama Pelos i Plastiras 21 cikladske kulture. Osim različitog materijala i neobično visokog područja vrata i glave, idoli se odlikuju karakteristikama usporedivima s balkanskim primjercima.[38]

Nova istraživanja, a prije svega i otkrića građe širokog raspona, prvi put omogućavaju da

[37] RUTTKAY, KRAMER 2004: 47–51; TIEFENGRABER 2015: sl. na str. 242; v. i TOMAŽ 2008: 53–55, sl. 36–37.

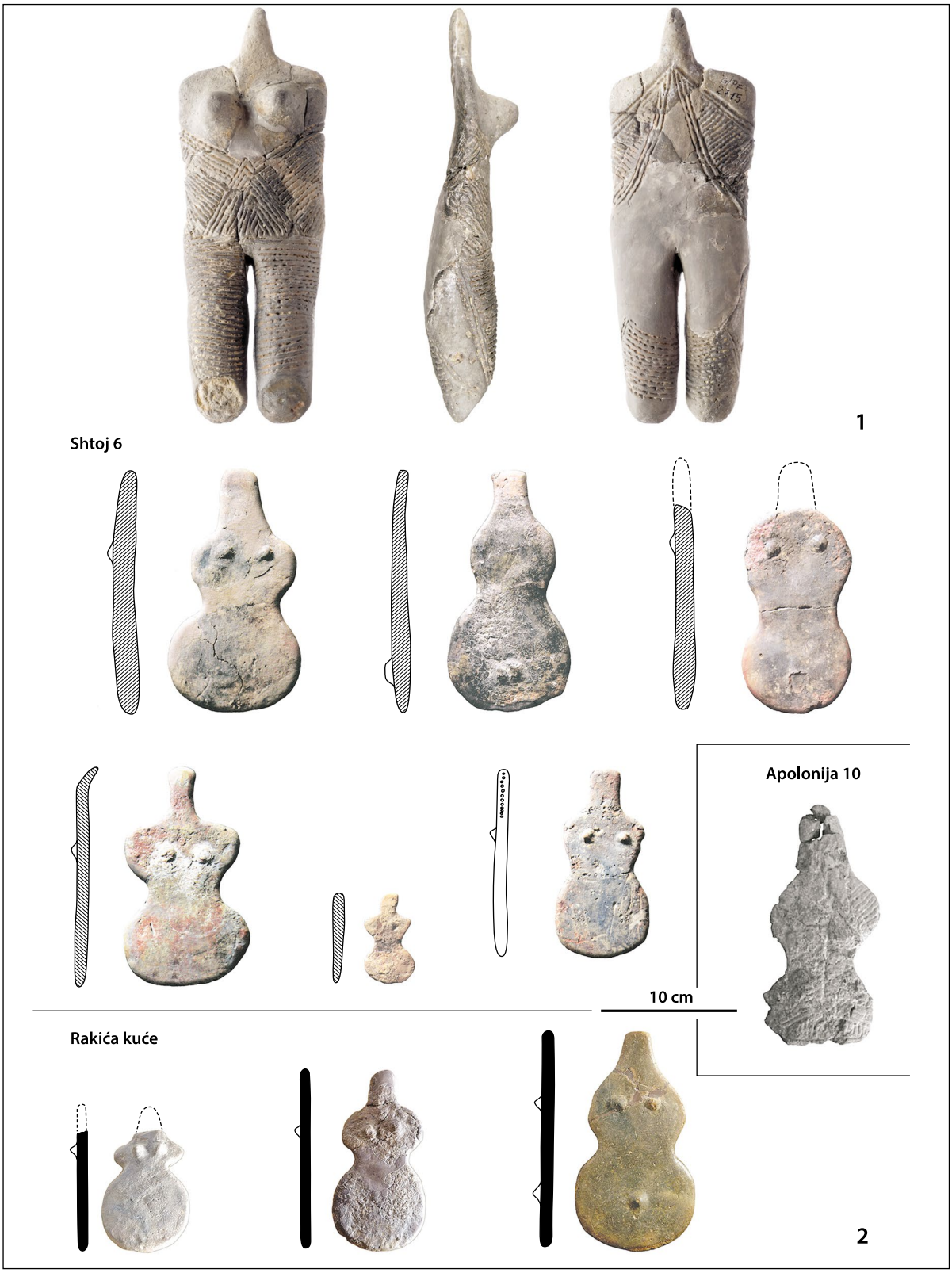
[38] GOVEDARICA 2016.

intermediaries between the eastern Mediterranean, particularly the Aegean-Ionian Sea, and the central Balkans, and further on to the core of the Vučedol Culture, rather than as a consequence of influences from northern cultures, which are often described as the Ljubljana variant of the Vučedol Culture?

It is evident that a comprehensive explanation for the striking similarities observed in ceramic forms and decorations across the Ljubljansko Barje, Vučedol community, and the distinctive ceramic set type has yet to emerge. Perhaps it would be helpful to look back at the Furchenstich pottery type of the Middle Copper Age. Despite the significant time gap of over half a millennium between the earlier Furchenstich pottery type and the Montenegrin princely graves, the pattern of this type of decoration technique is exemplified, for example, by the statuette from Graz in austrian Steiermark (Fig. 6/1) which belong to the Retz-Gajary pottery horizon of the middle 4th millennium BC (Fig. 6).[37]

The anthropomorphic shallow figurine from Graz with a characteristic conical-shaped attachment for the head and prominent female bust (Fig. 5/1) resembles the so-called violin idols, typical for the Early Bronze Age. B. Govedarica presented the graves from the mounds at Štoj and Kuća Rakića (Fig. 6/2), which contained few violin idols, and drew attention to similar anthropomorphic figurines from Cernavoda III and the Late Tripolje Culture, with examples that the heads were removable, as in the statuette from Graz (Fig. 6/1) and others of a similar period. The best parallels to the finds from Štoj and Rakića Kuće are the schematic-abstract violin idols made of marble from the Cycladic Pelos and Plastiras Group 21. Apart from a different material and an unusually high neck and head area, these idols exhibit comparable characteristics to the Bal-

[37] RUTTKAY, KRAMER 2004: 47-51; TIEFENGRABER 2015: Fig. on p. 242; see also TOMAŽ 2008: 53-55, Fig. 36–37.



Slika 6. *Kipić s Furchenstich ukrasom (odnosno ukrasom brazdastim urezivanjem) iz Graza (1.; Universalmuseum Joanneum Graz) i violinski idoli iz starijeg brončanog doba s položajâ Štoj, Rakića Kuće i Apolonia* (2.; prema: Forenbaher 2023: sl. 7.)
Figure 6 *Statuette with the Middle Cooper Age Furchenstich decoration from Graz (1; Universalmuseum Joanneum Graz) and violin idols from the Early Bronze Age from Štoj, Rakića kuća and Apolonia* (2; after Forenbaher 2023: Fig. 7)

se utvrde bogati crnogorski „kneževski grobovi", kao i tipološki jasno definirani violinski idoli, te da se, uz neke pouzdane datume dobivene metodom radiougljičnog datiranja, ukaže na poveznice s istočnojadranskim područjem i skrene pozornost na egejski svijet. To je posebna referentna točka rane faze cikladske kulture skupine Pelos u kojoj nalazimo ne samo najbolje analogije za naše violinske idole, nego i usporedive kamene grobnice u obliku cista.[39]

Slični oblici posuda s ukrasnim motivima nastalima urezivanjem (poznatim i kao brazdasto urezivanje), utiskivanjem i inkrustacijom mogu se pratiti od obronaka istočnih Alpa (Mondsee, Retz, Gajary) do Transilvanije.[40]

ZAJEDNICA SA SKADARSKOG JEZERA NA PRIJELAZU IZ BAKRENOG U BRONČANO DOBA

Kao važan dio pogrebnog obreda, izgradnja grobnice u obliku ciste od iznimno teškog kamenja bila je tehničko postignuće koje je zahtijevalo znatnu organizaciju ljudskih resursa. Slična postignuća preuzimale su organizirane neolitičke zajednice diljem Europe (i drugih kontinenata) u takozvanoj megalitskoj kulturi odnosno kulturi megalitskih grobova (dolmena).

Iako su humci vidljivi spomenici i tek ih je nekolicina arheološki istražena, slojevi istodobnih naselja poznati su samo s pećinskih

[39] GOVEDARICA 2016: 95–96: *Die Grubengräber aus Shtoj und Rakića Kuće, in denen Violin-Idole geborgen wurden, können eindeutig der Ljubljana-Kultur zugeordnet werden. Dafür spricht neben den typologischen Merkmalen der zusammen mit ihnen gefundenen Keramikgefäße auch die Position des Grabes № 1 im Hügel Rakića Kuće unmittelbar neben dem zentral gelegenen Grabe № 3 des adriatischen Typs der Ljubljana-Kultur.* [„Humci s položaja Shtoj i Rakića Kuće u kojima su otkriveni violinski idoli mogu se jednoznačno pripisati ljubljanskoj kulturi. Osim tipoloških obilježja keramičkih posuda pronađenih uz njih, to potvrđuje i položaj groba br. 1 u humku Rakića Kuće neposredno pokraj središnjeg groba br. 3 jadranskog tipa ljubljanske kulture."]

[40] KALICZ, HORVÁTH 2010; TIEFENGRABER 2015.

kan examples.[38]

The new investigations and, above all, the recovery of a wide range of material, make it possible for the first time to identify the rich Montenegrin 'princely graves', as well as the typologically clearly defined violin idols and, together with some reliable radiocarbon dates, to point the way to a connection with the eastern Adriatic region and to draw attention to the Aegean world. This is a special reference point of the Early Cycladic Pelos culture, where not only the best analogies for our violin idols are present, but also the comparable stone cist tombs can be found.[39]

Similar forms of vessels with decorative motifs made by incising (also known as grooved incising), embossing and incrustation can be traced from the outskirts of the Eastern Alps (Mondsee, Retz, Gajary,) to Transylvania.[40]

LAKE SKADAR COMMUNITY AT THE TURN FROM THE COPPER AGE TO THE BRONZE AGE

As an important part of the burial ritual, the construction of a cist grave from extremely heavy stones was a technical achievement that required considerable organisation of human resources. Similar achievements were emulated by organised Neolithic communities throughout Europe (and other continents) in the so-called Megalithic (Dolmen) Graves Culture.

Although the mounds are visible monuments and several of them have been archaeological researched, the contemporary settlements lay-

[38] GOVEDARICA 2016.

[39] GOVEDARICA 2016: 95-96: *Die Grubengräber aus Shtoj und Rakića Kuće, in denen Violin-Idole geborgen wurden, können eindeutig der Ljubljana-Kultur zugeordnet werden. Dafür spricht neben den typologischen Merkmalen der zusammen mit ihnen gefundenen Keramikgefäße auch die Position des Grabes № 1 im Hügel Rakića Kuće unmittelbar neben dem zentral gelegenen Grabe № 3 des adriatischen Typs der Ljubljana-Kultur.*

[40] KALICZ, HORVÁTH 2010; TIEFENGRABER 2015.

nalazišta Odmut i Ravlića pećina. Arheološka iskapanja Predraga Lutovca na gradini Samobor[41] na obali Skadarskog jezera iznjedrila su brojne ulomke keramike koji bi se vremenski također mogli podudarati s pogrebnom keramikom otkrivenom u grobovima. Ako su humci s grobnicama i grobnim prilozima bili izuzetni, prvi korak ka priznavanju domaćeg okruženja ovog prapovijesnog društva na prijelazu iz starijeg brončanog doba jest istraživanje naselja.

Moguće je potvrditi da različita građa grobnih priloga, od bogatih primjeraka s položajâ Gruda Boljevića te Velika i Mala Gruda do skromnijih priloga na drugim lokalitetima koji uključuje samo dva seta posuđa, ukazuje na postojanje dviju različitih socijalnih razina. Važno je napomenuti da su ključna obilježja tih lokaliteta humak i kamena grobnica. Njihova je izgradnja iziskivala značajne napore i podrazumijevala veliko poštovanje prema pokojnicima, kao i razvijenu društvenu strukturu. U većini su se slučajeva velike vapnenačke ploče pridobivale i prenosile do konačnog počivališta pokojnika s velike udaljenosti.

Ostaje nejasno gdje su korijeni te iznenadne pojave do koje je došlo u regiji između Kotorskog zaljeva i šireg područja Skadarskog jezera s „kneževskim horizontom". Je li moguće da je pritom važnu ulogu odigrao dolazak pridošlica koje su sa sobom donijele nova tehnološka znanja i otkrile potencijal rudnih resursa u planinama ili, štoviše, razvile djelatnost obrade metala koju su im podarili svemogući bogovi?[42]

Područje se otvorilo prema moru, a početkom 3. tisućljeća pr. Kr., s početkom ruta koje su vodile prema novim centrima moći u području Podunavlja, pojavila se lokalna elita čija se važnost i moć odražavaju u velikim humcima i izuzetnim grobnim prilozima.

Razlozi za takav neočekivani uspon još uvijek nisu sasvim jasni. Je li jednostavno riječ o strateškom položaju? Ili o posljedicama migra-

[41] Podatke pružio osobno P. Lutovac.
[42] DURMAN 2006: 25–47; TERŽAN 2023: 170–171.

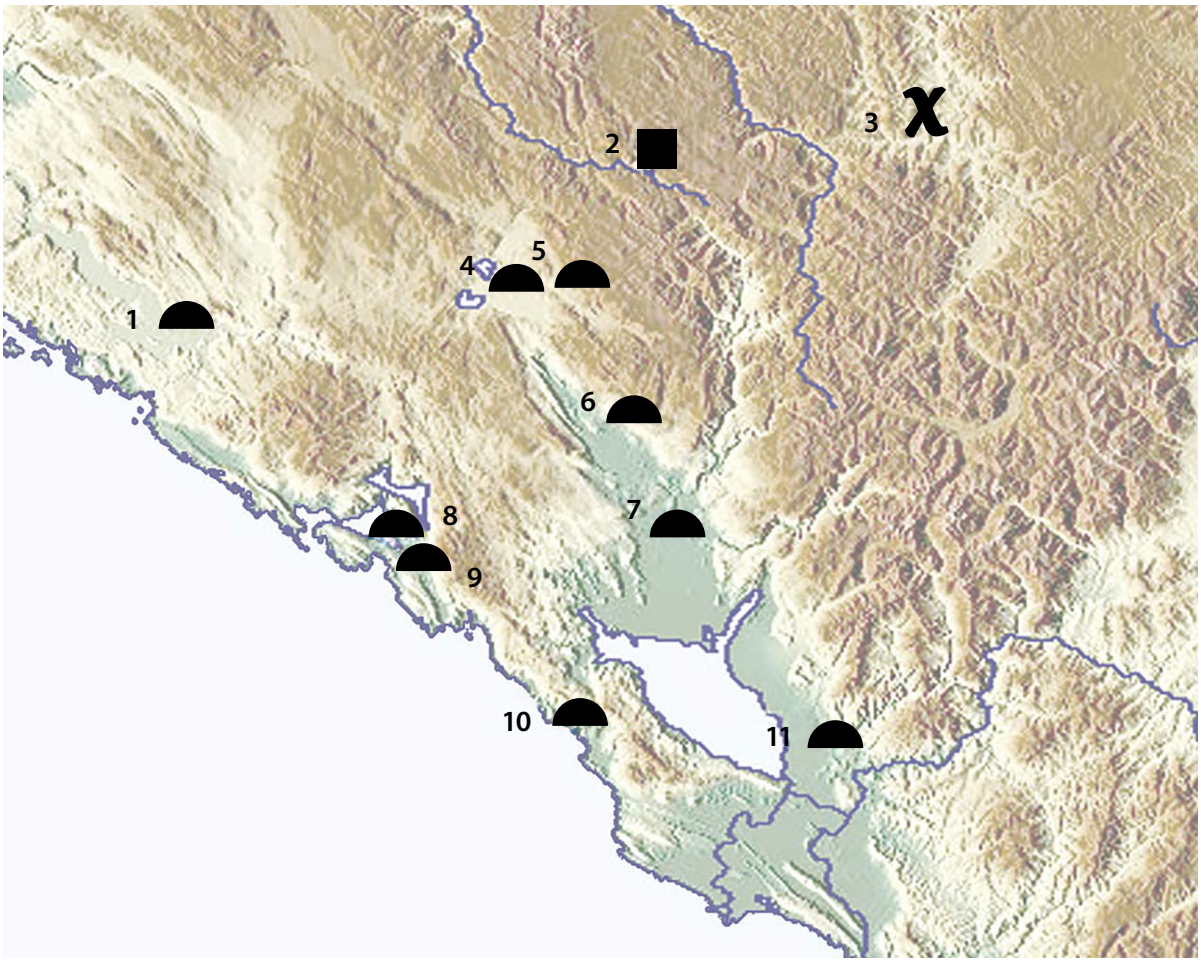
ers are known only from the caves of Odmut pećina and Ravlića pećina. Archaeological excavations by Predrag Lutovac on the Samobor gradina (hillfort)[41] on the shores of Lake Skadar have brought to light numerous ceramic fragments, which may also correspond chronologically to the funerary ceramics discovered in the graves. If the mounds with their tombs and grave goods were exceptional, the research of the settlement is the first step towards recognising the domestic world of this prehistoric society at the turn of the Early Bronze Age.

It can be acknowledged that the different grave goods assemblages, ranging from the rich examples from Gruda Boljevića and both Velika and Mala Gruda to the poorer assemblages comprising only two sets of vessels at other sites, represent the existence of two distinct social levels. It is important to note that the key feature of these sites is the mound and stone tomb. The construction of these required a significant effort and assumed a high degree of respect for the deceased and a developed social structure. In the majority of cases, the large limestone slabs were quarried and transported from a considerable distance to the final resting place of the deceased.

The roots of this sudden development in the region between the Kotor Bay and the wide surroundings of Lake Skadar with the 'princely horizon' remain unclear. Is it possible that the emergence of newcomers with new technological knowledge, who discovered the potential of mineral resources in the mountains or even developed the metallurgical activities given by the almighty gods may have played a role?[42]

This region opened to the sea and at the beginning of the 3rd millennium BC with the beginning of the routes to the new centres of power in the Danube area, a local elite emerged, whose importance and power are reflected in the large mounds and exquisite grave goods.

[41] Personal information by P. Lutovac.
[42] DURMAN 2006: 25-47; TERŽAN 2023: 170-171.



Slika 7. *Položaji mlađeg bakrenog doba u crnogorskom zaleđu Jadrana i Skadarskog jezera:* ■ *pećine ,* ◠ *tumuli ,* X *mogući rudnici u području bogatom bakrenom rudačom: 1. Leskova glavica, 2. Odmut, 3. Šuplja stena, 4. Nikšić – Ćemenci, 5 Nikšić – Rubeža, 6. Podgorica – Gruda Boljevića, 7. Kuće Rakića, 8. Tivat – Mala Gruda, 9. Tivat – Velika Gruda, 10. Sutomore – Mogila na rake, 11. Shtoj* (izradio: A. Preložnik)

Figure 7 *Late Copper Age sites in the hinterland of the Montenegrin coast and Lake Skadar:* ■ *caves,* ◠ *tumuli,* X *possible mines in the area rich with copper ore: 1 Leskova glavica, 2 Odmut, 3 Šuplja stena, 4 Nikšić-Ćemenci, 5 Nikšić-Rubeži, 6 Podgorica-Gruda Boljevića, 7 Kuće Rakića, 8 Tivat-Mala Gruda, 9 Tivat-Velika Gruda, 10 Sutomore-Gomila na Rake, 11 Štoj* (made by A. Preložnik)

cija novih doseljenika? Možda se radi o prihvaćanju novih društveno-ekonomskih odnosa i usvajanju novih tehnoloških znanja? Ili o sudbonosnoj kombinaciji svih tih čimbenika? U svakom slučaju, „crnogorski knezovi" su odigrali značajnu i, na mnogo načina, iznimnu ulogu na pozornici europske povijesti na prijelazu iz bakrenog u brončano doba.

Konačno, da bi se definirao ovaj crnogorski kulturni fenomen, bitno je uzeti u obzir niz elemenata, uključujući i odgovarajući prostorni kontekst. U ovom slučaju, ponovno ćemo se usredotočiti na tip ukopa – u humcima koji ih čine istaknutima u krajoliku, s grobnom

The reasons for such an unexpected rise are not yet entirely clear. Is it simply a convenient strategic location? Or is it the result of the migration of a new settler? Perhaps the acceptance of new socio-economic relations and the adoption of new technological knowledge? Or a fateful combination of all these factors? Either way, the 'Montenegrin princes' played a significant and, in many ways, exceptional role on the stage of European history at the turn of the Copper and Bronze Ages.

Finally, to define this Montenegrin cultural phenomenon, it is essential to consider a number of elements together with the correspond-

arhitekturom koja uključuje kamene ciste i zgrčene ukope. Odgovarajući prilozi – nakit, oružje, alat kao simboli vladavine i jedinstveni setovi keramike za obredne svrhe, izvrsne izrade – dodatno karakteriziraju i definiraju ovu istaknutu pojavu.[43]

S obzirom na jedinstvenost građe te na temelju spomenutih usporedbi jasno je da je predmet našeg promatranja razvijeno, neovisno društvo sa snažnim vezama, osobito na području Sredozemlja. To društvo karakteriziraju statusni simboli kao što su oružje i zlatne naušnice, kao i oblici keramike koji veoma nalikuju egejsko-grčkim predlošcima. Karakterističan način ukrašavanja keramike pridaje ovoj zajednici snažan lokalni karakter.

U svakom slučaju, na području između Crnogorskog primorja i priobalnog pojasa Skadarskog jezera koji uključuje humke i na albanskoj strani, koje obuhvaća i riječne doline Zete i Morače, moramo se pozabaviti zajednicom koja zauzima vrlo kompaktno i istaknuto mjesto u europskoj ranoj prapovijesti u geografskom i kulturnom smislu. Kao takvo, to visokorazvijeno društvo zaslužuje konkretnije priznanje dodjelom odgovarajućeg imena.

Izraz „facijes Kotor" prvotno je predložila Margarita Primas na temelju dva humka koja su tada bila poznata u Tivatskom polju u blizini Kotora na crnogorskoj obali. S obzirom na prostornu usporedivost elemenata povezanih s horizontom „crnogorskih knezova" (sl. 7), umjesto suvremenog pojma Crna Gora i povezanosti s područjem Albanije, najprikladnijim se čini pojam „zajednica sa Skadarskog jezera" s prelaska iz bakrenog u brončano doba.

[43] GUŠTIN 2006: 89.

ing spatial context. In this case, we will again focus on the type of burial: in mounds making them prominent in the landscape, featuring grave architecture consisting of stone cists and crouched inhumation. The corresponding accessories – jewellery, weapons, tools as symbols of ducal power and unique ceramic sets for ritual purposes and of excellent workmanship – further characterise and define this outstanding phenomenon.[43]

Considering the uniformity of the material and based on the above comparisons, it is clear that we are observing a developed, independent society with strong connections, particularly in the Mediterranean area. This society is characterised by status symbols such as weapons and gold earrings, as well as by the forms of the pottery, which closely resemble Aegean-Greek models. The distinctive ceramic decoration gives this community a strong local character.

In any case, in the area between Montenegrin Primorje (coast), surroundings of Lake Skadar with the mounds also on its Albanian side and encompassing the river valleys of Zeta and Morača, we have to deal with the community that stands in European early prehistory geographically and culturally very compact and prominent. As such, this highly developed society deserves more concrete recognition through the appropriate formed name.

The term 'facies Kotor' was originally proposed by Margareta Primas based on the two mounds that were known at the time in Tivatsko polje (Tivat Field) near the town of Kotor on the Montenegrin coast. Given the spatial comparability of the elements associated with the 'Montenegrin princes' horizon (Fig. 7), the term Copper/Bronze Age 'Lake Skadar community', instead of the modern term Montenegro and connection with the Albanian area, seems most appropriate.

Translation and proof-reading:
ETNOtrend d.o.o.

[43] GUŠTIN 2006: 89.

Literatura / References

AGOLLI, E. 2014, *The Shaping of Social Complexity, Networks and Cultural Transmissions: Pottery from the Bronze and Iron Age Communities of Southern Illyria and Northern Epirus (2500-500 B.C.)*, unpublished PhD thesis / neobjavljena disertacija, Los Angeles: University of California.

BAKOVIĆ, M. 2011, The princely Mound Gruda Boljevića, Podgorica, Montenegro, in/u: *Ancestral landscapes: burial mounds in the Copper and Bronze Ages (Central and Eastern Europe - Balkans - Adriatique - Aegean, 4th-2nd millennium B.C.)*, *Proceedings of the International Conference held in Udine, May 15th-18th 2008*, Borgna, E., Müller Celka S. (eds./ur.), Travaux de la Maison de l'Orient et de la Méditerranée, Série recherches archéologiques, 58, Lyon: Maison de l'Orient et de la Méditerranée Jean Pouilloux, 375–381.

BAKOVIĆ, M., GOVEDARICA, B. 2009, Nalazi iz kneževskog tumula Gruda Boljevića u Podgorici, Crna Gora, *Godišnjak Centra za balkanološka istraživanja*, XXXVIII/knj. 36, 5–21.

БАКОВИЧ, М., ГОВЕДАРИЦА В. 2010, Находки из «княжеского» кургана Груда Больевича в Подгорице, *Stratum Plus*, 2, 269–279.

DANI, J., 2021, Milleker's pride and joy, in/u: *Danubian Route of the Yamnaya Culture. The Barrows of Vojvodina*, Jarosz, P., Koledin, J., Wlodarczak, P. (eds./ur.), Budapest: Archeolingua, 195–206.

DELLA CASA, Ph. 1996, *Velika Gruda II. Die bronzezeitliche Nekropole Velika Gruda (Opš. Kotor, Montenegro)*, Universitätsforschungen zur prähistorischen Archäologie, 33, Bonn: Rudolf Habelt Bonn.

DIMITRIJEVIĆ, S. 1979, Vučedolska kultura i vučedolski kulturni kompleks, in/u: *Praistorija jugoslovanskih zemalja, III – Eneolit,* Benac, A. (ed./ur.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka istraživanja, 267–341.

DURMAN, A. 2006, *Simbol Boga i kralja: prvi europski vladari / Symbol of God and king: the first European rulers*, Zagreb: Galerija Klovićevi dvori.

FORENBAHER, S. 2023, *Rane grobne gomile na Jadranu i raznolikost pogrebnih običaja u 3. tisućljeću pr. Kr. / Early Burial Mounds in the Adriatic and the Diversity of Mortuary Practice in the 3rd Millennium B.C.,* Monografije Instituta za arheologiju, XV, Zagreb: Institut za arheologiju Zagreb.

GOVEDARICA B. 1989, *Rano bronzano doba na području istočnog Jadrana, Centar za balkanološka ispitivanja,* Djela, LXVII/knj. 7, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka istraživanja.

GOVEDARICA B. 2006*.,* Keramika cetinskog tipa u unutrašnjosti zapadnog Balkana i problem kulturno-istorijske interpretacije praistorijskih nalaza*, Godišnjak Centra za balkanološka ispitivanja,* XXXV/ knj. 33, 95–114.

GOVEDARICA, B. 2010, Grab- und Opferfunde aus dem Hugel Gruda Boljevića (erste Hälfte des 3. Jahrtausend v. Chr.), in/u: *Panta rhei. Studies on the Chronology and Cultural Development of South-Eastern and Central Europe in Earlier Prehistory*, presented to Juraj Pavúk on the Occasion of 75th birthday, Mellnerová Šuteková, J., Pavúk, P., Kalábková, P., Kovár, B. (eds./ur.), Studia Archaeologica et Medievalia, XI, Bratislava: Comenius University, Olomouc: Archaeological centre, 179–188.

GOVEDARICA, B. 2016, Violin-Idole aus Hügelgräbern der beginnenden Bronzezeit in Nordalbanien und Montenegro, in/u: *Mensch, Kultur und Gesellschaft von der Kupferzeit bis zur Frühen Eisenzeit im Nördlichen Eurasien*, Zanoci A., Kaiser E., Kashuba M., Izbitser E., Băţ M. (eds./ur.), Chişinău: National Museum of History of Moldova, Freie Universität Berlin, 85–101.

GUŠTIN, M. 2006, Prvi vladari između Egejskog i Jadranskog mora / First rulers between the Aegean and Adriatic seas, in/u: *Simbol Boga i Kralja: prvi europski vladari / Symbol of God and king: the first European rulers*, Durman, A. (ed./ur.), Zagreb: Galerija Klovićevi dvori, 87–98.

GUŠTIN, M. 2017, Gruda – poslednji dom prvih knezov v Črni Gori iz obdobja Bakrene dobe / Gruda – last home of the first princes in Montenegro from Late Copper Age, *Arhitekturni razgledi*, XVIII(1), 94–101.

GUŠTIN, M., PRELOŽNIK, A. 2015, Gruda Boljevića. Kneževska humka kasnog bakarnog doba, in/u: *Podgorica, praistorijske humke i srednjevekovne nekropole. Gruda Boljevića*. Saveljić-Bulatović, L., Guštin, M., Hincak, Z. (eds./ur.), Podgorica: JU muzeji i galerije Podgorice, 15–47.

HARRISON, R., HEYD, V. 2007, The transformation of Europe in the third Millenim BC: the example of »Le Petit-Chasseur I + III« (Sion, Valais, Switzerland), *Prähistorische Zeitschrift*, 82(2), 129–214.

HEYD, V. 2011, Yamnaya groups and mounds west of the Black sea, in/u: *Ancestral landscapes: burial mounds in the Copper and Bronze Ages (Central and Eastern Europe - Balkans - Adriatique - Aegean, 4th-2nd millennium B.C.)*, *Proceedings of the International Conference held in Udine, May 15th-18th 2008*, Borgna, E., Müller Celka, S. (eds./ur.), Travaux de la Maison de l'Orient et de la Méditerranée, Série recherches archéologiques, 58, Lyon: Maison de l'Orient et de la Méditerranée Jean Pouilloux, 535–555.

HORVÁTH, T., GHERDÁN, K., KULCSÁR, G., SIPOS, G., TÓTH, M. 2013, An Enigmatic Funnel Find of the Somogyvar-Vinkovci Culture from Balatonőszod-Temetői dűlő in Transdanubia, Hungary, *Interdisciplinaria archaeologica*, 4(1), 23–38,195-255.

KALICZ, N., HORVÁTH, L. 2010, Die kupferzeitliche Protoboleraz-Phase (Gruppe) im Lichte der neuen Ausgrabungen in Sudwest-Transdanubien, in/u: Panta rhei. Studies on the Chronology and Cultural Development of South-Eastern and Central Europe in Earlier Prehistory, presented to Juraj Pavúk on the Occasion of 75th birthday, Mellnerová Šuteková, J., Pavúk, P., Kalábková, P., Kovár, B. (eds./ur.), Studia Archaeologica et Medievalia, XI, Bratislava: Comenius University, Olomouc: Archaeological centre, 407–433.

LEGHISSA, E. 2021, Deschmann´spile dwelling sites near Ig and the cultural-chronological attribution of the Late Copper Age Ljubljana culture / Kulturna in časovna umestitev poznobakrenodobne ljubljanske kulture na Dežmanovih koliščih pri Igu, *Arheološki vestnik*, 72, 7–51.

LEGHISSA, E., KASZTOVSZKY, Z., SZILÁGYI, V., HARSÁNYI, I., DE MIN, A., PRINCIVALLE, F., MONTAGNARI KOKELJ, M., BERNARDINI, F. 2020, Late-Copper-Age decorated bowls from the Trieste Karst (north-eastern Italy): What can typology, technology and non-destructive chemical analyses tell us on local vs. foreign production, exchange systems and human mobility patterns?, *Quaternary international*, 539, 92-104.

LUTOVAC, P. 2017, Nalazi iz tumula u selu Kujava kod Danilovgrada, *Godišnjak Centra za balkanološka ispitivanja*, 46, 55–75.

MARAN, J. 1998, *Kulturwandel auf dem griechischen Festland und den Kykladen im späten 3. Jahrtausend v. Chr.*, Universitätforschungen zur prähistorischen Archäologie, 53, Bonn: Rudolf Habelt Bonn.

MARAN, J. 2007, Seaborne Contacts between the Aegean, the Balkans and the Central Mediterranean in the 3rd Millennium BC; The Unfolding of the Mediterranean World, in/u: *Between the Aegean and Baltic Seas: Prehistory across Borders,* Aegaeum, 27, Galanaki, I., Tomas, H., Galanakis, Y., Laffineur, R. (eds./ur.), Liège: Université de Liège, Austin:, University of Texas, 3–21.

MARIJANOVIĆ, B. 1981, Ravlića pećina (Peć Mlini), *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu*, 35–36, 1–97.

MARIJANOVIĆ, B. 1991, Ljubljanska kultura na istočnoj jadranskoj obali, *Vjesnik za arheologiju i historiju dalmatinsku*, 84, 215–245.

MARKOVIĆ, Č. 1977, The Stratigraphy and Chronology of the Odmut Cave, *Archaeologia Iugoslavica,* 15, 7–12.

MELLER, H. 2014, Die neolitischen und bronzezeitlichen Goldfunde Mitteldeutschlands – Eine Übersicht, in/u: *Metalle der Macht – Frühes Gold und Silber / Metals of power – Early gold and silver*, Meller, H., Risch, R., Pernicka, E. (eds./ur.). Halle: Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt – Landesmuseum für Vorgeschichte Halle, 611–716.

PAROVIĆ-PEŠIKAN, M., TRBUHOVIĆ V. 1971, Iskopavanja tumula ranog bronzanog doba u Tivatskom polju / Fuilles des tumulus de l'age du bronce anciene dans la plaine de Tivat, *Starinar*, XXII, 129–144.

PRIMAS, M. 1996, *Velika gruda I. Hügelgräber der frühen 3. Jahrtausends v. Chr. im Adriagebiet – Velika Gruda, Mala Gruda und ihr Kontext*, Universitätsforschungen zur prähistorischen Archäologie 32, Bonn: Rudolf Habelt.

RADUNOVIĆ, N. 2022, Catalog No. 28; Burial assemblages, in/u: Gyucha A., Parkinson W. A., *First Kings of Europe*, Exhibition Catalog, Chicago: Field Museum of Natural History.

RUTTKAY, E., KRAMER, D. 2004, Graz-iella aus dem frühen 4. vorchristlichen Jahrtausend. Die erste (fast) vollständige Frauenfigur mit Furchenstichverzierung, in/u: *Spannungsfeld Altstadt Tiefgarage: Stadtplanung, Stadtarchäologie*, Schild von Steier, Kleine Schriften, 20, Kramer, D. (ed./ur.), Graz: Landesmuseum Joanneum, Ur- und Frühgeschichtliche Sammlung, 2004, 47–51.

SAVELJIĆ BULATOVIĆ, L., LUTOVAC, P. 2003, *Zlatno doba Crne Gore / The Golden Age of Montenegro*, Podgorica: JU muzeji i galerije Podgorice.

TERŽAN, B. 2023, The Masters of Silver in the Central Balkans – A Brief Outline, in/u: *A Step into past. Approaches to Identity, Communications and Material Culture in South-Eastern European Archaeology*. Papers dedicated to Petar Popović for his 78th birthday, Monographs, 87, Govedarica, B., Vranić, I., Kapuran, A. (eds./ur.), Belgrade: Institute of Archaeology, 169–189.

TIEFENGRABER, G. 2015, Chalkolithikum (= Kupferzeit; 4300– 2.500 v. Chr.), in/u: *Urgeschichte und Römerzeit in der Steiermark*, Geschichte der Steiermark, 1, Herbert, B. (ed./ur.), Graz: Böhlau Verlag GesmbH & Co.KG Wien Köln Weimar, 217–275.

TOMAŽ, A. 2008, *Prva dama: ob odkritju prazgodovinske ženske figurine na Slovenskem / First lady: the discovery of a prehistoric female figurine in Slovenia*, Koper: Univerza na Primorskem, Znanstveno-raziskovalno središče, Založba Annales.

ZAGARČANIN, M. 2016, Mogila na Rake. Kneževski tumul iz ranog bronzanog doba / „Mogila na Rake". Princely mound from the early bronze age, *Nova antička Duklja,* VII, 7–20

SREDNJOEUROPSKI ELEMENTI NA SREDNJEM JADRANU I NJEGOVU ZALEĐU U RANO BRONČANO DOBA – REKAPITULACIJA

CENTRAL EUROPEAN ELEMENTS IN THE CENTRAL ADRIATIC AND ITS HINTERLAND IN THE EARLY BRONZE AGE – A RECAPITULATION

BIBA TERŽAN

Univerza v Ljubljani, Filozofska fakulteta
University of Ljubljana, Faculty of Arts
Zavetiška 5
SL-1000 Ljubljana
ljubinka.terzan@ff.uni-lj.si

ANA KRUH

Goriški muzej
Regional Museum Goriški muzej
Grajska cesta 1
SL-5000 Nova Gorica
ana.kruh@goriskimuzej.si

UDK: 903(497.583)"637.3"
DOI: 10.15291/archeo.4689
Pregledni članak / Review paper
Primljeno / Received: 2024-3-27
Prihvaćeno / Accepted: 2024-11-29

Ključne riječi:
licenska keramika, bodež s punim metalnim drškom, igle s ušicom, cetinska kultura, posuška kultura, rano brončano doba, migracija

Key words:
Litzen pottery, solid-hilted dagger, eyelet-headed pin, Cetina Culture, Posuška/Posušje/Dinaric Group, Early Bronze Age, migration

Istraživanje je uputilo na komplementarnu sliku triju glavnih elemenata, kao indikacije kontakata između prostora srednjeg Jadrana i njegova zaleđa s kulturama ranoga brončanog doba u srednjoj Europi. Istraživanjima je obuhvaćena materijalna kultura iz naselja (licenska lončarija), vojna oprema, odnosno oružje (bodeži s punim drškom) te nošnja (igla s ušicom). Na temelju njihove tipološke analize i njihove rasprostranjenosti, koje pokazuju da se u određenim segmentima međusobno prostorno i vremenski prekrivaju, zaključujemo da su to, u okviru posuške skupine, pokazatelji jednog te istoga kulturnog, a moguće i migracijskog događanja tijekom ranoga brončanog doba.

Research has shown a complementary image of three main elements as indications of contacts between the region of the central Adriatic and its hinterland with the cultures of the Early Bronze Age in Central Europe. They encompass the settlement material culture (Litzen pottery), military equipment or weapons (solid-hilted daggers), and attire (pins with an eyelet). On the basis of their typological analysis and distribution, which showed that they overlap each other spatially and temporally in certain segments, it can be concluded that within the framework of the Posuška/Posušje or Dinaric group, they are indicators of one and the same cultural and possibly migratory event occurring during the Early Bronze Age.

GEOGRAFSKI OKVIR

Zapadni dio Balkanskog poluotoka pretežno je brdovito područje, koje na sjeveru prema Savi prelazi u nizinske predjele južne Panonije, tj. Karpatske kotline, dok je na zapadu i jugozapadu ograničeno istočnom obalom Jadranskog mora, brojnim otocima, poluotocima i zaljevima, iako je obalno zaleđe poprilično brdovito. Pečat mu daju Dinaridi, raščlanjeni brojnim visoravnima i krškim poljima, koja se nalaze sve od Notranjske na sjeveru, preko Like, Dalmacije i Hercegovine te Crne Gore, dalje prema jugu. Samo malobrojne rijeke poput Zrmanje, Krke, Cetine i Neretve povezuju ovaj relativno teško dostupan kraj s obalom i morem.

KRONOLOŠKI OKVIR

Sintetički pregled o brončanom dobu na zapadnom Balkanskom poluotoku dan je u četvrtoj knjizi veleopusa *Praistorija jugoslavenskih zemalja* (= PJZ).[1] U njoj je, s jedne strane, predstavljena opća kronološka podjela na rano, srednje i kasno brončano doba, što bi ugrubo odgovaralo srednjoeuropskoj kronološkoj shemi prema Reineckeu i njegovim nasljednicima, koji su je dopunjavali i detaljnije razdijelili (rano – Bd A1-2 (-3), srednje – Bd B1-2 do Bd C1-2, kasno – Bd D do Ha A1-2 i Ha B1-3), a s druge strane, dane su lokalne kronološke karakteristike i vremenske faze u okviru pojedinačnih regija odnosno kulturnih skupina. Temeljne studije, za područje koje nas ovdje zanima, nastale su ispod pera Borivoja Čovića i Ivana Marovića[2] te također predstavljaju ishodište za naše istraživanje. Uzimajući to u obzir, potrebno je upozoriti da je u razdoblju od izdavanja četvrte knjige PJZ (1983.) došlo

[1] BENAC, ČOVIĆ 1983.
[2] ČOVIĆ 1983a; MAROVIĆ, ČOVIĆ 1983.

GEOGRAPHIC FRAMEWORK

The western part of the Balkan Peninsula is mainly mountainous, in the north, towards the Sava River, it merges into the lowlands of southern Pannonia or the Carpathian basin, and in the west and southwest, it is bordered by the eastern coast of the Adriatic Sea with numerous islands, peninsulas, and bays, while its hinterland is quite hilly. Its dominant feature is the Dinaric Alps or Dinarides, broken up by numerous high plateaus – plain that stretch all the way from Notranjska in the north, through Lika, Dalmatia, and Herzegovina, and Montenegro further south. These relatively inaccessible areas in the hinterland of the central Adriatic are connected to the coast and the sea only by a small number of rivers, such as the Zrmanja, Krka, Cetina, and Neretva.

CHRONOLOGICAL FRAMEWORK

A synthetic overview of the Bronze Age in the Western Balkan Peninsula was given in the fourth book of the magnum opus "Prehistory of the Yugoslav Lands" / "Praistorija jugoslavenskih zemalja" (further PJZ).[1] It presents, on the one hand, a general chronological division into the early, middle and late Bronze Age, which roughly corresponds to the Central European chronological scheme according to Reinecke and his successors, who supplemented and subdivided it in more detail (early – Bd A1-2 (-3), middle – Bd B1-2 to Bd C 1-2, late – Bd D to Ha A 1-2 and Ha B1-3), while, on the other hand, local chronological characteristics and time stages were added in the framework of individual regions or cultural groups. For the area we are interested in here, the fundamental studies were made by Borivoj Čović and Ivan Marović, which also represent the starting point for our research.[2] At the same time, it seems necessary to note that there have been certain changes and supplements

[1] BENAC, ČOVIĆ 1983.
[2] ČOVIĆ 1983a; MAROVIĆ, ČOVIĆ 1983.

do određenih promjena i dopuna, pogotovo u apsolutnom datiranju pojedinih kronoloških stupnjeva, što je rezultat popunjenih datacijskih metoda, prije svega radiokarbonske i dendrokronološke analize.

KULTURNI OPIS

Među karakterističnim fenomenima ranoga brončanog doba na području srednjeg Jadrana i njegova zaleđa ističe se tzv. cetinska kultura, čija je jezgra bila baš u srednjoj Dalmaciji.[3] Njezini su utjecaji sezali duž Jadrana prema sjeveru sve do Istre[4] i Tršćanskog krasa te prema jugu do Peleponeza[5] i južnoga Apeninskog poluotoka[6], a također u kontinentalno zaleđe, sve do kulturnih skupina, kao što su Glasinac u Bosni i Belotić-Bela Crkva u zapadnoj Srbiji. Okvirno,[7] cetinska je kultura datirana paralelno s ranom heladskom fazom III (EH/FH III), dakle u drugu polovinu 3. i rana stoljeća 2. tisućljeća pr. n. e.[8] Njezin se kulturni identitet prije svega raspoznaje kroz način pokopavanja njihovih preminulih,[9] odnosno: 1) po obliku grobova, u pravilu pravokutne grobne škrinje sastavljene od kamenih ploča, 2) po obliku nadgrobnih spomenika – gomila, koje su pretežno kamene, ali također mogu biti zemljane, 3) po specifičnoj lončariji – i glede vrsta posuđa i glede tipične ornamentike[10] te 4) po drugim grobnim prilozima, pogotovo

since the publication of the fourth volume of the PJZ (1983), especially in the absolute dating of individual chronological stages, which is the result of improved dating methods, especially in radiocarbon and dendrochronological analyses.

CULTURAL OUTLINE

Among the characteristic phenomena of the Early Bronze Age in the area of the central Adriatic and its hinterland, the so-called Cetina Culture stands out, the core of which was exactly in central Dalmatia.[3] Its influence extended along the Adriatic Sea to the north as far as Istria and the Trieste Karst[4], and to the south to the Peloponnese[5] and the southern Apennine peninsula,[6] as well as in the continental hinterland as far as cultural groups such as Glasinac in Bosnia and Belotić-Bela Cerkev in western Serbia.[7] In general terms, the Cetina Culture is dated parallel to the early Helladic phase III (EH/FH III), i.e. to the second half of the 3rd millennium and early centuries of the 2nd millennium BC.[8] Its cultural identity is recognizable mainly in terms of the burial of the deceased,[9] i.e. 1) according to the shape of the graves, the most recognizable, they were rectangular stone cists made from stone slabs, 2) according to the shape of the grave monuments – tumuli or mounds that were mainly composed of stone, but also earthen, 3) according to specific forms of pottery – both in terms of the form

3 MAROVIĆ 1976; MAROVIĆ, ČOVIĆ 1983; MAROVIĆ 1984; 1994; GOVEDARICA 1989: 109–144; DELLA CASA 1995: 568–571; FORENBAHER 2018.
4 MIHOVILIĆ 2007–2008; 2022: 215–217, T. 1-2; MIHOVILIĆ, TERŽAN 2022: 359; RECCHIA 2020: 9–11.
5 RAMBACH 2007.
6 CAZELLA et al. 2020; RECCHIA 2020: 12–23.
7 MARAN 1998: 323–330, T. 30-36, 39-40, 71; FORENBAHER 2023.
8 MAROVIĆ, ČOVIĆ 1983; ČOVIĆ 1983b: 807–811; DELLA CASA 1995: 572–573; MARAN 1998: 327–330, Pl. 82; CAZELLA et al. 2020; RECCHIA 2020: 21–23; ARENA 2020: 32–33, Fig. 2; FORENBAHER 2023: 143–152, Fig. 14–17.
9 FORENBAHER 2023: 59–137, 165–172, Sl. 1; 52.
10 FORENBAHER 2018: 124–132, Sl. 5–6, 8.

3 MAROVIĆ 1976; MAROVIĆ 1984; MAROVIĆ, ČOVIĆ 1983; MAROVIĆ 1994; GOVEDARICA 1989: 109-144; DELLA CASA 1995: 568-571; FORENBAHER 2018.
4 MIHOVILIĆ 2007-2008; MIHOVILIĆ 2022: 215-217, Pl. 1-2; MIHOVILIĆ, TERŽAN 2022: 359; RECCHIA 2020, 9-11.
5 RAMBACH 2007.
6 CAZELLA et al. 2020; RECCHIA 2020, 12-23.
7 MARAN 1998: 323-330, Pl. 30-36, 39-40, 71; FORENBAHER 2023.
8 MAROVIĆ, ČOVIĆ 1983; ČOVIĆ 1983b: 807-811; DELLA CASA 1995: 572-573; MARAN 1998: 327-330, Pl. 82; CAZELLA et al. 2020; RECCHIA 2020: 21-23; ARENA 2020: 32-33, Fig. 2; FORENBAHER 2023: 143-152, Fig. 14-17.
9 FORENBAHER 2023: 59-137, 165-172, Fig. 1; 52.

oružju. U gomilama s promjerom između okvirno 4 m i 26 m, očuvanim i do 3 m visine, u pravilu se nalazio samo po jedan grob, a samo u rijetkim primjerima više grobova. U grobnoj je škrinji uobičajeno pokopana po jedna osoba, ponegdje i više njih, a u pravilu su zgrčenci. Kod primjera kremacije, ostatci su pokojnika položeni u žare, također smještene u središnji dio gomile. Razmjerno brojne su i gomile, u kojima nisu otkriveni grobovi odnosno ostatci pokopanih osoba te za njih I. Marović misli da predstavljaju kenotafe. Često su u gomilama otkrivene veće količine razbijenog posuđa, što upućuje na posebne pogrebne rituale. Budući da su inhumacije i kremacije pokojnika relativno podjednako zastupljene te istovremene, to dovodi do zaključka o biritualnom načinu pokopavanja, koji se ipak pokazuje specifičnim, i to samo za pojedine lokalne društvene skupine ove kulture.[11]

Drugi karakteristični fenomen na području srednjodalmatinskog zaleđa, uključujući i područje Hercegovine između rijeke Zrmanje i rijeke Neretve te dalje prema Crnoj Gori, tijekom ranoga brončanog doba jest takozvana posuška kultura odnosno dinarska kultura.[12] Kao novu odnosno posebnu kulturnu pojavu definirao ju je B. Čović, tek nakon što je izdana četvrta knjiga *Praistorija jugoslavenskih zemalja*. Njezine je početke datirao u fazu Bd A1 te je naslućivao da je egzistirala još dalje, u vrijeme srednjega brončanog doba, slično kao naselje Velika Gradina u Varvarima.[13] Za razliku od cetinske kulture, njezina se kulturna identifikacija prije svega oslanja na naseobinske nalaze. Za

[11] MAROVIĆ, ČOVIĆ 1983: 205; FORENBAHER 2023: 165–172, Fig. 52.

[12] ČOVIĆ 1989: 69–70, Prilog 1, Popis nalazišta (Posuška kultura/grupa); GOVEDARICA 1989: 145–172 (Dinarska kultura); DELLA CASA 1995: 568–574 (*Dinaric group*); TERŽAN, KARAVANIĆ 2013: 845.

[13] ČOVIĆ 1989; DELLA CASA 1995: 574. Spomenimo da Marijanović zagovara mišljenje da se posuška kultura nije širila preko Neretve: pogledaj MARIJANOVIĆ 2003: 323–325.

of the vessels and the typical decoration,[10] and 4) by other grave goods, particularly weapons. In mounds with a diameter between around 4 and 26 m and preserved up to a height of 3 m, only one grave was located as a rule, only in rare cases were there more. Only one person was usually buried in the grave, sometimes more, as a rule in a contracted position. In those cases where the dead were cremated, their remains were placed in urns, also located in the central part of the tumulus. There are relatively numerous mounds in which no graves or remains of buried persons were uncovered, and I. Marović considered them to represent cenotaphs. Large quantities of broken vessels were also often discovered in the tumuli, which would suggest special burial rituals. Considering the relatively equal representation and simultaneity of inhumation and cremation burials, a bi-ritual manner of burial can be considered to have existed, which, nonetheless, appears to be specific and only for individual local social communities of this culture.[11]

Another characteristic phenomenon in the area of the central Dalmatian hinterland, including the areas of Herzegovina between the Zrmanja and Neretva Rivers and further towards Montenegro, is the so-called Posuška/Posušje culture, also called the Dinaric culture of the early Bronze Age.[12] It was defined by B. Čović as a new or special cultural phenomenon only after the publication of the fourth volume of the "Prehistory of the Yugoslav Lands". Its beginnings were dated to the Bd A1 phase and it was presumed that it had already existed in the period of the middle Bronze Age, similar to the settlement of Velika Gradina at Varvara.[13] Unlike the Cetina Culture,

[10] FORENBAHER 2018: 124-132, Fig. 5-6, 8.

[11] MAROVIĆ, ČOVIĆ 1983: 205; FORENBAHER 2023: 165-172, Fig. 52.

[12] ČOVIĆ 1989: 69-70, Add. 1, List of sites (Posušje-Culture); GOVEDARICA 1989: 145-172 (Dinaric Culture); DELLA CASA 1995: 568-574 (Dinaric group); TERŽAN, KARAVANIĆ 2013: 845.

[13] ČOVIĆ 1989; DELLA CASA 1995: 574. It should be mentioned that Marijanović defended the idea that the Posuška Culture did not extend across the Neretva: see MARIJANOVIĆ 2003: 323-325.

tu su kulturu važna visinska naselja – gradine, u pravilu utvrđene moćnim bedemima, a ponegdje i kulama, izgrađenim suhozidnom tehnikom. Pretežito je riječ o manjim naseljima promjera 50-100 m, a samo neka dosežu promjer od oko 150 m. Ova su potonja u unutrašnjosti raščlanjena dodatnim zidovima, što upućuje na kompleksne utvrde s akropolom.[14] Posebna studija Alojza Benca[15] o topografiji prapovijesnih naselja te o prostornoj dimenziji naseljenosti na području Duvanjskog, Livanjskog i Glamočkog polja upućuje na pažljivo planiranje pri naseljavanju visinskih utvrda te na to kakva je bila konceptualizacija i upravljanje prostorom, pomoću sistema vizualnih komunikacija, koji je povezivao cijelo proučavano područje.[16] Budući da se cetinska i posuška odnosno dinarska kulturna skupina i prostorno i kronološki djelomično preklapaju, lucidna je teza B. Čovića[17] da su koegzistirale na istome geografskom prostoru. Dok su nositelji cetinske kulture bili nomadski pastiri, a njihova naselja gotovo nepoznata, osim špiljskih boravišta, poput špilja Škarin samograd i Ravlića pećina,[18] nositelji posuške kulture su, međutim, bili sedentarni poljoprivrednici. Dakle, riječ je o komplementarnim gospodarskim granama i smislenoj strategiji za preživljavanje u tome krševitom kraju.[19] Moglo bi se ići korak dalje i postaviti tezu da dok je cetinska kultura, kao arheološki fenomen, ponajprije odraz načina pokopavanja i pogrebnih rituala, što se osobito izražava baš u specifičnoj lončariji i njezinoj ornamentici, koja je u naseljima samo izni-

its cultural definition is based primarily on settlement finds. It is characterized by high-altitude settlements, hillforts, generally fortified with strong walls and, in some places, towers built of stone using the dry-wall technique. These are mostly small settlements with a diameter of 50-100 m, only a few reach a diameter of around 150 m. The latter, on the other hand, can be divided inside with additional walls, which indicates complex fortifications with an acropolis.[14] Alojz Benac's special study[15] on the topography of prehistoric hillforts and the spatial dimensions of settlement in the area of the Duvno, Livno, and Glamoč plains shows how carefully the settlement of high-altitude outposts was planned, the conceptualization of the space, and its control with a system of visual communications that connected the entire considered area of settlement.[16] Since the Cetina and Posuška/ Dinaric cultural groups most probably overlapped both spatially and chronologically for a part of their existence, B. Čović's lucid thesis is that they coexisted in the same geographical area,[17] but while the bearers of the Cetina Culture were nomadic shepherds, as their settlements except for cave shelters, such as Škarin samograd and Ravlića Cave, are almost unknown,[18] the bearers of the Posuška Culture were most probably sedentary peasants, mainly arable farmers. These would thus be complementary economic branches, as a sensible strategy for survival in this karst region.[19]

We could go one step further and put forward the thesis that the Cetina Culture as an archaeological phenomenon is primarily a reflection of the method of burial and funerary rituals, which

14 ČOVIĆ 1989: 62–70, 79–83, sl. 11; GOVEDARICA 1989: 149–153, Sl. 20–21.
15 BENAC 1985.
16 BENAC 1985: 190–191, Karta 5. Premda nisu sva kartirana naselja iz razdoblja ranoga brončanog doba i/ili posuške kulture, ipak nude frapantan uvid u strukture naseljenosti tijekom brončanog i željeznog doba na obuhvaćenom području.
17 ČOVIĆ 1989: 93–95; DELLA CASA 1995: 568–569.
18 MAROVIĆ, ČOVIĆ 1983: 201–203; MARIJANOVIĆ 1981: 36–41, 52–54; MARIJANOVIĆ 2012.
19 ČOVIĆ 1989: 93–95; MARIJANOVIĆ 2003: 324–325.

14 ČOVIĆ 1989: 62-70, 79-83, fig. 11; GOVEDARICA 1989: 149-153, Fig. 20-21.
15 BENAC 1985.
16 BENAC 1985: 190-191, Map 5. Although not all mapped settlements are from the Early Bronze Age and/ or the Posuška Culture , they nevertheless provide a striking insight into settlement structures during the Bronze and Iron Ages in the area under consideration.
17 ČOVIĆ 1989: 93-95; see also DELLA CASA 1995: 568-569 (»Dinaric and Cetina groups being thus to a certain extent coeval.«).
18 MAROVIĆ, ČOVIĆ 1983: 201-203; MARIJANOVIĆ 1981: 36-41, 52-54; MARIJANOVIĆ 2012.
19 ČOVIĆ 1989: 93-95; MARIJANOVIĆ 2003: 324-325.

mno prisutna, posuška/dinarska kultura pak predstavlja materijalnu kulturu pretežito naseobinskog značenja, vjerojatno djelomično istovremene jedne te iste populacije.

INDIKATORI KONTAKATA SA SREDNJOEUROPSKIM KULTURAMA

Keramika

Kako je već B. Čović eksplicitno pokazao, tzv. licenska lončarija (Litzen keramika) predstavlja novu pojavu u okviru posuške kulturne skupine. Karakteristična je za drugu fazu te kulture – koja je nazvana kao faza Sovići, odnosno 3. faza cetinske kulture, što odgovara u srednjoeuropskom smislu fazi Bd A2/B1.[20] Čović je licensku keramiku posve jasno izdvojio od starije vrpčaste (Schnur keramike) i keramike ukrašene na način „namotane niti", koje su karakteristične za eneolitik. To što se na taj način ukrašena lončarija pojavljuje u kontekstu ranoga brončanog doba, shvaća se kao plod lokalne eneolitske tradicije.[21] Drukčija je situacija s licenskom keramikom. Čović je pokazao da je njezino primarno podrijetlo na području zapadne Panonije, od zapadnog dijela srednjeg Podunavlja – sjeverozapadne Hrvatske i susjednih dijelova Slovenije, zapadne Mađarske i Austrije.[22] Lončarija ukrašena pojasevima (pramenima) s utisnutom izvijenom niti, zastupljena je na veoma širokom prostoru, i to od Malih Karpata na sjeveru do ruba istočnih Alpa na zapadu te do srednjeg toka Dunava na istoku pa sve do Save na jugu, a izdvojena je od panonskog prostora u zaleđu srednjeg Jarana, i to baš na području posuške kulturne skupine. Istraživanje suautorice ovog rada, Ane Kruh,

[20] ČOVIĆ 1989: 75–78, 94, sl. 16, T. 10–11; FORENBAHER 2018: 136–137, Fig. 13.
[21] ČOVIĆ 1977; 1983a: 158; 1989: 94, T. 10-11; 1989/1990.
[22] ČOVIĆ 1983a: 158; 1989: 78, 95–96.

is particularly expressed in the specific pottery and its ornamentation, which is only rarely represented in the settlements, while the Posuška/Dinaric culture in fact represents the material culture of the mostly settlement character of this probably partly contemporary population of the area.

INDICATORS OF CONTACTS WITH CENTRAL EUROPEAN CULTURES

Pottery

As has already been explicitly shown by B. Čović, the so-called Litzen pottery represents a new phenomenon within the Posuška cultural group. It is typical of the second phase of this culture –called the Sovići phase or the 3rd phase of the Cetina Culture, which corresponds in Central European terms to the Bd A2/B1 phase.[20] Čović quite clearly separated Litzen pottery from earlier corded ware (= corded or Schnur-pottery) and pottery decorated in the manner of "wound string"; which are typical in the Eneolithic. However, if pottery decorated in this way were to appear in the context of the early Bronze Age, it would be understood to be a remnant of the local Eneolithic tradition.[21] It is different, however, for Litzen pottery. Čović clearly pointed to a primary provenance for it in the area of western Pannonia – in northwestern Croatia and neighboring parts of Slovenia, western Hungary, and Austria.[22] This type of pottery, decorated with the impression of twisted cord in bands (strands) was spread over a very wide area in the developed Early Bronze Age, namely from the Little Carpathians in the north to the edge of the Eastern Alps in the west, to the middle course of the Danube in the east, and all the way to the Sava River in the south –

[20] ČOVIĆ 1989: 75-78, 94, Fig. 16, Pl. 10-11; see also FORENBAHER 2018: 136-137, Fig. 13.
[21] ČOVIĆ 1977; ČOVIĆ 1983a: 158; ČOVIĆ 1989: 94, Pl. 10-11; ČOVIĆ 1989/1990.
[22] ČOVIĆ 1983a: 158; ČOVIĆ 1989: 78, 95-96; see also FORENBAHER 2018.

pokazalo je da možemo razlikovati šest skupina licenske keramike, koje su povezane s različitim kulturnim regijama te su znakovite za raspon od faza Bd A2 do Bd B1 (sl. 1).[23] U prvu su skupinu uvršteni nalazi licenske lončarije s područja sjeverne Hrvatske (Hrvatsko Zagorje, Podravina), zapadne Mađarske (okolica jezera Balaton uz rijeke Kapos, Rabu i Zalu), istočne Slovenije (Prekmurje,[24] Podravje,[25] Dolenjska i Ljubljansko barje)[26] te austrijske Štajerske/Steiermark (uz rijeke Muru i Rabu); u drugu skupinu spadaju nalazi s područja istočnog dijela Donje Austrije (Niederösterreich) južno od Dunava, Gradišćanske (Burgenland) i sjeverozapadne Transdanubije[27]; treća je skupina na području Slavonije i južne Transdanubije; četvrta je skupina na području jugozapadne Slovačke i podunavskog dijela Mađarske (Mala mađarska nizina i okolica Budimpešte); u petu su skupinu uvršteni nalazi, koji se u stručnoj literaturi svrstavaju u stariju fazu kulture Belegiš, povezani s prostorom istočne Slavonije, Srijema, Bačke i Banata; te šesta skupina na području Hercegovine i srednje Dalmacije (sl. 1).[28]

Nalazi s nalazišta srednje Dalmacije, Hercegovine, uključujući i one iz Poda kod Bugojna, tako predstavljaju posebnu skupinu licenske keramike, koja je svojstvena posuškoj kulturnoj skupini (sl. 2). Pri tome je karakteristično da su ti nalazi licenske lončarije

[23] KRUH 2019.

[24] Pogledaj također KERMAN 2024: 472–480, sl. 1; 8–12.

[25] Pogledaj također TERŽAN 1984: 58–60, Abb. 4–5; KRAMBERGER 2024: 567–569, 571–576, Fig. 2; 16–18, Pl. 4–5, 7.

[26] Za radiokarbonske datacije licenske keramike u Sloveniji pogledaj također ČREŠNAR, TERŽAN 2014: 674–679, Sl. 14–18.

[27] Lončarija ove vrste većinom je pojedinim primjercima zastupljena na nalazištima još mnogo šireg prostora: kod Salzburga, pri donjem toku rijeke Morave/March (u Donjoj Austriji/Niederösterreich), na predjelima današnje jugozapadne Slovačke, u južnoj Transdanubiji te također na nalazištima istočne i središnje Slovenije.

[28] KRUH 2019: 162–179, sl. 38, Prilog 1, 156–166 (s popisom nalazišta i citiranom literaturom).

and separated from the Pannonian area in the hinterland of the middle Adriatic, namely in the area of the Posuška cultural group. Research in the framework of the doctoral dissertation of the co-author of this paper, Ana Kruh, showed that we can distinguish six groups of Litzen pottery, which are linked to different cultural regions and are attested in the range from Bd A2 to Bd B (Fig. 1).[23] The first group encompassed the finds of Litzen pottery in the areas of northern Croatia (Hrvaško Zagorje, Podravina), western Hungary (around Lake Balaton and along the Kapos, Raba, and Zala Rivers), eastern and central Slovenia (Prekmurje,[24] Podravje,[25] Dolenjska, and Ljubljansko barje),[26] and Austrian Styria/Steiermark (along the Mura River), the second group was related to the area of the eastern part of Lower Austria/Niederösterreich south of the Danube, Gradiščansko/Burgenland, and northwestern Transdanubia,[27] the third group the area of Slavonia and southern Transdanubia, the fourth group the area of southwestern Slovakia and the Danubian part of Hungary (the Little Hungarian plain and the surroundings of Budapest). The fifth group contained finds assigned to the earlier phase of the Belegiš Culture, tied to the area of Eastern Slavonia, Srem/Syrmia, Bačka, and the Banat, while the sixth group encompassed the area of Herzegovina and Central Dalmatia (Fig. 1).[28] Thus, finds from sites in Central Dalmatia and Herzegovina, including those from Pod near Bugojno, represent a special group of Litzen pottery belonging to the Posuška/Dinaric cultural group (Fig. 2). It is significant that these finds of Litzen pottery are known mainly from settle-

[23] KRUH 2019.

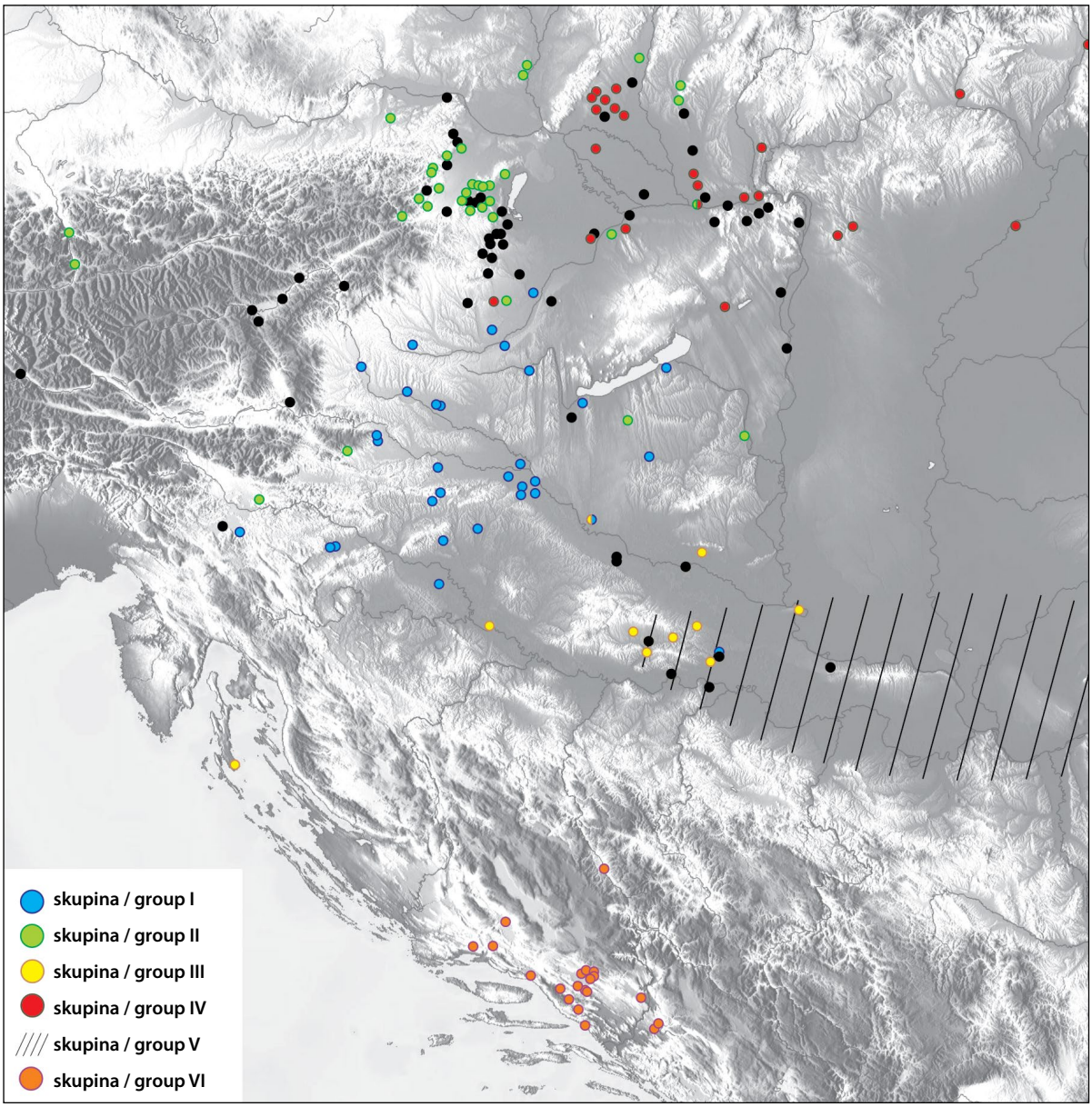
[24] See also KERMAN 2024: 472-480, Fig. 1; 8-12.

[25] See also TERŽAN 1984: 58-60, Fig. 4-5; KRAMBERGER 2024: 567-569, 571-576, Fig. 2; 16-18, Pl. 4-5, 7.

[26] See also ČREŠNAR, TERŽAN 2014: 674-679, Fig. 14-18.

[27] This type of pottery is mostly known from individual specimens at sites in a much larger area: in Solnograško/Salzburg, along the lower reaches of the Morava/March River (in Lower Austria/Niederösterreich), in parts of present-day southwestern Slovakia, in southern Transdanubia, and also at sites in eastern and central Slovenia.

[28] KRUH 2019: 162-179, Fig. 38, Add. 1, 156-166 (with a list of sites and cited literature).



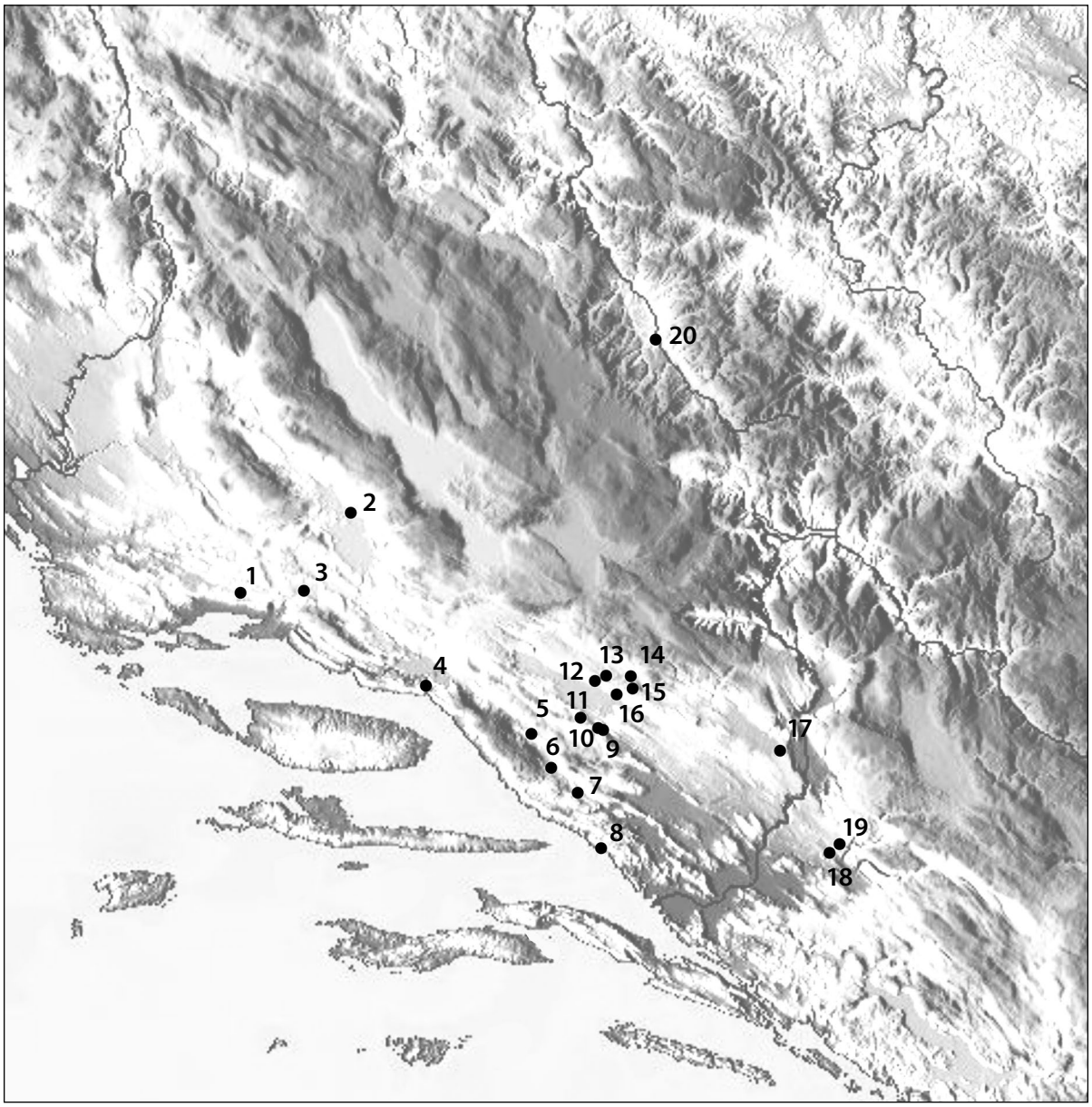
Slika 1. *Licenska keramika, cjelokupna rasprostranjenost s označenim regionalnim skupinama I–VI i crne točke neopredjeljenje s obzirom na skupine* (prema Kruh 2019: 162–179, Priloga 1; izradila A. Kruh)
Figure 1 *Litzen pottery, total distribution with regional groups I-VI, black dots are unclassified finds* (according to Kruh 2019: 162-179, Add. 1; made by A. Kruh)

rije poznati prije svega iz naselja – gradina,[29] pojedini primjerci također iz špiljskih nalazišta,[30] a samo rijetko iz grobnih gomila (sl. 6: 4–6).[31] S obzirom na način izrade i tipološke karakteristike posuda, pretpostavlja

ments - hillforts,[29] with individual specimens also from cave sites,[30] and only very rarely from burial mounds (Fig. 6/4-6).[31] Based on the method of production and the typological characteristics of the vessels, it can be assumed that they are mainly

[29] ČOVIĆ 1989: 62–68, 75, 79–84.
[30] ČOVIĆ 1989: 84–85; MARIJANOVIĆ 1981: 42, sl. 3; 2012: 105, sl. 59, T. 85: 1-5; 86: 1-2; TOMASOVIĆ 2011: 15–16, sl. 7, T. 4/3.
[31] MAROVIĆ, ČOVIĆ 1983: 214; MAROVIĆ 1984: sl. 14, 2–3, 5; 1994: 66–68, sl. 4/4; TOMAS, VUJEVIĆ 2023.

[29] ČOVIĆ 1989: 62-68, 75, 79-84.
[30] ČOVIĆ 1989: 84-85; MARIJANOVIĆ 1981: 42, Fig. 3; 2012: 105, Fig. 59, T. 85/1-5; 86/1-2; TOMASOVIĆ 2011: 15-16, Fig. 7, T. 4:3.
[31] MAROVIĆ, ČOVIĆ 1983: 214; MAROVIĆ 1984: Fig. 14, 2-3, 5; 1994: 66-68, Fig. 4:4; TOMAS, VUJEVIĆ 2023.



Slika 2. *Nalazišta licenske keramike na srednjem Jadranu i njegovom zaleđu* (za pojedina nalazišta pogledaj listu, brojevi na listi odgovaraju brojevima na karti; izradila A. Kruh)
Figure 2 *Sites of Litzen pottery discoveries along the central Adriatic and its hinterland* (for individual sites see the list, as the numbers in the list correspond to the numbers on the map; made by A. Kruh 2019)

se da je pretežito riječ o lokalnim proizvodima, koji su vjerojatno nastali po uzorima iz istočnoalpskog odnosno južnopanonskog prostora, u periodu faze Bd A2 te nije riječ o importima.[32] Prijelaznu i povezujuću kariku

local products, which were probably created according to models from the Eastern Alps or of the Pannonian area during the Bd A2 phase, and not imports.[32] An intermediate and connecting link between the groups in the Pannonian Plain and

[32] Na temelju vrste uzoraka ukrasa, prije svega uporabe motiva valovnice, pokazuje se veza s licenskom keramikom, opredijeljenom u prvu skupinu, koja je zastupljena u fazi Bd A2. Pretpostavku o lokalnoj proizvodnji bilo bi potrebno još provjeriti tehnološko-kemijskim analizama keramičkih nalaza.

[32] Based on the typical ornamentation of the vessels, especially wavy bands, it can be assumed that this pottery was made according to models of our first group of Litzen–pottery. However, this hypothesis about local production would still need to be verified with technological-chemical analyzes of these pottery finds.

između skupina u Panonskoj nizini i posuške kulture, predstavljala je gradina Pod kod Bugojna[33], u dolini rijeke Vrbasa, kao komunikacijskoj žili između sjevera i juga. Naime, upravo kod Poda se put, koji je vodio sa sjevera duž Vrbasa, rascijepio, i to na jednu stranu prema Neretvi, a na drugu preko Kupreških vrata do Kupreškog, Livanjskog i Sinjskog polja, sve do Jadrana. Ovaj put također dobro karakteriziraju nalazi licenske keramike (sl. 2).

Oružje

Između grobnih priloga cetinske kulture, pored već opisane bogato ukrašene keramike, kao što su kultne posude na nozi, terine sa širokim, ukrašenim rubovima ušća te vrčevi tipa „Kozarac"[34], u prvom se redu ističu bodeži s punim metalnim drškom i sjekire s cjevastim otvorom za nasađivanje ručice[35] te takozvani „pseudobrassardi" (brusni kamen ili zaštitna pločica za zapešće pri napinjanju luka ili ...???; sl. 6/3).[36] Za našu su obuhvaćenu temu prije svega važni brončani bodeži s punim metalnim drškom. Za njih su već Z. Vinski, I. Marović te B. Čović pokazali da ih možemo povezati, s jedne strane, s bodežima italskog tipa na Apeninskom poluotoku te s druge strane, s metalurškim krugom unjetičke kulture.[37] Ako se oslonimo na neka novija istraživanja, njihovo tipološko i kronološko mjesto možemo još nadopuniti i precizirati.

Zanimljivu sliku daje cjelokupna raspro-

[33] ČOVIĆ 1965: 48–49, 71–77, T. 6/17-18; 8/1-2; 1983a: 172–173, 177–181, T. 24/12; 1991: 20, T. 14/3, 8; 20/6; 25/1–4. O povezanosti Poda s Panonskim prostorom glede metalurške djelatnosti pogledaj također TERŽAN 2019.

[34] MAROVIĆ, ČOVIĆ 1983: 194–200, 209–214, sl. 14-15, T. 31-32; MAROVIĆ 1984: 34–46, sl. 7–13, 16–17; MARAN 1998: T. 33–36 (kod keramike se ističe ukras izveden dubokim urezima, pečati, često bijelo inkrustirani, organizirani u različite geometrijske motive).

[35] Za sjekire pogledaj ŽERAVICA 1993: 26–27, T. 8/82–83.

[36] MAROVIĆ, ČOVIĆ 1983: 205–209, T. 31/4.7; 33–34, 1/7–9; MAROVIĆ 1984: 37–38, sl. 14-15. Funkcija tih predmeta još nije posve razjašnjena, ali je dosta diskutirana.

[37] VINSKI 1961: 13–18; MAROVIĆ, ČOVIĆ 1983: 206–209; MAROVIĆ 1984: 38; 1994: 70.

the Posuška/Dinaric group was represented by the settlement at Pod near Bugojno[33] in the valley of the Vrbas River as a communication channel between the north and the south. It was in fact at Pod that the route that led from the north along the Vrbas branched, on one side towards the Neretva River and on the other through the Kupreška Vrata pass to the Kupres, Livno, and Sinj plains all the way to the Adriatic. This route is also well marked by finds of Litzen pottery (Fig. 2).

Weapons

Among the grave goods of the Cetina Culture, in addition to the already mentioned richly decorated pottery, such as footed cult vessels, terrines with wide, decorated mouth edges, and jugs of the "Kozarac" type,[34] weapons especially stand out, such as triangular and solid-hilted daggers, and shaft-hole axes with a tubular socket,[35] and the so-called "pseudobrassards" (a whet-stone, or protective plate for the wrist when drawing a bow, Fig. 6/3).[36] For the topic discussed here, solid-hilted bronze daggers are particularly important. Z. Vinski and I. Marović and B. Čović had already shown that they may be connected on the one hand with daggers of the Italic type on the Apennine peninsula, and on the other hand with the metallurgical circle of the Unetice culture.[37] However, if we rely on some recent research, we can supplement and specify their typological and chronological position.

An interesting image is given by the full distri-

[33] ČOVIĆ 1965: 48-49, 71-77, Pl. 6/17-18; 8/1-2; 1983a: 172-173, 177-181, Pl. 24/12; 1991: 20, Pl. 14/3, 8; 20/6; 25/1-4. For the connections of Pod with the Pannonian area in terms of metallurgical activity also see TERŽAN 2019.

[34] MAROVIĆ, ČOVIĆ 1983: 194-200, 209-214, Fig. 14-15, Pl. 31-32; MAROVIĆ 1984: 34-46, Fig. 7-13, 16-17; MARAN 1998: Pl. 33-36 (in the pottery, the decoration stands out made with deep incisions, stamps, often encrusted in white, and organized into various geometric motifs).

[35] For axes, see ŽERAVICA 1993: 26-27, Pl. 8/82-83.

[36] MAROVIĆ, ČOVIĆ 1983: 205-209, Pl. 31/4.7; 33–34, 1/7–9; MAROVIĆ 1984: 37-38, Fig. 14-15. The function of these objects is still not entirely clear, but has been discussed at length.

[37] VINSKI 1961: 13-18; MAROVIĆ, ČOVIĆ 1983: 206-209; MAROVIĆ 1984: 38; 1994: 70.

stranjenost bodeža s punim metalnim drškom u Europi, koja s jedne strane obuhvaća dijelove od južnih obala Baltičkog mora, između Labe i Visle, preko pokrajina srednje Europe, poput pokrajina srednje Njemačke s Bavarskom te preko zapadnih Alpa do sliva rijeke Rone, sve do njezina ušća u Sredozemno more te s druge strane do Padske nizine i Apeninskog poluotoka. Bodeži iz srednje Dalmacije označuju, takoreći, jugoistočni rub raširenosti ove vrste oružja tijekom ranoga brončanog doba. Naravno, mogu se razlikovati brojni različiti i regionalni tipovi, tj. varijante bodeža s punim metalnim drškom, koji upućuju na postojanje pojedinih metalurških radionica lokalnog značenja ili pak možda na putujuće majstore lijevanja (sl. 3).[38]

Glede tipa bodeža s kratkom trokutastom oštricom i relativno dugim metalnim drškom, najstariji primjerci takvih bodeža u srednjoj Dalmaciji su iz Prapatnice kod Splita i Živalja kod Obrovca. Premda prvi potječe iz uništenog groba, a drugi iz tumula 2, njihova datacija u fazu Bd A1-2 ne čini se spornom. Bodeži se među sobom ponešto razlikuju, jer bodež iz Živalja ima držak sastavljen od dvaju dijelova (sl. 4). Kako je već spomenuto, bodeže su već prije odgovarajuće datirali Vinski, Marović i Čović te su definirani kao italski tip bodeža.[39] U pogledu nešto detaljnije tipološke analize bodeža, koju je izveo Stephan Schwenzer, bodež iz Prapatnice je tako pripisan njegovu tipu 3 italskih bodeža, koji su najzastupljeniji upravo u srednjoj Italiji te samo u pojedinim primjercima na području sliva Rone (sl. 5).[40] Zbog dvodijelnosti drška, bodež iz Živalja je napravljen posebnim ljevačko-tehnološkim postupkom te ga zato Schwenzer pripisuje posebnoj skupini bodeža s tuljastim drš-

[38] SCHWENZER 2004: 13–19, Abb. 4–6.

[39] VINSKI 1961: 14, T. 3/1; MAROVIĆ, ČOVIĆ 1983: 206, sl. 15/12, T. 33/5,5a; MILOŠEVIĆ 1998: 174–175, sl. 289.

[40] SCHWENZER 2004: 82–85, 301 (Nr. 232), Abb. 56/230; 57; T. 68/230; 69/232.

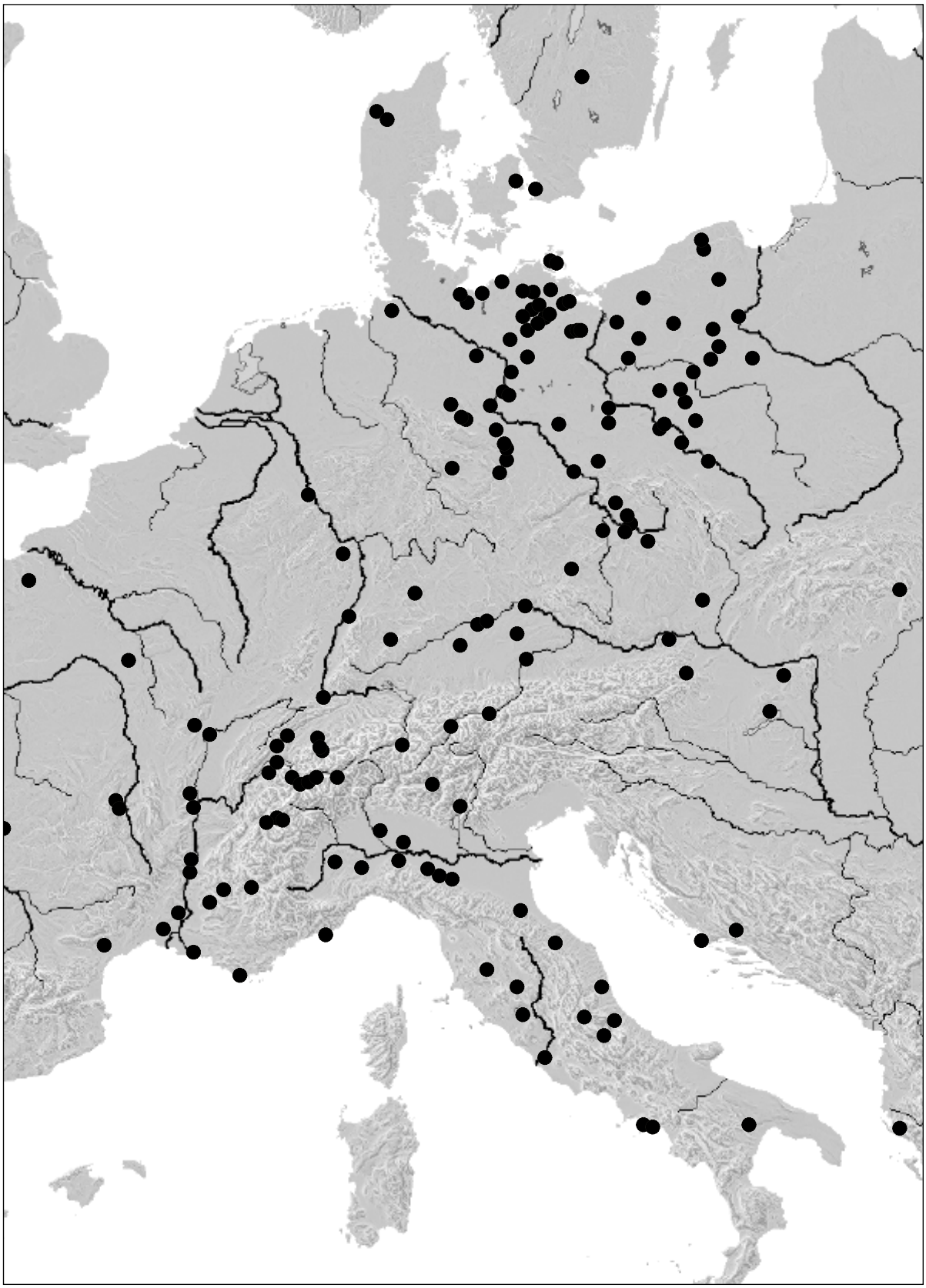
bution of solid-hilted daggers in Europe, which encompasses the areas from the southern shores of the Baltic Sea between the Elbe and the Vistula Rivers through the lands of Central Europe, such as central Germany with Bavaria, and through the Western Alps to the Rhone River basin all the way to its outlet into the Mediterranean Sea on one side, and on the other side to the Po River plain and the Apennine peninsula. The daggers from central Dalmatia mark, so to speak, the southeastern edge of the distribution of this type of weapon in the Early Bronze Age. Of course, it is possible to distinguish between numerous different local and regional types or variants of solid-hilted daggers, which indicate that individual metallurgical workshops of a local character existed with perhaps also traveling foundry masters (Fig. 3).[38]

In central Dalmatia, in terms of the type of dagger with a short triangular blade and a relatively long hilt, the oldest examples of such daggers are from Prapatnica near Split and Živalji near Obrovac (Sinj). Although the former originates from a destroyed grave and the latter from tumulus 2, their dating to the Bd A1-2 phase does not seem controversial. However, the two daggers are slightly different, because the dagger from Živalji has a hilt composed of two parts (Fig. 4). As was already mentioned, the daggers had already been properly identified and dated as Italic type daggers by Vinski, Marović, and Čović.[39] According to a somewhat more detailed typological analysis of daggers by Stephan Schwenzer, the dagger from Prapatnica was attributed to his type 3 of Italic daggers, which are most abundantly represented in central Italy, with only individual examples also in the Rhone basin (Fig. 5).[40] Due to the two-part handle, the dagger from Živalji was made using a special casting-technological process, hence Schwenzer attributed it to a special group of daggers with socketed handles,

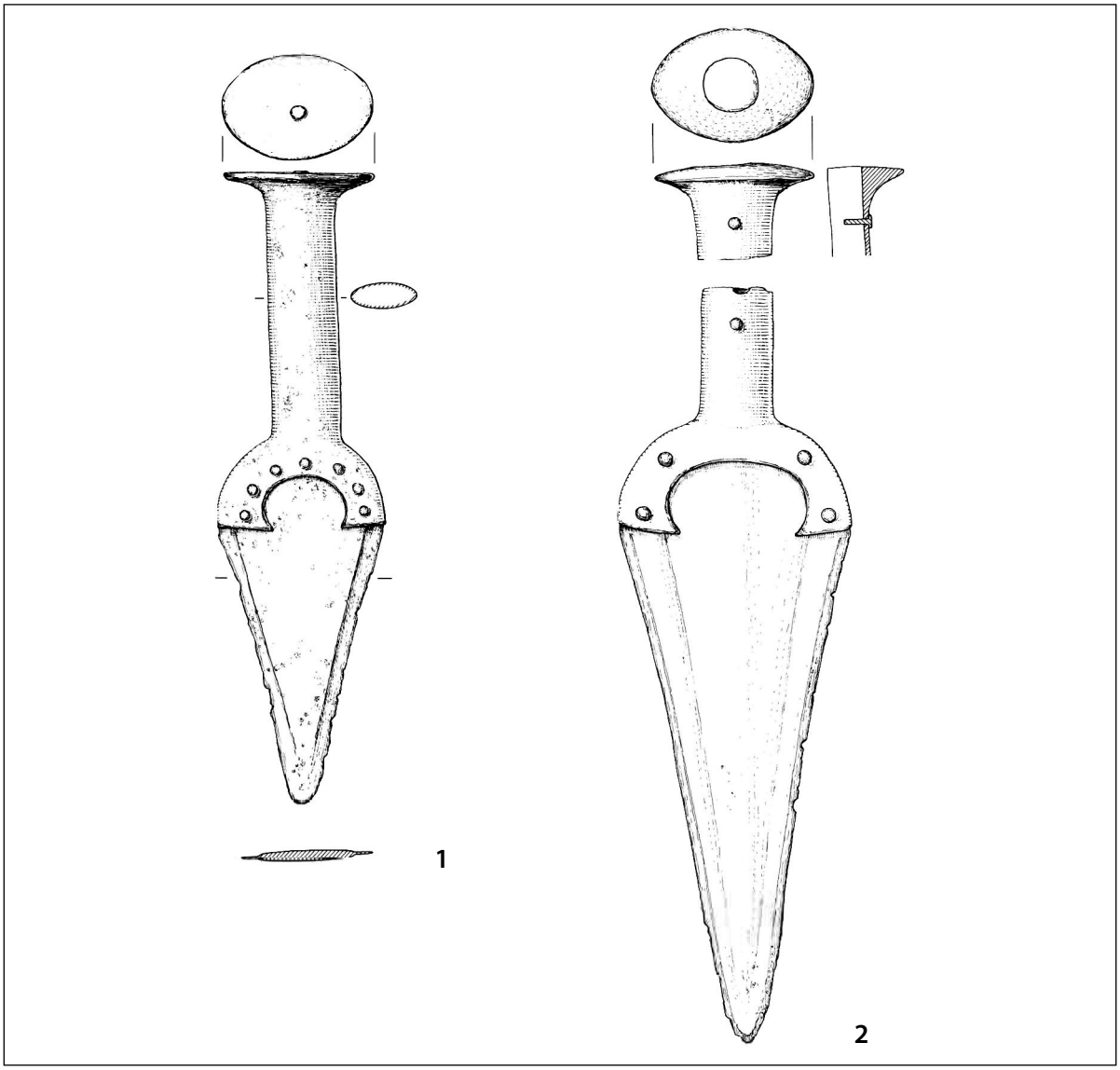
[38] SCHWENZER 2004: 13-19, Fig. 4-6.

[39] VINSKI 1961: 14, Pl. 3/1; MAROVIĆ, ČOVIĆ 1983: 206, Fig. 15/12, Pl. 33/5,5a; DELLA CASA 1995: 574; MILOŠEVIĆ 1998: 174-175, Fig. 289.

[40] SCHWENZER 2004: 82-85, 301 (No. 232), Fig. 56/230; 57; Pl. 68/230; 69/232.



Slika 3. *Bodeži s punom drškom iz ranog brončanog doba, cjelokupna rasprostranjenost bez obzira na tip i okolnosti nalazišta* (prema Schwenzer 2004: Abb. 4-6)
Figure 3 *Solid-hilted daggers from the early Bronze Age, total distribution without reference to type and circumstances of discovery* (according to Schwenzer 2004: Fig. 4-6)



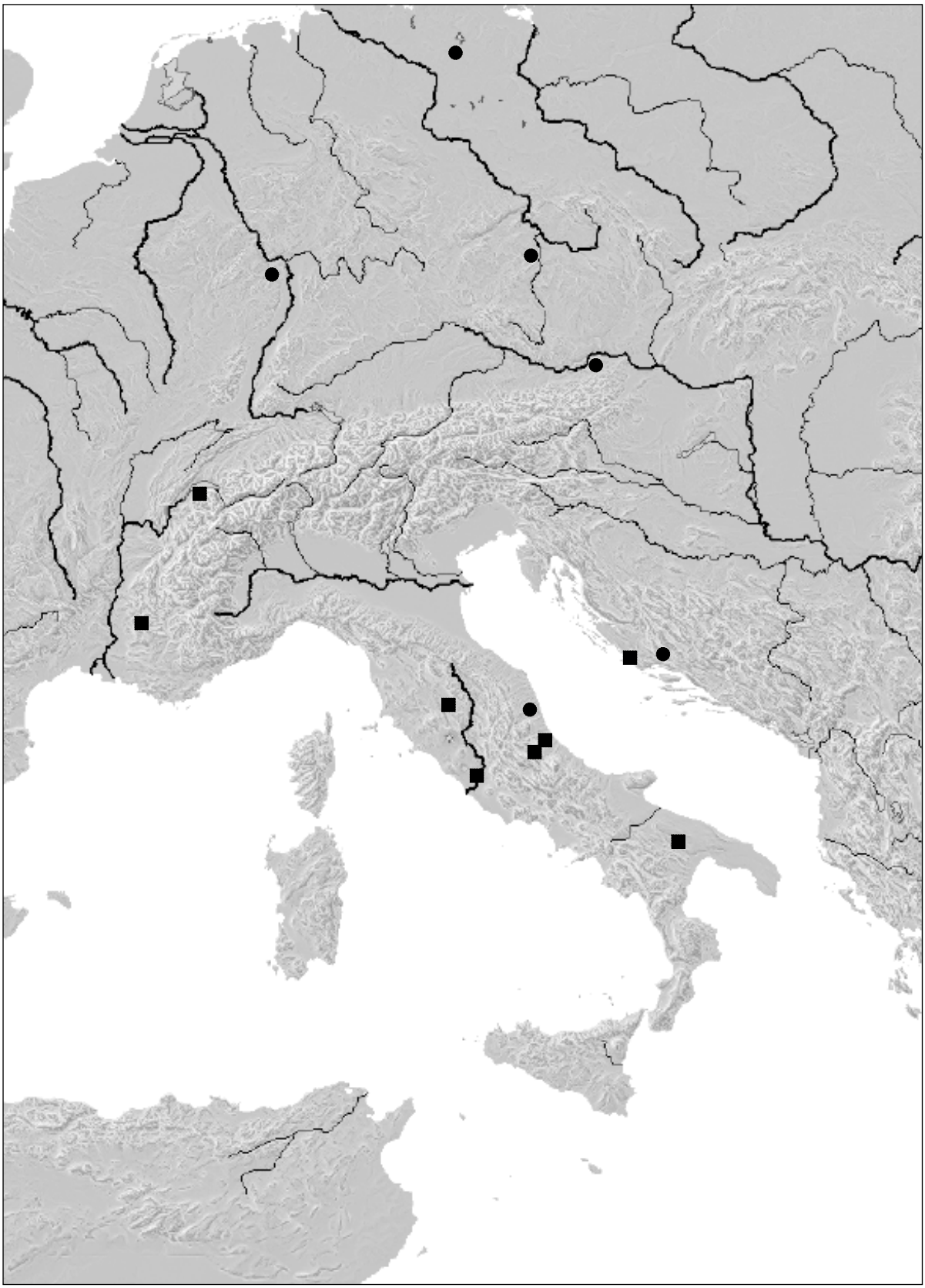
Slika 4. *Bodeži s punom drškom: 1) Prapatnica kod Splita, 2) Živalji u Obrovcu kod Sinja* (prema Vinski 1961: T. 3/1; Marović, Čović 1983: sl. 15/12, T. 33/5–6; Schwenzer 2004: T. 68/230; 69/232)
Figure 4 *Solid-hilted daggers: 1) Prapatnica near Split, 2) Živalji in Obrovac near Sinj* (according to Vinski 1961: Pl. 3/1; Marović, Čović 1983: fig. 15/12, Pl. 33/5-6; Schwenzer 2004: Pl. 68, 230; 69/232)

kom, opredijeljeni kao skupina VI (*Tüllengriffdolch*). Bodeži ove skupine ne pojavljuju se samo u Italiji, već se također pojavljuju i u srednjem Podunavlju i uz Rajnu, sve do Mecklenburga, što upućuje na veze između metalurških majstora odnosno između krugova radionica iz vrlo udaljenih krajeva i kulturnih skupina (sl. 5).[41] Na pitanje je li bodež iz Živalja podrijetlom s italskog ili srednjoeuropskog prostora ili je možda ipak lokalne izrade, kemijske bi analize njegove

[41] SCHWENZER 2004: 166, Abb. 113.

defined as Group VI (*Tüllengriffdolch*). Daggers of this group appear not only in Italy, but also in the central Danube basin and the Rhineland as far as Mecklenburg, hence indicating connections between metallurgical craftsmen or workshop circles from very distant places and cultural groups (Fig. 5).[41] The question of whether the dagger from Živalji would have originated from the Italic or Central European region, or perhaps was even of local manufacture, could probably be answered by metallurgical analyzes of its alloy

[41] SCHWENZER 2004: 166, Abb. 113.



Slika 5. *Rasprostranjenost bodeža s punom drškom italskoga tipa 3 (kvadrat) i bodeža livarsko-tehnološke skupine VI (krug)* (prema Schwenzer 2004: Abb. 57, 113; doradila M. Vinazza)
Figure 5 *The distribution of solid-hilted daggers of Italic type 3 (rectangle) and daggers of the cast-technological group VI (circle)* (according to Schwenzer 2004: Fig. 57, 113; made by M. Vinazza)

slitine vjerojatno mogle pružiti odgovor.

Iz Živalja kod Obrovca potječe još jedan bodež s punim metalnim drškom, i to iz groba 2 u tumulu 1, koji datira u vrijeme Bd A2.[42] Bodež ima dulju, trokutastu i lijepo ukrašenu oštricu, a i elegantno konkavno zakrivljeni držak ukrašen je trima pojasevima horizontalnih ureza,[43] gornja okrugla ploha drška s tutulom u sredini je ukrašena dvama graviranim koncentričnim krugovima u motivu jeline grane (*Tannenzweigmotiv*)[44] ili riblje kosti (*Fischgrätband*) (sl. 6/1).[45] Baš zbog relativno dugog sječiva, s duljinom od 32,5 cm, neki ga istraživači ubrajaju čak i među kratke mačeve.[46] To znači da bi se taj primjerak mogao uvrstiti među oružje, koje već upućuje na novi način borbe – mačevanje, odnosno u prijelazni oblik između bodeža i mača. Već su Marović i Čović naveli primjerak iz Perjana u Tirolu[47] kao najbolju analogiju za bodež iz Živalja, što je Peter Turk potvrdio u svojoj studiji o novom nalazu kratkog mača s područja Jablje kod Mengeša, iz šire okolice Ljubljane (sl. 7),[48] koji predstavlja najbližu i adekvatnu usporedbu s primjerkom iz Živalja te je bitno nadopunio raspravu o mačevima ovog tipa. Naime, Turk je pokazao da je u razvijenoj fazi ranoga brončanog doba na istočno-alp-

42 VINSKI 1961: 15; MAROVIĆ, ČOVIĆ 1983: 207, T. 34/1–7; MAROVIĆ 1994: 65–68, sl. 2–3; GOVEDARICA 1989, T. 34/1, 5–8; MILOŠEVIĆ 1998: 207–208, sl. 343.

43 Jednako je ukrašen držak kratkog mača iz Donje doline, koji pak u pogledu oblikovanosti oštrice spada u metalurški krug mačeva tipa Hajdu Samson-Apa. Usporedi: VINSKI 1961: 17–19, T. 8/1; MAROVIĆ, ČOVIĆ 1983: 208; HARDING 1995: 69–70, T. 28/228.

44 Za ovaj ukras pogledaj HARDING 1995: 70.

45 MAROVIĆ, ČOVIĆ 1983: 207–209, T. 34/1, 1a; MAROVIĆ 1994: 63–68, sl. 3/1; HARDING 1995: 69–70, T. 28/229; SCHWENZER 2004: 92–93, 301 (Nr. 231), Abb. 62: 231, T. 69: 231. Za ukras riblje kosti na bodežima još posebno pogledaj SCHWENZER 2004: 95–98, 339 (Liste 18), Abb. 63; 65, 67; za ukras gornje okrugle plohe drška s koncentričnim krugovima pogledaj SCHWENZER 2004: 107–108, Abb. 72 e, 75.

46 HARDING 1995: 69–70; SCHWENZER 2004: 92–93, Abb. 62: 231; TURK 2007: 211–212, sl. 11/1.

47 MAROVIĆ, ČOVIĆ 1983: 208.

48 TURK 2007; 2012; TURK, TURK 2019: 177–178, sl. 221–223.

composition.

Another solid-hilted dagger originates from Živalji near Obrovac (Sinj), from grave 2 in tumulus 1, which belongs to the period of Bd A2.[42] The dagger has a long narrow triangular and nicely decorated blade, as well as an elegant impressed concave hilt decorated with three bands of horizontal incisions,[43] while the top of the circular plate of the hilt was decorated with a rounded cone (tutulus) in the center and two engraved concentric circles with a motif of pine branches (*Tannenzweigmotiv*)[44] or herringbone (*Fischgrätband*) (Fig. 6/1).[45] It is precisely because of the relatively long blade, about 32.5 cm, that some researchers have assigned it among short swords.[46] This would mean that this example could already be classified as a type of weapon that indicates a new way of fighting - swordsmanship, i.e. as a transitional form between a dagger and a sword. Already Marović and Čović had cited the example from Perjen in the Tyrol as the best analogy for the dagger from Živalji,[47] while Peter Turk in his study on the new find of a short sword from the area of the Jablje Castle near Mengeš, in the broader area of Ljubljana (Fig. 7),[48] which represents the closest and at the same time a good comparison to the example from Živalji, both confirmed and significantly supplemented the discussion on this type of sword. He in fact showed that in the devel-

42 VINSKI 1961: 15; MAROVIĆ, ČOVIĆ 1983: 207, Pl. 34/1-7; MAROVIĆ 1994: 65-68, Fig. 2-3; GOVEDARICA 1989: Pl. 34/1, 5-8; MILOŠEVIĆ 1998: 207-208, Fig. 343.

43 The hilt of a short sword from Donja Dolina is decorated in the same way, but due to the shape of the blade, it belongs to the metallurgical circle of swords of the Hajdu Samson-Apa type. Cf.: VINSKI 1961: 17-19, Pl. 8/1; MAROVIĆ, ČOVIĆ 1983, 208; HARDING 1995: 69-70, Pl. 28/228.

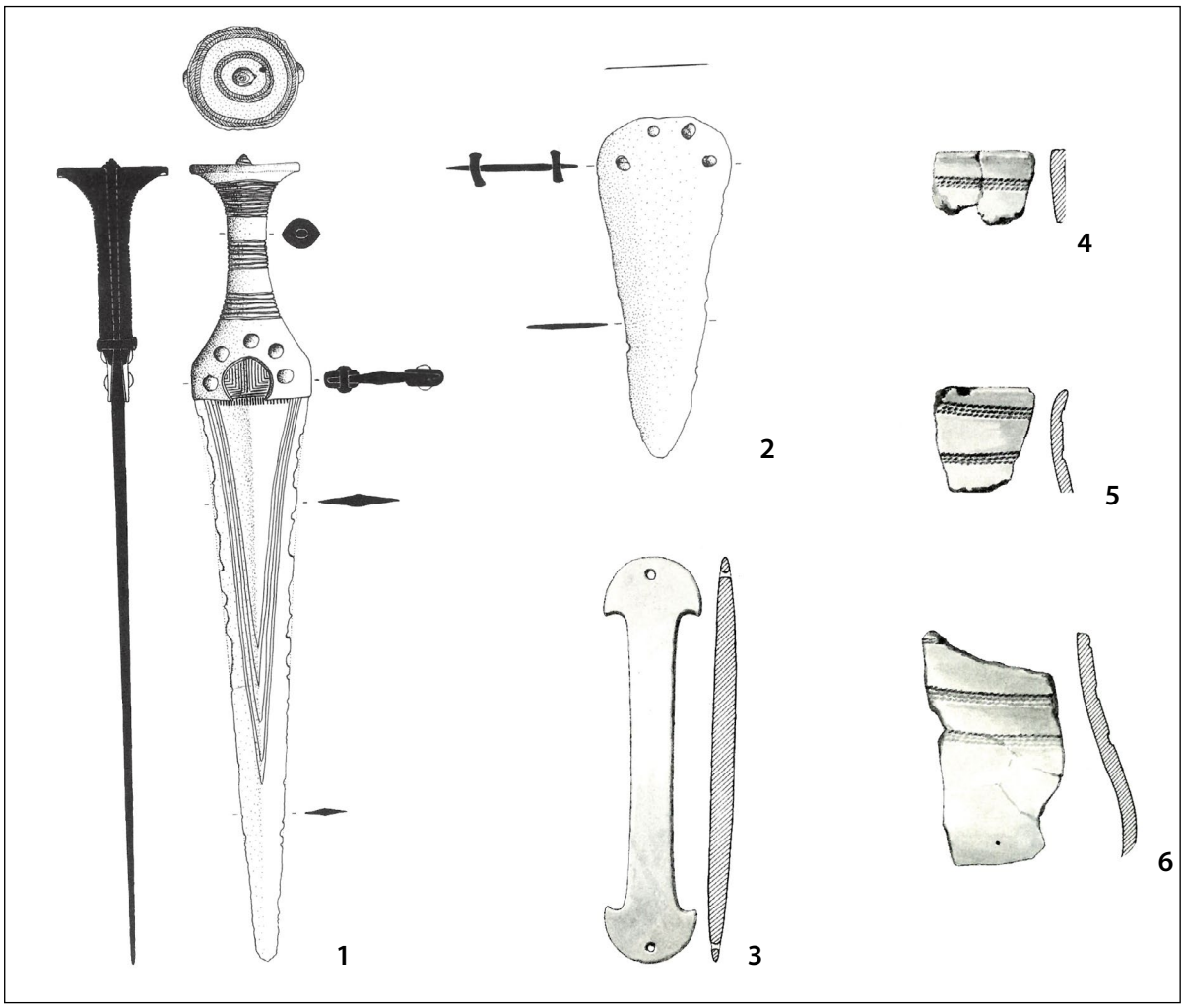
44 For this decoration, see HARDING 1995: 70.

45 MAROVIĆ, ČOVIĆ 1983: 207-209, Pl. 34/1, 1a; MAROVIĆ 1994: 63-68, Fig. 3/1; HARDING 1995: 69-70, Pl. 28/229; SCHWENZER 2004: 92-93, 301 (No. 231), Fig. 62/231, Pl. 69/231. For the herringbone decoration on the daggers, see especially SCHWENZER 2004: 95-98, 339 (List 18), Fig. 63; 65, 67; for the decoration of the upper hilt plate with concentric circles, see SCHWENZER 2004: 107-108, Fig. 72e, 75.

46 HARDING 1995: 69-70; SCHWENZER 2004: 92-93, Fig. 62/231; TURK 2007: 211-212, Fig. 11/1.

47 MAROVIĆ, ČOVIĆ 1983: 208.

48 TURK 2007; 2012; TURK, TURK 2019: 177-178, Fig. 221-223.



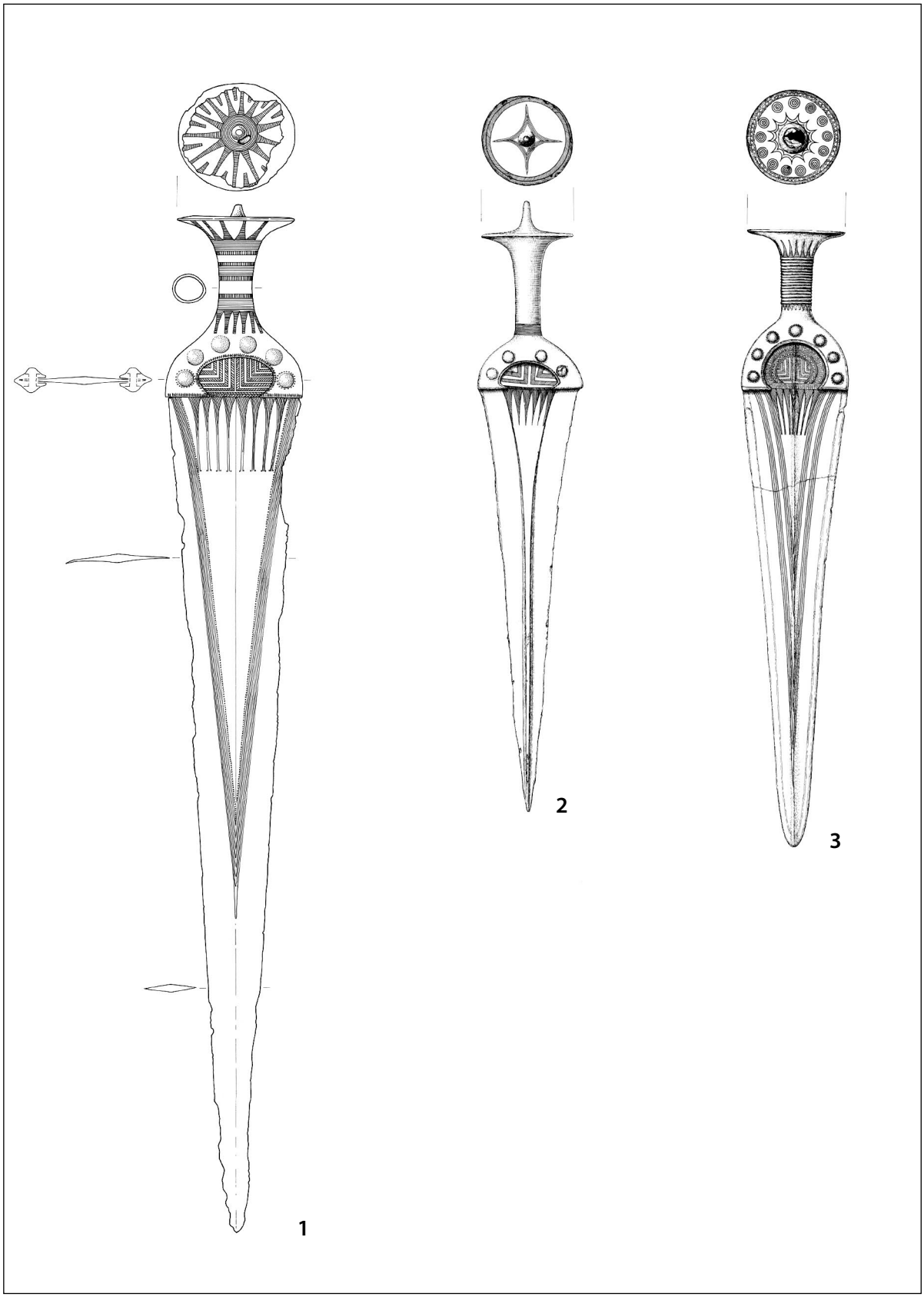
Slika 6. *Živalji u Obrovcu kod Sinja, tumul, grob 2, grobni nalazi: 6 (1–2 bronca, 3 kamen, 4 keramika)* (prema Marović 1994: sl. 3)
Figure 6 *Živalji in Obrovac near Sinj, tumulus, grave 2, grave finds: 6 (1-2 bronze, 3 stone, 4-6 pottery)* (according to Marović, Čović 1983: Pl. 34: 1-7; Marović 1994: Fig. 3)

skom prostoru postojala posebna skupina kratkih mačeva, za koje je karakterističan specifičan kombinirani ukras šrafiranih kutnih polukriževa i visećih trokuta. S takvim se ukrasom ovi mačevi nadovezuju na stariju ornamentalnu tradiciju, svojstvenu upravo alpskom svijetu. Ta činjenica omogućava tezu da je u rano brončano doba postojala posebna istočno-alpska metalurška provincija s lokalnim ljevačkim radionicama.[49] Sudeći prema obliku sječiva i ukrasa, možemo pretpostaviti da bodež/kratki mač iz groba

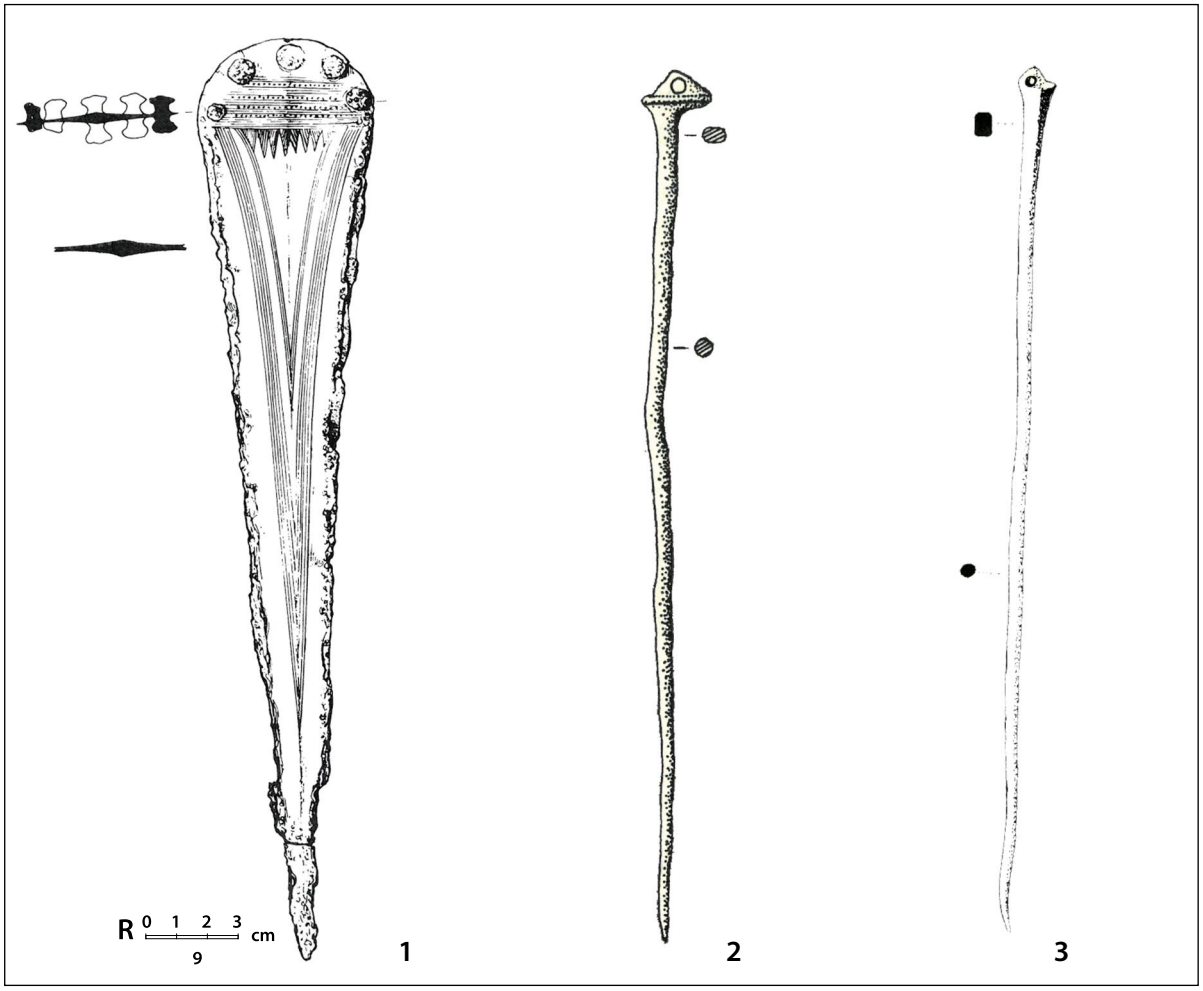
[49] TURK 2007: 211–213, 218 (Lista 1), sl. 9–13; 2012: 316–318, sl. 2–5. Za ukras kutnih polukriževa (= *halbes Winkelkreuz*/ HA 4) pogledaj također SCHWENZER 2004: 118–119, 349–350 (Liste 43–44), Abb. 85.

oped stage of the Early Bronze Age in the Eastern Alpine region there was a special group of short swords, which were characterized by a specific combined decoration of hatched angular crosses and hanging triangles. With this kind of decoration, these swords are linked to an older ornamental tradition, specific to the Alpine world. This fact enables the theory to be expressed that in the Early Bronze Age there had been a special Eastern Alpine metallurgical province with local casting and metal working activities.[49] Judging by the shape of the blade and the decoration, it can therefore

[49] TURK 2007: 211-213, 218 (List 1), Fig. 9-13; 2012: 316-318, Fig. 2-5. For the decoration of angular crosses (= *halbes Winkelkreuz*/ HA 4), also see SCHWENZER 2004: 118-119, 349-350 (Liste 43-44), Fig. 85.



Slika 7. *Kratki mačevi s punom drškom: 1) Jablje kod Mengeša, 2) Perjen u Tirolu, 3) Maiersdorf u Donjoj Austriji* (prema Turk 2012: sl. 3-4)
Figure 7 *Short solid-hilted swords: 1) Jablje near Mengeš, 2) Perjen in theTyrol, 3) Maiersdorf in LowerAustria* (according to Turk 2012: Fig. 3-4)



Slika 8. *1) Bodež, Sopa u Vinjanima, tumul, grob, grobni nalaz* (prema Čović 1989: T. 14/9)*; igle s ušicom na glavi (Ösenkopfnadel): 2) Postranje kod Imotskog, 3) Surčin u Srijemu* (prema Marović 1981: sl. 16/6; Vinski 1961: T. 6/3)

Figure 8 *1) Bronze dagger: Sopa in Vinjani, tumulus, grave find* (according to Čović 1989: Pl. 14/9)*; Pins with a loop ("Ösenkopfnadel"): 2) Postranje near Imotski, 3) Surčin in Srem/Syrmia* (according to Marović 1981: Fig. 16/6; Vinski 1961: Pl. 6/3)

2 u tumulu iz Živalja, potječe iz istočnoalpskoga obrtničkog kruga, što, među ostalim, dodatno podupiru i fragmenti licenske keramike, pronađeni u grobu (sl. 6/4–6).

Zbog toga je pozornosti vrijedan i bodež iz tumula u Sopi u Vinjanima kod Posušja (sl. 8/1). Njegova je oštrica po dužini, koja iznosi oko 29 cm, te po obliku gotovo jednaka kao kod bodeža iz Živalja, samo mu se gravirani ukras, na predjelu pločice drška, ponešto razlikuje. U ovom slučaju nije riječ o kombiniranom ukrasu šrafiranih kutnih polukriževa i visećih trokuta, kao u slučaju onog iz Živalja, nego je riječ o paralelno urezanim pojasima, ispunjenim sitnim punciranim točkama pod

be suggested that the dagger/short sword from grave 2 in the tumulus at Živalji originated from the Eastern Alpine craft circle, which is supported – not least of all- by the shards of Litzen pottery found in the grave (Fig. 6/4-6).

In this connection, the dagger from the tumulus at Sopa in Vinjani near Posušje is also worthy of attention (Fig. 8/1). Its blade is approx. 29 cm long, and the shape is almost the same as the dagger from Živalji, only the engraved decoration in the area of the hilt plate is slightly different. It is not a combined decoration of cross-hatched angular half-crosses and hanging triangles as in the example from Živalji, but of parallel incised bands filled with finely punctuated dots and

kojima je ukras s većim trokutima.[50] Premda ovaj bodež nema očuvani držak, koji je vjerojatno bio drven, ima pet zakovica za nasađivanje,[51] jednako kao kod bodeža iz Živalja (sl. 6/1 i 8/1). S obzirom na to da su na takav način ukrašeni bodeži poznati prije svega na prostoru sjeverno od Alpa i srednjeg Podunavlja sve do Danske, čini se vjerojatno da je bodež iz Sope također proizvod obrtničke radionice koju moramo tražiti na području srednje ili čak sjeverne Europe.

Grob 2 iz tumula 1 iz Živalja čini se zanimljivim i zbog svojeg položaja unutar gomile te ostalih grobnih priloga. U kamenom su tumulu bile dvije grobne škrinje, jedna pored druge, pokrivene kamenom pločom. U slučaju prvog groba riječ je o pokopu djeteta, uz vanjski rub drugog groba ležali su ostatci kostiju jedne osobe, a u grobnoj škrinji druge osobe, i to ostatci kostura (lubanje i udova) odrasle osobe, u zgrčenom položaju. Dugi je bodež bio položen u sredinu groba i daje utisak da ga je pokojnik držao u ruci, na sredini prsnoga koša (sl. 6/1). U njegovoj blizini, isto tako na sredini prsa, otkriven je kameni predmet u obliku „izdužene kretske sekire", vjerojatno tzv. „pseudobrassard" i zlatna žica (sl. 6/3). U grobu je bilo i nekoliko fragmenata licenske lončarije (sl. 6/4–6). U sjeverozapadnom uglu grobne škrinje nalazio se kratki trokutasti bodež (sl. 6/2). Marović je za njega mislio da ne pripada zgrčencu u grobu 2, već dislociranom pokopu izvan kamene škrinje.[52] Ta je teza vjerojatna, ali ne i jedina moguća. Naime, među grobnim prilozima istaknutih ratničkih grobova

[50] SCHWENZER 2004: 116–117, 352, Abb. 82 a; 83 (Liste 50). Schwenzer je ugotovio da taj ukras nije specifičan za određeni tip bodeža, već da je raširen – kako pokazuje karta Abb. 83 – na različitim tipovima bodeža s punim metalnim drškom i oštricama bodeža, sve od obala Baltičkog mora do Padske nizine odnosno srednje Italije. Pokazuje da je bodež iz Sope s tim ukrasom do sada jedini tako ukrašeni primjerak južno od Dunava odnosno na zapadnom Balkanu.

[51] ČOVIĆ 1983: 146, sl. 11/9; ČOVIĆ 1989: 86, T. 14/9, Karta: 11; HARDING 1995: 11–12, T. 1/1.

[52] MAROVIĆ 1994: 66–68, sl. 3.

below them a decoration of larger hanging triangles.[50] However, this dagger does not have a preserved hilt, which was probably wooden, but it does have five rivets for fastening the hilt,[51] the same as the dagger from Živalji (Fig. 6/1 and 8/1). Considering that daggers decorated in this way are known mainly from the area north of the Alps and the middle Danube all the way to Denmark, it seems likely that the dagger from Sopa would also be the product of a craft workshop, which we have to seek in the central or even northern regions of Europe.

Grave 2 from tumulus 1 at Živalji also seems interesting from the point of view of its location in the mound and the other grave goods. In the stone tumulus, there were two stone cist burials, one next to the other, covered with a stone slab. The first grave contained a child's burial, along the outer edge of the second grave lay the remains of the bones of one individual, with another in the stone cist, the remains of a skeleton (skull and limbs) of an adult in a contracted position. The long dagger was placed in the middle of the grave, giving the impression that the deceased was holding it in his hand in the middle of his chest. Nearby, also in the middle of his chest, a stone object in the shape of an "elongated Cretan axe", probably the so-called "pseudobrassard", and a gold wire were found (Fig. 6/1, 3). In the grave there were also some shards of Litzen pottery vessels. A short triangular dagger was also found in the northwestern corner of the burial cist (Fig. 6/2). Marović concluded that this did not belong to the contracted burial in grave 2, but to a dislocated burial outside the stone cist.[52] This thesis is plausible, but not the only possible one. Among

[50] SCHWENZER 2004: 116-117, 352, Fig. 82a, 83 (List 50). Schwenzer noted that this decoration is not specific to a particular type of dagger, but rather widespread – as shown by the map on Fig. 83 – on various types of solid-hilted daggers and dagger blades all the way from the shores of the Baltic Sea to the Po River Plain or central Italy. It appears that the dagger from Sopa with this decoration is so far the only example south of the Danube or in the Western Balkans.

[51] ČOVIĆ 1983: 146, Fig. 11/9; 1989: 86, Pl. 14/9; Map: 11; HARDING 1995: 11-12, Pl. 1/1.

[52] MAROVIĆ 1994: 66-68, Fig. 3.

ranoga brončanog doba, a još češće tijekom srednjega brončanog doba, ova kombinacija oružja – dva bodeža ili bodež i mač, pojavljuje se više puta. Kao primjer može se navesti grob iz Siona-Petit Chasseur[53] u švicarskim Alpama te kao „krunski" dokaz iz kronološke faze Bd A2, slavni i izrazito bogati grob iz Leubingena u Saskoj, kod kojeg su bila čak dva para bodeža.[54] Pri tome je vrijedno spomenuti da je riječ o dvostrukom grobu starije muške osobe i mlađe ženske osobe, odnosno djeteta.[55] Veoma se često u regijama srednje Europe pojavljuje kombinacija bodeža i mača u grobovima srednjega brončanog doba.[56] Kad bismo grob 2 iz Živalja sagledali iz toga zornog kuta, mogli bismo pretpostaviti da je mali trokutasti bodež također pripadao ratniku u grobnoj škrinji 2. To bi značilo da bi eventualna kombinacija dugog bodeža/kratkog mača i maloga trokutastog bodeža (sl. 6/1-2), mogla upravo upućivati na novi način naoružanja, odnosno ratovanja. Ujedno, takva kombinacija odražava visoki društveni status ratnika u grobu 2 tumula iz Živalja, slično kao što ga iskazuju iznadprosječno opremljeni ratnički grobovi na srednjoeuropskom prostoru.[57]

Takva dragocjena vojna oprema, kao što su bodeži iz Živalja, Sope i Prapatnice te zlatni nakit, premda u malobrojnim grobovima, ipak dopuštaju pretpostavku da je u okviru cetinske kulture odnosno posuške kulture došlo do zamjetljivih društvenih diferencijalnosti s ratničkom elitom na čelu. Možda nije riječ samo o odrazu društvenih okolnosti, kakve su zavladale širom Europe tijekom ranoga brončanog doba, već je moguće da je riječ o ogledalu lokalnih tradicija iz kasnoga bakrenog doba, kakve predstavljaju istaknute gomile tipa „Velika i Mala Gruda" kod Tivta

[53] SCHWENZER 2004: 223–224, Abb. 136/8–9.
[54] HÖFER 1906: 18–21, sl. 14–17, T. 1, 2/1, 5–7; STRAHM 2010: 167–171, Abb. 4.
[55] HÖFER 1906: 16; ZICH 2004.
[56] Pogledaj npr. HACHMANN 1957, T. 50; SCHAUER 1971, T. 129/B, C; 130/D.
[57] Pogledaj npr. STRAHM 2010; HANSEN 2016.

the grave goods of prominent warrior graves in the Early Bronze Age and even more often in the Middle Bronze Age, a combination of weapons consisting of two daggers or a dagger and a sword often appears. As an example, let us cite the grave from Sion-Petit Chasseur in the Swiss Alps,[53] and as the crowning evidence from the Bd A2 chronological phase, the famous, extremely rich grave from Leubingen in Saxony, in which there were even two pairs of daggers.[54] It is worth noting here that this is a double grave of an older male person and a younger female person, or child.[55] Especially often in the countries of Central Europe, a combination of a dagger and a sword appears in graves of the Middle Bronze Age.[56] If grave 2 at Živalji is viewed from this angle, it might be assumed that the small triangular dagger had also belonged to the warrior in the stone cist burial 2. This would mean that the eventual combination of a long dagger/short sword and a small triangular dagger (Fig. 6/1-2) might also indicate a new way of arming or fighting. At the same time, such a combination of weapons would reflect the high social status of the warrior in grave 2 of the tumulus at Živalji, similar to that exhibited by some warriors equipped with above-average weapons in the Central European area.[57]

Such valuable military equipment as the daggers from Živalji, Sopa, and Prapatnica and the gold jewelry, although found in a relatively small number of graves, nevertheless allows the hypothesis that within the framework of the Cetina and Posuška cultures there existed a noticeable social differentiation with a warrior elite in charge. Perhaps it is not merely a reflection of similar social conditions that prevailed throughout Europe in the Early Bronze Age, but rather also a reflection of local traditions from the Late Copper Age, as represented by the outstanding mounds of the "Velika and Mala Gruda" type near Tivat on the

[53] SCHWENZER 2004: 223-224, Fig. 136/8-9.
[54] HÖFER 1906: 18-21, Fig. 14-17, Pl. 1, 2/1, 5-7; STRAHM 2010, 167-171, Fig. 4.
[55] HÖFER 1906: 16; ZICH 2004.
[56] See, cf. HACHMANN 1957: Pl. 50; SCHAUER 1971: Pl. 129/B, C; 130/D.
[57] See, cf. STRAHM 2010; HANSEN 2016.

u Boki kotorskoj na južnom Jadranu.[58]

Nošnja

Između grobnih priloga cetinske i posuške kulture, tek rijetki predmeti predstavljaju metalne dijelove nošnje, poput igle za zakopčavanje odjeće te komadi nakita. Kako je već spomenuto, ističu se predmeti, kao što su zlatne žice u grobu 2 iz Živalja, spiralni obruči za kosu (Noppenring)[59] iz Čitluka, Velike gomile te ogrlica od jantarnih jagoda iz Nadograde.[60] Našu posebnu pozornost izazvala je brončana igla s ušicom, odnosno rupicom na vrhu glavice iz Postranja kod Imotskog (sl. 8/2). Za nju je već Marović pokazao da spada među igle karakteristične za srednjoeuropsku unjetničku kulturu, tzv. *Ösenkopfnadel*, a najbližu joj paralelu predstavlja igla iz nekropole u Surčinu (sl. 8/3).[61] Koliko nam je poznato, do danas na Balkanu nisu otkrili nove nalaze ovih igala, ali je njihova rasprostranjenost indikativna, jer se djelomično prostorno prekriva s distribucijom određenih tipova bodeža s punim metalnim drškom te ujedno i sa sjevernim rubom rasprostranjenosti licenske keramike. Dapače, igle tog tipa najzastupljenije su u središnjem dijelu unjetičke kulture, od gornjeg toka Odre, preko srednjonjemačkih pokrajina i gornjeg Podunavlja, odnosno Bavarske, do zapadno-alpskog svijeta, a samo su pojedini primjerci do sada poznati iz srednjeg Podunavlja, odnosno Karpatskog bazena. S

[58] PAROVIĆ-PEŠIKAN 1977–1978; PRIMAS 1996; MARAN 1998: 320–322, T. 20/1-8, 15-17; 21; DURMAN 2006; SAVELJIĆ-BULATOVIĆ, GUŠTIN, HINCAK 2015: 9–48.

[59] Za rasprostranjenost tipa Noppenring pogledaj BARTELHEIM 1998: 61–62, Karte 142.

[60] MAROVIĆ, ČOVIĆ 1983: 214–215, T. 34/8; MAROVIĆ 1984: 48–50, T. 19/8; 1994: 68; MILOŠEVIĆ 1998: 85–86, sl. 139 (Čitluk, Velike gomile), 267, sl. 435 (Nadograde). Za ogrlicu sastavljenu od jantarnih jagoda i brončanih spiralica – salteleonov, pokazali smo da je riječ o nakitu koji je karakterističan prije svega u Istri tijekom ranoga i srednjega brončanog doba, te zato pretpostavka da ovaj nakit iz Nadograde upućuje na povezanost s Istrom – pogledaj MIHOVILIĆ, TERŽAN 2022: 359–360.

[61] VINSKI 1961: 10, T. 6/3; MAROVIĆ 1981: 56, sl. 16/6.

Boka Kotorska Bay in the southern Adriatic.[58]

Attire

Among the grave goods of the Cetina and Posuška cultures, there are only rare objects that represent metal parts of the attire, such as pins for fastening clothes and pieces of jewelry. As was already mentioned, objects such as the gold wires in grave 2 from Živalji, and spiral hair rings (*Noppenring*)[59] from Čitluk, Velike gomile, and a necklace of amber beads from Nadograde stand out.[60] Attention was particularly drawn to a bronze attire pin with a loop at the top of the head (an eyelet-headed pin) from Postranje near Imotski. Marović has already shown that it belongs to the pins typical of the Central European Unjetice/Unetice culture, the so-called *Ösenkopfnadel*, and that the closest parallel is the pin from the necropolis in Surčin (Fig. 8/2-3).[61]As far as we know, so far no new finds of these pins have come to light in the Western Balkans, but their distribution is indicative because it partially overlaps spatially with that of certain types of solid-hilted daggers, and at the same time with the northern periphery of the distribution of Litzen pottery. Of course, pins of this type are most common in the central areas of the Unetice culture, from the upper course of the Oder River through the central German lands and the upper Danube or from Bavaria to the western Alpine world, and only individual specimens are so far known from the central Danube basin or the Carpathian basin.

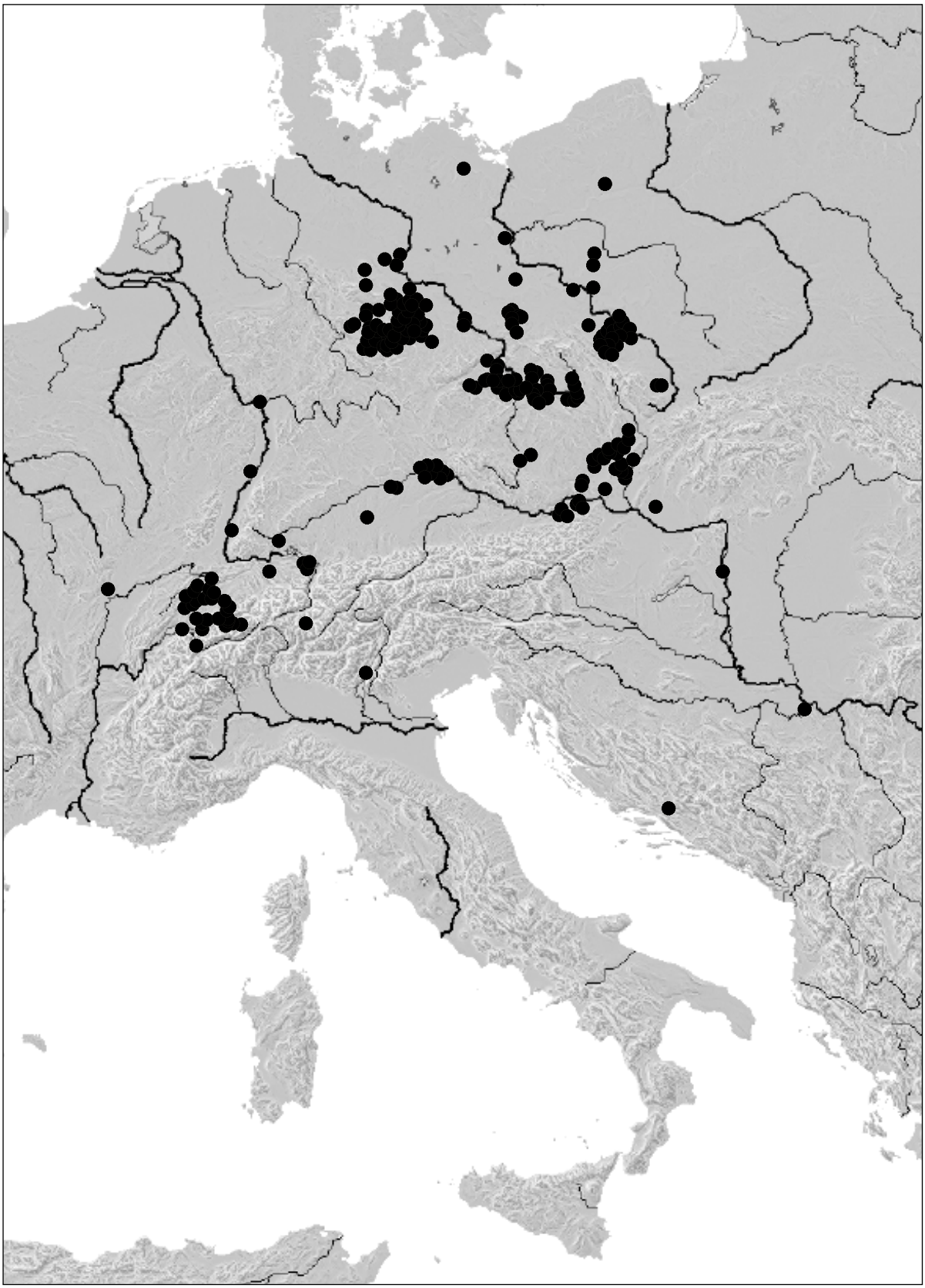
According to the investigations of Franziska

[58] PAROVIĆ-PEŠIKAN 1977-78; PRIMAS 1996; MARAN 1998: 320-322, Pl. 20/1-8, 15-17; 21; DURMAN 2006; SAVELJIĆ-BULATOVIĆ, GUŠTIN, HINCAK 2015: 9-48.

[59] For the distribution of the Noppenring type, see BARTELHEIM 1998: 61-62, Map 142.

[60] MAROVIĆ, ČOVIĆ 1983: 214-215, Pl. 34:8; MAROVIĆ 1984: 48-50, Pl. 19/8; 1994: 68; MILOŠEVIĆ 1998: 85-86, Fig. 139 (Čitluk, Velike Gomile), 267, Fig. 435 (Nadograde). For the necklace composed of amber beads and bronze spirals-salteleons, we have shown that this is jewelry that is typical especially in Istria in the Early and Middle Bronze Ages, hence it is thought that only this jewelry from Nadograde indicates connections with Istria, see MIHOVILIĆ, TERŽAN 2022: 359-360.

[61] VINSKI 1961: 10, Pl. 6:3; MAROVIĆ 1981: 56, Fig. 16/6.



Slika 9. *Igle s ušicom na glavi (Ösenköpfnadeln), cjelokupna rasprostranjenost bez obzira na tipove i okolnosti nalazišta* (prema Bartelheim 1998: Karte 148–149; Knoll, Meller 2016: Abb. 1, 8a; dopunjeno; doradila M. Vinazza)
Figure 9 *Pins with a loop ("Ösenköpfnadeln"), total distribution without reference to type and circumstances of discovery, with additions* (according to Bartelheim 1998: Maps 148-149; Knoll, Meller 2016: Fig. 1, 8a; made by M. Vinazza)

obzirom na istraživanja Franziske Knoll i Haralda Mellera, moguće je razlikovati sedam odnosno osam tipova tih igala, koje se međusobno razlikuju u pogledu ukrašenosti igle i oblikovanosti glavice i ušice. Zanimljivo je da se pojedini tipovi igala pokazuju kao lokalno specifični te na taj način ocrtavaju pojedine lokalne skupine nošnji u okviru unjetičkoga kulturnog kruga (sl. 9).[62] Igla iz Postranja je neornamentirana, njezina je ušica trokutastog oblika te bismo je zato eventualno mogli uvrstili u tip 5 ili 3, koji su pak zastupljeni u razmjerno malom broju primjeraka, prije svega na području zapadnih Alpa,[63] međutim neukrašene igle, prema Bartelheimu, imaju mnogo veću raširenost. Budući da je igla iz Surčina ostala po strani kod obaju spomenutih autora, glede tipa neopredijeljenosti, i igla iz Postranja ostaje među neopredijeljenim, neukrašenim iglama (sl. 8/2-3). Unatoč tomu, igla iz Postranja predstavlja dodatni indikator povezanosti srednjeg Jadrana, odnosno njegova zaleđa sa srednjoeuropskim kulturnim prostorom u vrijeme ranoga brončanog doba, faze Bd A2.

SAŽETAK[64]

Naše je istraživanje pokazalo komplementarnu sliku, sastavljenu od triju glavnih elemenata, koji obuhvaćaju naseobinsku materijalnu kulturu (licenska keramika), vojnu opremu, tj. oružje (bodeži s punim metalnim drškom) te nošnju (igle s ušicom). Na osnovi rasprostranjenosti spomenutih predmeta – licenske

[62] Za rasprostranjenost igala tipa „Ösenkopfnadel" cfr. BARTELHEIM 1998: 64–66, t. 46, Karte 148–149; KNOLL, MELLER 2016: 284–291, Abb. 1–2, 7–8a.

[63] KNOLL, MELLER 2016: 289–294, Abb. 2; 7 n,o,p; 8a.

[64] Za pomoć pri pripremi našeg članka za tisak naša zahvala ide kolegama i kolegicama, Dariju Maršaniću (Rijeka) za prijevod na hrvatski jezik, Barbari Smith-Demo (Zagreb) za prijevod na engleski jezik, Manci Vinazza (Ljubljana) za pripremu karata rasprostranjenosti i za pripremu slika 3-9 te Petru Turku (Ljubljana) za crteže sa slike 7.

Knoll and Harald Meller, it is possible to distinguish between seven or eight types of these pins, which differ from each other according to the decoration of the pin and the design of the head and loop. It is interesting that individual types of pins appear to be locally specific and in this way outline individual local attire groups within the Unetice cultural circle (Fig. 9).[62] The pin from Postranje is unornamented, and its loop is triangular in shape, so it could possibly be classified as type 5 or 3, which are represented by relatively few examples, especially in the area of the Western Alps,[63] while the distribution of undecorated pins according to Bartelheim is much wider. Since the pin from Surčin was also unclassified by the two mentioned authors in terms of type, the pin from Postranje also remains among the undefined undecorated pins (Fig. 8/2-3). Nevertheless, the pin from Postranje represents an additional indicator for connections between the central Adriatic and its hinterland with the Central European cultural area during the Early Bronze Age of phase Bd A2.

SUMMARY[64]

Our research has shown a complementary picture consisting of three main elements, which refer to the settlement's material culture (Litzen pottery), military equipment or weapons (solid-hilted daggers), and attire (pins with a loop). Based on the prevalence of the mentioned types–Litzen pottery (Figs 1-2), certain types of daggers/short swords (Fig. 5), and personal attire, namely pins with a loop (*Ösenkopfnadel*) (Fig. 9), which in certain segments mutually

[62] For the distribution of the *Ösenkopfnadel* type pin, cf. BARTELHEIM 1998: 64-66, Pl. 46, Map 148-149; KNOLL, MELLER 2016: 284-291, Fig. 1-2, 7-8a.

[63] KNOLL, MELLER 2016: 289-294, Fig. 2; 7 n,o,p; 8a.

[64] For help in preparing our article for print, we would like to thank our colleagues Barbara Smith-Demo (Zagreb) for the English translation, Dario Maršanić (Rijeka) for the Croatian translation, Manca Vinazza (Ljubljana) for the preparation of the distribution maps and figures (Fig. 3-9) and Peter Turk (Ljubljana) for the illustrations Fig. 7.

keramike (sl. 1–2), određenih tipova bodeža/kratkih mačeva (sl. 5) te osobne nošnje, tj. igala s ušicom (*Ösenkopfnadel*, sl. 9), koje se u određenim segmentima međusobno prostorno i vremenski preklapaju, zaključujemo da su to pokazatelji istoga kulturnog događanja. Karakterističnim se čini relativno raspršeno, ali unatoč tomu neuobičajeno gusto pojavljivanje licenske keramike u cijelom zaleđu srednjeg Jadrana, dakle u posuškoj skupini, uključujući i Pod kod Bugojna (sl. 2), za koju se smatra da je lokalne izrade. Njezina zastupljenost, kao i domaća proizvodnja pokazuju da licenska keramika u posuškoj kulturi nije predstavljala samo „modni trend" u oponašanju i prihvaćanju određene vrste „pribora za jelo i/ili servisa za piće" te pivskih običaja po uzoru na panonski kulturni krug s licenskom keramikom (sl. 1). Tim više dopušta pretpostavku da je u posuškoj kulturnoj skupini licenska keramika bila popularan i sastavni element njezine lončarske materijalne kulture. Zbog toga je možda možemo razumjeti kao odraz migracije manje ili veće skupine osoba iz zapadno-panonskog svijeta, koja se posve asimilirala te se, takoreći, stopila s cetinsko-posuškom kulturom.[65] Drugo moguće objašnjenje jest to da je licenska keramika rezultat intenzivnih kontakata između jadranskog zaleđa i panonskog prostora, čiji bi glavni medijator bilo transhumantno stočarstvo, koje je možda i pokrenulo migracije.[66]

Tezu o kontaktima i možda ipak migraciji u vrijeme Bd A2 iz panonskog prostora prema srednjem Jadranu podupiru i bodeži iz tumula iz Živalja kod Obrovca te Sope u Vinjanima (sl. 4; 5; 6/1; 8/1), jer smo pokazali da je njihov izvor potrebno tražiti ili na području jugoistočnog alpskog svijeta ili među srednjim Podunavljem i sjevernom Europom. Nešto se

[65] Sigurno je trenutačno riječ samo o hipotezi koja se mora u budućnosti provjeriti novim multidisciplinarnim metodama istraživanja. A bez hipoteze nema ni uzroka za buduća istraživanja.

[66] O problematici transhumantnosti te također migracija postoji opsežna stručna literatura, premda na tome mjestu želimo upozoriti samo na dobro argumentiranu i ključnu studiju: pogledaj HÄNSEL 2002; HÄNSEL 2016.

overlap each other spatially and chronologically, we can conclude that they are indicators of the same cultural events. The relatively scattered, but nevertheless unusually dense occurrence of Litzen pottery in the entire hinterland of the middle Adriatic seems significant, such as in the Posuška/Dinaric group, including Pod near Bugojno (Fig. 2), as it is considered to be of local manufacture. Hence its distribution as a local product indicates that the Litzen pottery in the Posuška group did not represent merely a "fashion trend" in imitating and adopting a certain type of "food and/or beverage service", and drinking habits following the model of the Pannonian cultural circle with Litzen pottery (Fig. 1), but allows the hypothesis that it was a popular and integral element of the pottery material culture in the Posuška/Dinaric group. Therefore, it can be understood as a reflection of the migration of smaller or larger groups of people from the western Pannonian world, who completely assimilated and, so to speak, merged with the Posuška/Dinaric cultural group.[65] Another possible explanation is that the presence of Litzen pottery is the result of intense contacts between the Adriatic hinterland and the Pannonian area, the main mediator of which could be transhumant grazing, which may also have triggered migrations.[66]

The thesis about migrations during Bd A2 from the Pannonian area towards the central Adriatic is also supported by the daggers from the tumuli in Živalji near Obrovac and Sopa in Vinjani (Figs 4/2; 5; 6/1; 8/1), as we have shown that their origin is to be sought either in the regions of the southeastern Alpine world or between the Middle Danube and Northern Europe. The origin of the pin with a loop (*Ösenkopfnadel*) can be defined somewhat more precisely. The distribution of such pins (regardless

[65] Of course our hypothesis have to be prooved by new multidisziplinary analyses and research. But without hypothesis there are no need for furhter investigations.

[66] Extensive professional literature exists on the topic of transhumance and also migration, but we would like to point out here only one well-argued and key study: see HÄNSEL 2002; HÄNSEL 2016.

točnije da odrediti izvor igle s ušicom (*Ösenkopfnadel*). Rasprostranjenost takvih igala (ne glede tipa) ne seže u panonski prostor južno od Dunava, jer su iznimke izrazito rijetke, međutim, slaže se s najsjevernijom, četvrtom skupinom licenske keramike, koja obuhvaća prostor današnje jugozapadne Slovačke i sjeverne Mađarske (usporedi sl. 1 i 9). Pritom treba spomenuti da se utjecaji kasne unjetičke kulture zamjećuju također na nalazištima zapadne Transdanubije, na kojima je zastupljena također licenska keramika prve skupine.[67] Ta je činjenica važna jer pokazuje da i iglu iz Postranja (sl. 8/2) možemo razumijeti u neposrednom kontekstu s proširenjem licenske keramike u zaleđe srednjeg Jadrana, i to ili u okviru migracije ili samo na individualnoj razini. Isto je tako indikativno da licenska keramika, kao i bodeži iz Živalja i Sope te igla iz Postranja govore o tome da se priljev srednjoeuropskih elemenata na srednjem Jadranu i u njegovu zaleđu odvijao prilično istovremeno, tj. u rano brončano doba, tijekom faze Bd A2.

of type) does not extend to the Pannonian area south of the Danube, as exceptions are extremely rare, but contact does exist with the northernmost, fourth group of Litzen pottery, which includes the area of today's southwestern Slovakia and northern Hungary (cf. Figs 1 and 9). It should also be mentioned that the influences of the late Unjetice Culture can also be traced at sites in Western Transdanubia, where Litzen pottery of the first group is also represented.[67] This fact seems significant, because it shows that the pin from Postranje (fig. 8/1) can also be understood in a direct context with Litzen pottery in the hinterland of the middle Adriatic, either in the context of a potential migration or only on an individual level. It is also indicative that both Litzen pottery and solid-hilted daggers from Živalji and Sopa, along with the pin from Postranje speak for the fact that the influx of Central European elements in the middle Adriatic and its hinterland took place fairly simultaneously, i.e. in the early Bronze Age, during phase Bd A2.

[67] Pogledaj npr. BÉKEI 2007: 102–103, 105, T. 34/5–7; 36: 63–67; KVASSAY, KISS, BONDAR 2004: 153, T. 18/8–12. (Autorice kod nekih posuda također vide vezu s lončarijom cetinske kulture).

[67] See e.g. BÉKEI 2007, 102-103, 105, Pl. 34/5-7; 36: 63-67; KVASSAY, KISS, BONDAR 2004, 153, Pl. 18/8-12 (The authors noted several connections with the pottery of the Cetina Culture in several vessels).

Lista arheoloških nalazišta licenske keramike na srednjem Jadranu i u njegovu zaleđu / A list of archaeological find spots of Litzen pottery in the central Adriatic and its hinterland

1. Vučevica – Kovačina, HR (ŠUTA 2013: 11–12, sl. 6)
2. Obrovac Sinjski – Živalji, HR (MAROVIĆ, ČOVIĆ 1983: 207–208, 214, T. 34/4–6)
3. Dugopolje, HR (KLIŠKIĆ 2001: 64, T. 3/6–8)
4. Slime – Plana/Pod, HR (TOMASOVIĆ 2011b: 242, sl. 26, T. 1/4)
5. Rašćane Gornje, HR (KATAVIĆ, SUNKO KATAVIĆ, DEVLAHOVIĆ 2011: 46, kat. jed. 7)
6. Kozica – Jujnovića špilja, HR (TOMASOVIĆ 2008: 142, T. 2/2; 2011a: sl. 7, T. 4/3)
7. Majići – Gradina, HR (MUCIĆ, KOVAČEVIĆ BOKARICA 2011: 130, kat. jed. 2; T. 1/2)
8. Brist, HR (TOMASOVIĆ 1999: 2, sl. 1a; 2014: 108)
9. Peć Mlini – Ravlića pećina, BiH (MARIJANOVIĆ 1981: 42, sl. 3; 2012: 105, sl. 59, T. 85/1−5, T. 86/1−2; ČOVIĆ 1989: 75)
10. Drinovci – Petnjik, BiH (TOMAS, VUJEVIĆ 2023: 32, 35, T. 3/1)
11. Drinovci – Majića gradina, BiH (TOMAS 2016: 13, sl. 5–7)
12. Osoje – Nečajno, BiH (ČOVIĆ 1980: 38; 1983: 139, 151–152; 1989: 70, T. 8/5)
13. Osoje – Slime, BiH (ČOVIĆ 1983: 152; 1989: 75)
14. Batin – Golovrana, BiH (ČOVIĆ 1989: 75)
15. Gradac – Bristovica, jug, BiH (ČOVIĆ 1989: 75)
16. Sovići – Trostruka gradina, BiH (ČOVIĆ 1980: 38–41, sl. 2/4–7, 3/3; 1983: 139–140, 151–152, T. 18/9, 10, 12; 1989: 75, T. 10/1–7, T. 11/1–6)
17. Čule - Kamenak, BiH (ČOVIĆ 1983: 152; 1989: 75)
18. Crnići – Aladinsko brdo, BiH (ČOVIĆ 1989: 75, T. 11/7)
19. Crnići – Jasočka gradina, BiH (ČOVIĆ 1989: 75, T. 11/8)
20. Bugojno – Pod, BiH (ČOVIĆ 1965: 49, T. 6/17, 18, T. 8/1–2; 1983: 177, T. 24/12; 1991: 20, T. 14/3, 8, T. 20/6, T. 25/1−4)

Literatura / References

ARENA, A. 2020, From one side to another. An overview on trans-Adriatic connectivity during the Middle Bronze Age, *Godišnjak Centra za balkanološka ispitivanja*, 49, 49–135.

BARTELHEIM, M. 1998, *Studien zur böhmischen Aunjetitzer Kultur: Chronologische und chorologische Untersuchungen 1-2*, Universitätsforschungen zur prähistorischen Archäologie 46/I -II, 1998, Bonn: Verlag Dr. Rudolf Habelt GmbH.

BÉKEI, L. 2007, Adatok a Nyugat-Dunántul kozépső bronzkori tőrténetéhez / Angaben zur mittelbronzezeitlichen Geschichte Westtransdanubiens. Siedlung mit Aunjetitz-, Gäta- und ostalpinen Elementen und Litzenkeramik auf den Fundorten 4 und 6/a am Umleitungsweg 84 bei Sárvár, *Savaria*, 31, 7–140.

BENAC, A. 1985, *Utvrđena ilirska naselja (I). Delmatske gradine na Duvanjskom polju, Buškom Blatu, Livanjskom i Glamočkom polju*, Djela 60, Centar za balkanološka ispitivanja 4, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine.

BENAC, A., ČOVIĆ, B. (ur./ eds.) 1983, *Praistorija jugoslavenskih zemalja IV. Bronzano doba*, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja.

BULATOVIĆ, A., GORI, M., VANDER LINDEN, M. 2020, Radicarbon dating the 3rd millenium BC in the Central Balkans: a re-examination of the Early Bronze Age sequence, *Radiocarbon* 62(5), 1163–1191.

CAZELLA, A., GORI, M., PACCIARELLI, M., RECCHIA, A. 2020, 2500-2000 BC: connectivity phenomena between the Balkans, Greece, Southern Italy, Eastern Sicily, the Aeolian Islands and Malta, u/in: *Italia tra Mediterraneo ed Europa: mobilità, interazioni e scambi*, Rivista di Scienze Preistoriche, 70, 181–197.

ČOVIĆ, B. 1965, Uvod u stratigrafiju i hronologiju praistorijskih gradina u Bosni, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n. s., 20, 27–100.

ČOVIĆ, B. 1976, *Od Butmira do Ilira*, Sarajevo: Veselin Masleša.

ČOVIĆ, B. 1980, »Schnur« i »Litzen« keramika na području Neretve, u/in: *Dolina rijeke Neretve od prethistorije do ranog srednjeg vijeka. Znanstveni skup Metković, 4.-7. listopada 1977*, = *Izdanja Hrvatskog arheološkog društva*, 5, 35–43.

ČOVIĆ, B. 1983a, Jadransko-zapadnobalkanska regija, u/in: Benac, A., Čović, B. (ur./eds.) 1983, 99–190.

ČOVIĆ, B. 1983b, Zaključna razmatranja, u/in: Benac, A., Čović, B. (ur./eds.) 1983, 807–829.

ČOVIĆ, B. 1989, Posuška kultura, *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n. s., 44, 61–127.

ČOVIĆ, B. 1989/1990, Vrpčasto ukrašena keramika na istočnoj jadranskoj obali i u njenom zaleđu, *Starinar*, 40/41, 51–59.

ČOVIĆ, B. 1991, *Pod kod Bugojna. Naselje bronzanog i željeznog doba u centralnoj Bosni. Sveska 1: Rano bronzano doba / Pod bei Bugojno. Eine Siedlung der Bronze- und Eisenzeit in Zentralbosnien. Heft 1: Die Frühbronzezeit*, Sarajevo: Zemaljski muzej Bosne i Hercegovine.

ČREŠNAR, M., TERŽAN, B. 2014, Absolutno datiranje bronaste dobe na Slovenskem / Absolute Dating of the Bronze Age in Slovenia, u/in: Teržan, B., Črešnar, M. (eds.), *Absolutno datiranje bronaste in železne dobe na Slovenskem / Absolute Dating of the Bronze and Iron Ages in Slovenia*, Katalogi in monografije 40, Ljubljana: Narodni muzej Slovenije, 661–702.

DELLA CASA, Ph. 1995, The Cetina-group and the transition from Copper to Bronze Age in Dalmatia, *Antiquity* 69(204), 565–576.

DURMAN, A. (ur./ed.) 2006, *Simbol boga i kralja. Prvi europski vladari / Symbol of God and King.*

The first european Rulers, Zagreb: Galerija Klovićevi dvori.
FORENBAHER, S. 2018, Ljubljana i Cetina: lončarski stilovi 3. tisućljeća prije Krista na prostoru istočnog Jadrana / Ljubljana and Cetina: Pottery Styles of the third Millenium BC in the Eastern Adriatic, *Prilozi Instituta za arheologiju u Zagrebu*, 35, 113–157.
FORENBAHER, S. 2023, *Rane grobne gomile na Jadranu i raznolikost pogrebnih običaja u 3. tisućljeću pr. Kr. / Early Burial Mounds in the Adriatic and the Diversity of Mortuary Practice in the 3rd Millenium B.C*, Monografije Instituta za arheologiju 15, Zagreb: Institut za arheologiju.
GOVEDARICA, B. 1989, *Rano bronzano doba na području istočnog Jadrana*, Djela 67, Centar za balkanološka ispitivanja, 7, Sarajevo.
HACHMANN, R. 1957, *Die frühe Bronzezeit im westlichen Ostseegebiet und ihre mittel- und südosteuropäischen Beziehungen. Chronologische Untersuchungen*, 6. Beiheft zum Atlas der Urgeschichte, Hamburg: Flemmings Verlag, Kartographisches Institut Hamburg.
HÄNSEL, B. 2002, Zusammenfassende Bemerkungen zum Siedlungsverlauf in Kastanas – Kontinuität und Bevölkerungswandel, u/in: R. Jung, *Kastanas. Ausgrabungen in einem Siedlungshügel der Bronze- und Eisenzeit Makedonies 1975-1979. Die Drehscheibenkeramik der Schichten 19–11*, Prähistorische Archäologie in Südosteuropa 18/1, Kiel: Verlag Oetker/Voges, 11–27.
HÄNSEL, B. 2016, Invasion, Immigration, Infiltration im bronzezeitlichen Makedonien, u/in: *Mensch, Kultur und Gesellschaft von der Kupferzeit bis zur frühen Eisenzeit im nördlichen Eurasien. Beiträge zu Ehren zum 60.Geburtstag von Eugen Sava / Man, Culture, and Society from the Copper Age until the Early Iron Age in Northern Euroasia. Contributions in honour of the 60th anniversary of Eugen Sava*, Zanoci, A., Kaiser, E., Kashuba, M., Izbitser, E., Băt M. (ur./eds.),Tyragetia International 1, Chişinău: National museum of history of Moldova, Freie Universität Berlin, 127–143.
HANSEN, S. 2016, »Arm und Reich« in der Bronzezeit Europas, u/in: *Arm und Reich – Zur Ressourcenverteilung in prähistorischen Gesellschaften / Rich and Poor – Competing for resources in prehistoric societies, 8. Mitteldeutscher Archäologentag von 22. bis 24. Oktober 2015 in Halle (Saale) / 8th Archaeological Conference of Central Germany, October 22-24, 2015 in Halle (Saale)*, Meller, H., Hahn, H. P., Jung, R., Risch, R. (ur./eds.), Tagungen des Landesmuseums für Vorgeschichte Halle 14/I, Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt,197–217.
HARDING, A. 1995, *Die Schwerter in ehemaligen Jugoslawien*, Prähistorische Bronzefunde IV/14, Stuttgart: Franz Steiner Verlag.
HÖFER, P. 1906, Der Leubinger Grabhügel, *Jahresschrift für die Vorgeschichte der sächsisch-thüringischen Länder*, 5, 1–59.
KATAVIĆ, V., SUNKO KATAVIĆ, A., DEVLAHOVIĆ, A. 2011, Istraživanje grobnog tumula, dviju vrtača, gradine i gradinice u Gornjim Rašćanima kod Vrgorca, u/in: *Arheološka istraživanja na trasi autoceste u Zabiokovlju i Plini*, Tomasović M. (ur./ed.), Makarska: Gradski muzej, 41–70.
KERMAN, B. 2024, Naselbine iz bronaste dobe v Prekmurju. Pregled stanja raziskav/ Bronze Age settlements in Prekmurje. Overview of the state of research, *Arheološki vestnik*, 75, 463–499.
KLIŠKIĆ, D. 2001, Prapovijest na području Dugopolja, u/in: *Dugopolje: zbornik radova općine Dugopolje*, 1, Gulin A. (ur./ed.), Dugopolje, Zagreb: Općina Dugopolje, 55–78.
KRAMBERGER, B. 2024, Novosti o poselitvi Pohorskega Podravja v zgodnji in srednji bronasti dobi ter kronologija poselitve na najdišču Slivnica IB pri Mariboru / New insight into the settlement of Pohorsko Podravje region in the Early and Middle Bronze Age and the chronology of Slivnica IB near Maribor, *Arheološki vestnik*, 75, 551–618.
KNOLL, F., MELLER, H. 2016, Die Ösenkopfnadel – Ein »Klassen« verbindendes Trachtele-

ment der Aunjetitzer Kultur. Ein Beitrag zu Kontext, Interpretation und Typochronologie der mitteldeutschen Exemplare, u/in: *Arm und Reich – Zur Ressourcenverteilung in prähistorischen Gesellschaften/ Rich and Poor – Competing for resources in prehistoric societies. 8. Mitteldeutscher Archäologentag von 22. bis 24. Oktober 2015 in Halle (Saale) / 8th Archaeological Conference of Central Germany, October 22-24, 2015 in Halle (Saale)*, Meller, H., Hahn, H. P., Jung, R., Risch, R. (ur./eds.), Tagungen des Landesmuseums für Vorgeschichte Halle 14/ II, Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, 283–370.

KRUH, A. 2019, *Pramenasta keramika*, neobjavljena disertacija / unpublished PhD thesis, Univerza v Ljubljani, Ljubljana: Filozofska fakulteta.

KVASSAY, J., KISS, V., BONDÁR, M. 2004, Őskori és közepkori település emlékei Zalaegerszeg-Ságod–Bekehäta lelőhelyen, *Zalai Múzeum*, 13, 119–175.

MARAN, J. 1998, *Kulturwandel auf dem griechischen Festland und den Kykladen im späten 3. Jahrtausend v. Chr. Studien zu den kulturellen Verhältnissen in Südosteuropa und dem zentralen sowie östlichen Mittelmeerraum in der späten Kupfer- und frühen Bronzezeit*, Universitätsforschungen zur prähistorischen Archäologie 53/I-II, Bonn: Verlag Dr. Rudolf Habelt GmbH.

MARIJANOVIĆ, B. 1981, Ravlića pećina (Peć Mlini), *Glasnik Zemaljskog muzeja Bosne i Hercegovine*, n. s., 35/36 (1980–1981), 1–97.

MARIJANOVIĆ, B. 2003, Značenje Neretve u prostornom rasporedu prapovijesnih kultura, u/in: *Arheološka istraživanja u Naroni i dolini Neretve. Znanstveni skup Metković, 6.-9. listopada 2001*, = *Izdanja Hrvatskog arheološkog društva*, 22, 321–328.

MARIJANOVIĆ, B. 2012, *Ravlića pećina: prapovijesno naselje / Ravlića cave: prehistoric settlement*, Mostar: Hrvatska franjevačka arheološka zbirka sv. Stjepana, Ogranak Matice hrvatske u Grudama.

MAROVIĆ, I. 1976, Rezultati dosadašnjih istraživanja kamenih gomila oko vrela rijeke Cetine u god. 1953, 1954, 1958, 1966. i 1968, *Materijali 12. IX kongres arheologa Jugoslavije Zadar 1972*, 55–75.

MAROVIĆ, I. 1981, Prilozi poznavanju brončanog doba u Dalmaciji, *Vjesnik za arheologiju i historiju dalmatinsku* 75, 7–61.

MAROVIĆ, I. 1984, Sinjska regija u prahistoriji, u/in: *Cetinska krajina od prethistorije do dolaska Turaka. Znanstveni skup Sinj, 3.-6. VI 1980.*, = *Izdanja Hrvatskog arheološkog društva*, 8, 27–63.

MAROVIĆ, I. 1994, Dva predmeta neuobičajena oblika iz Obrovca i Ravče, *Vjesnik za arheologiju i historiju dalmatinsku*, 86, 63–80.

MAROVIĆ, I., ČOVIĆ, B. 1983, Cetinska kultura, u/in: A. Benac, B. Čović (ur./eds.)1983, 191–231.

MIHOVILIĆ, K. 2009–2008, Gropi – Stari Guran. Analiza prapovijesne keramike, *Histria archaeologica*, 38/39 (2007–2008), 37–79.

MIHOVILIĆ, K. 2022, Katalog tumula, grobova u kamenoj škrinji i drugih oblika pokopa na području brončanodobne Istre / Katalog der Grabhügel, Gräber in einer Steinkiste und anderer Bestattungsformen im Gebiet des bronzezeitlichen Istriens, u/in: K. Mihovilić, B. Teržan, *Monkodonja. Istraživanje protourbanog naselja brončanog doba Istre. Knjiga 4. Mušego / Mon Sego, grobni tumuli – nekropola gradine Monkodonja i brončanodobni tumuli Istre / Monkodonja. Forschungen zu einer protourbanen Siedlung der Bronzezeit Istriens. Teil 4. Mušego / Mon Sego, Grabhügel – eine Nekropole von der Gradina Monkodonja und die bronzezeitlichen Grabhügel Istriens*, Monografije i katalozi 37, Pula: Arheološki muzej Istre, 181–282.

MIHOVILIĆ, K., TERŽAN, B. 2022, Usporedba s tumulima u susjednim regijama / Tumuli in den Nachbarregionen, u/in: K. Mihovilić, B. Teržan, *Monkodonja. Istraživanje protourbanog*

naselja brončanog doba Istre. Knjiga 4. Mušego / Mon Sego, grobni tumuli – nekropola gradine Monkodonja i brončanodobni tumuli Istre / Monkodonja. Forschungen zu einer protourbanen Siedlung der Bronzezeit Istriens. Teil 4. Mušego / Mon Sego, Grabhügel – eine Nekropole von der Gradina Monkodonja und die bronzezeitlichen Grabhügel Istriens, Monografije i katalozi 37, Pula: Arheološki muzej Istre, 347–375.

MILOŠEVIĆ, A. 1998, *Arheološka topografija Cetine*, Katalozi i monografije 3, Split: Muzej hrvatskih arheoloških spomenika.

MUCIĆ, K., KOVAČEVIĆ BOKARICA, N. 2011, Doprinosi poznavanju povijesti Vrgoračke krajine na osnovi rezultata novijih arheoloških istraživanja, u/in: *Arheološka istraživanja na trasi autoceste u Zabiokovlju i Plini*, M. Tomasović (ur./ed.), Makarska: Gradski muzej, 125–212.

PAROVIĆ-PEŠIKAN, M. 1977-78, Les recherches `a Boka Kotorska, *Starinar*, n. s., 28/29, 16–67.

PRIMAS, M. 1996, *Velika Gruda I. Hügelgräber des frühen 3. Jahrtausends v. Chr. im Adriagebiet – Velika Gruda, Mala Gruda und ihr Kontext*, Universitätsforschungen zur prähistorischen Archäologie 32, Bonn: Verlag Dr. Rudolf Habelt GmbH.

RAMBACH, J. 2007, Olympia and Andravida-Lechania: two bronze age sites in the northwest Peloponnese with far-reaching overseas cultural connections, u/in: *Between the Aegean and Baltic seas. Prehistory across borders*, Aegaeum 27, Liege: Universite de Liege, University of Texas at Austin, 81–89.

RECCHIA, G. 2020, Reaching across the Adriatic: northern and western interactions of the Cetina phenomenon (25th – 20th centuries BC), *Godišnjak 49, Centar za balkanološka ispitivanja Sarajevo*, 5–28.

SAVELJIĆ-BULATOVIĆ, L., GUŠTIN, M., HINCAK, Z. 2015, *Podgorica. Praistorijske humke i srednjovjekovne nekropole Gruda Boljevića*, Podgorica: JU Muzeji i galerije Podgorica.

SCHAUER, P. 1971, *Die Schwerter in Süddeutschland, Österreich und der Schweiz I.* Prähistorische Bronzefunde IV/2, München: C.H. Beck´sche Verlagsbuchhandlung.

SCHWENZER, S. 2004, *Frühronzezeitliche Vollgriffdolche. Typologische, chronologische und technische Studien auf der Grundlage einer Materialaufnahme von Hans-Jürgen Hundt*, Kataloge vor- und frühgeschichtlicher Altertümer 36, Mainz: Verlag des Römisch-Germanischen Zentralmuseums in Kommission bei Dr. Rudolf Habelt GmbH, Bonn.

STRAHM, CH. 2010, Die ökonomischen und ideellen Bedingungen der Formation frühbronzezeitlicher Eliten, u/in: *Der Griff nach den Sternen. Wie Europas Eliten zu Macht und Reichtum kamen. Internationales Symposium in Halle (Salle) 16.-21. Februar 2005*, Meller, H., Bertemes F. (ur./ eds.), Tagungen des Landesmuseums für Vorgeschichte Halle (Saale) 5/1, Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, 165–175.

ŠUTA, I. 2013, Korištenje vrtača u prapovijesti Dalmacije, *Tusculum*, 6, 7–24.

TERŽAN, B. 1983, Das Pohorje – ein vorgeschichtliches Erzrevier?, *Arheološki vestnik*, 34, 51–84.

TERŽAN, B. 2019, Metallurgical activity in the Early Bronze Age period on the hilltop settlement of Pod near Bugojno, *Godišnjak 48, Centar za balkanološka isptivanja ANU BiH*, 59–71.

TERŽAN, B., KARAVANIĆ, S. 2013, The Western Balkans in the Bronze Age, Settlemenets and their social implications, u/in: *The Oxford Handbook of the European Bronze Age*, Fokkens, H., Harding A. (ur./eds.), Oxford: Oxford University Press, 839–849.

TOMAS, T. 2016, Majića gradina (Drinovci) – novo nalazište licenske keramike u Hercegovini, *Hercegovina*, 2, 7–23.

TOMAS, T., VUJEVIĆ, D. 2023, Nove arheološke spoznaje s prostor Drinovaca, *Hercegovina*, 9, 7–42.

TOMASOVIĆ, M. 1999, Prostor Gornjega makarskog primorja od prapovijesti do srednjega vijeka prema arheološkim pokazateljima, u/in: *Hrvatski rasadnik. Zbornik članaka znanstvenoga skupa Gornje makarsko primorje (Gradac – Zaostrog, 26.–27. 9. 1996)*, Radelić, Z. (ur./ed.), Zagreb: Gornjoprimorska općina Gradac i prijatelji, 1–15.

TOMASOVIĆ, M. 2008, Arheološki dokazi života na prostoru Biokova od razdoblja prapovijesti do srednjeg vijeka, u/in: *Biokovo*, R. Ozimec (ur./ed.), Zagreb: Graphis, 138–152.

TOMASOVIĆ, M. 2011a, Prapovijesni nalazi iz Župe, Rašćana i Kozice – kulturna slika nakon započetih rekognosciranja, u/in: *Arheološka istraživanja na trasi autoceste u Zabiokovlju i Plini*, Tomasović M. (ur./ed.), Makarska: Gradski muzej, 9–29.

TOMASOVIĆ, M. 2011b, Arheološka topografija lijeve strane donjeg toka Cetine, u/in: *Arheološka istraživanja u Cetinskoj krajini*, = *Izdanja Hrvatskog arheološkog društva*, 27, 229–265.

TOMASOVIĆ, M. 2014, *Culture heritage guide: Makarska and the Makarska Littoral, Biokovo and the Biokovo hinterland, the Omiš-Rogoznica and the Neretva river-Ston areas*, Makarska: Gradski muzej.

TURK, P. 2007, Bronasti polnoročajni meč iz Jabelj v osrednji Sloveniji / A Bronze Solid-Hilted Sword from Jablje in Central Slovenia, u/in: *Scripta praehistorica in honorem Biba Teržan. Situla 44*, Ljubljana: Narodni muzej Slovenije, 209–229.

TURK, P. 2012, Bronasti meč iz izvira pri Jabljah / Bronze sword from a water spring near Jablje, u/in: *Potopljena preteklost. Arheologija vodnih okolij in raziskovanje podvodne kulturne dediščine v Sloveniji. Zbornik ob 128-letnici Dežmanovih raziskav Ljubljanice na Vrhniki (1884-2012)*, Gaspari, A., Erič M. (ur./eds.), Ljubljana: Didacta.

TURK, P., TURK, M. 2019, *Najstarejše zgodbe s stičišča svetov*, Ljubljana: Narodni muzej Slovenije.

VINSKI, Z. 1961, O oružju ranoga brončanog doba u Jugoslaviji, *Vjesnik Arheološkog muzeja u Zagrebu*, 3. ser., 2, 1–38.

ZICH, B. 2004, Die Fürstengräber von Leubingen und Helmsdorf, u/in: *Der geschmiedete Himmel. Die weite Welt im Herzen Europas vor 3600 Jahren*, Meller H. (ur./ed.), Stuttgart: Theiss Verlag GmbH: 156–159.

ŽERAVICA, Z. 1993, *Äxte und Beile aus Dalmatien und anderen Teilen Kroatiens, Montenegro, Bosnien und Herzegowina*, Prähistorische Bronzefunde IX/8, Stuttgart: Franz Steiner Verlag.

GROB IZ STARIJEG ŽELJEZNOG DOBA S GROBLJA NAKOVANA – ZMIJNA (POLUOTOK PELJEŠAC)

AN EARLY IRON GRAVE AT THE NAKOVANA – ZMIJNA CEMETERY (PELJEŠAC PENINSULA)

DOMAGOJ PERKIĆ

Dubrovački muzeji, Arheološki muzej
Dubrovnik Museum, Archaeological Museum
Pred dvorom 3
HR–20000 Dubrovnik
domagoj.perkic@dumus.hr

MARKO DIZDAR

Institut za arheologiju
Institute of Archaeology
Jurjevska ulica 15
HR–10000 Zagreb
mdizdar@iarh.hr

HRVOJE POTREBICA

Filozofski fakultet Sveučilišta u Zagrebu,
Odsjek za arheologiju
Faculty of Humanities, University of Zagreb,
Department of Archaeology
I. Lučića 3
HR–10000 Zagreb
hpotrebi@ffzg.hr

IVAN PAMIĆ

Viganj 81
HR–20267 Viganj
ivanpamic@hotmail.com

UDK: 903.5(497.584Nakovanj)"638"
DOI: 10.15291/archeo.4679
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-4-2024
Prihvaćeno / Accepted: 2024-15-7

Ključne riječi:
starije željezno doba, grob, Nakovana, groblje, južni Jadran, dijadema, višestruki ukop, kulturna povezanost

Prapovijesno gradinsko naselje Grad u Nakovani jedno je od najistaknutijih naselja iz brončanog i željeznog doba na južnom dijelu istočnojadranske obale. O njegovoj važnosti kao i kompleksnom kulturnom krajoliku u kojem se nalazi, osim do sada pronađene materijalne ostavštine, svjedoče i brojne kamene gomile koje se nalaze u okolici Grada, posebno na brdu Zmijnoj. S obzirom na pretpostavljenu kontinuiranu naseljenost Grada sve do kraja željeznog doba, očekivalo se i postojanje ravnih grobova, što su istraživanja provedena 2020. godine i potvrdila. Na južnim padinama brda Zmijne otkrivena su dva groba na ravnom smještena u blizini mlađih kamenih gomila. Grob smješten pri vrhu brda, na osnovi pronađenih nalaza, datiran je u starije željezno doba. Ostatci više pokojnika bili su položeni u prirodnu udubinu i pokriveni većim kamenim blokovima. U grobu su, osim keramičkih ulomaka, pronađeni predmeti nakita i nošnje koji upućuju na kulturne kontakte sa zaleđem te prostorom zapadnog Balkana na kojem je starije željezno doba obilježeno razvojem glasinačke kulture.

Key words:
Early Iron Age, grave, Nakovana, cemetery, southern Adriatic, diadem, multiple burial, cultural connectivity

The prehistoric hillfort settlement of Grad in Nakovana is one of the most prominent Bronze and Iron Age settlements on the southern part of the eastern Adriatic coast. Its importance and the complex wider cultural landscape are reflected not only in the material legacy found so far, but also in the numerous stone mounds around Grad, especially on the hill of Zmijna. Since it was presumed that Grad was continuously inhabited until the end of the Iron Age, it was expected to find flat graves, which were in fact discovered during the excavations of 2020. On the southern slopes of Zmijna hill,

two flat graves were discovered near younger stone mounds. The grave located near the top of the hill was dated to the Early Iron Age based on the finds. The remains of several individuals were laid in a natural depression and covered with large stone blocks. The grave contained potsherds, but also jewellery and costume items indicating cultural contacts with the hinterland and the area of the western Balkans, where the Early Iron Age was characterized by the development of the Glasinac culture.

UVOD

Gradinsko naselje Grad kod Nakovane, smješteno u zapadnom dijelu poluotoka Pelješca, jedno je od najistaknutijih naselja na južnom dijelu istočnojadranske obale koje je vjerojatno bilo kontinuirano naseljeno od prijelaza s eneolitika na rano brončano doba pa sve do kraja željeznog doba.[1] Na Gradu do sada nisu bila provedena sustavna istraživanja, osim terenskih pregleda,[2] iako su nalazi prikupljani od kraja 19. stoljeća upućivali na njegovu važnost tijekom brončanog i željeznog doba na južnom dijelu istočne obale Jadrana.[3] U okolici Grada nalazi se više od 50 kamenih gomila koje su u najvećem broju dokumentirane na brdu Zmijnoj koje se nalazi oko 300 m sjeverno od Grada.[4] Najbolje je do sada istražena pećina Spila koja se nalazi ispod vrha brda Kopinja, oko jedan km sjeveroistočno od Grada gdje je, uz neke starije nalaze datirane od ranog neolitika do u kasno brončano doba, u skrivenoj dvorani otkriveno ilirsko svetište datirano od kraja 4. st. pr. Kr. do oko 35. god. pr. Kr. i vremena Oktavijanova osvajanja južnog dijela istočnojadranske obale.[5] Prikupljene spoznaje pokazuju kako je gradinsko naselje Grad s okolnim prostorom predstavljalo kompleksan kulturni krajolik čija istraživanja mogu rezultirati novim spoznajama o prapovijesti Pelješca i južnog dijela istočnojadranske obale. Zbog toga su 2020. godine na prostoru groblja na položaju Zmijna započela istraživanja kako bi se prikupili novi podatci i materijalna ostavština koji bi doprinijeli poznavanju pogrebnih običaja i tretmana pokojnika za vri-

1 Na Gradu su pronađeni i kasnoantički nalazi te oni iz srednjeg vijeka.
2 PETRIĆ 1977; 1978; FORENBAHER 2009: 690–692; RAJIĆ ŠIKANJIĆ, FORENBAHER 2010: 71–75.
3 PERKIĆ et al. 2021 s povijesti istraživanja i literaturom.
4 PETRIĆ 1981: 44–45; FORENBAHER, KAISER, VUJNOVIĆ 2001: 46–49.
5 Najvažnije: FORENBAHER, KAISER 1999: 75–77; 2001: 677–678; 2003; 2006: 571–582; 2011: 185–193; 2012: 263–274; FORENBAHER, KAISER, KIRIGIN 2003: 323–331; FORENBAHER, JONES 2011: 425–438; 2014: 7–28; MENALO 2005.

INTRODUCTION

The hillfort settlement of Grad near Nakovana, located in the western part of the Pelješac Peninsula, is one of the most prominent settlements on the southern part of the eastern Adriatic coast; it was probably continuously inhabited from the transition from the Eneolithic to the Early Bronze Age until the end of the Iron Age.[1] No systematic excavations have been undertaken at Grad, apart from field surveys,[2] even though the finds collected since the late 19th century indicated its importance during the Bronze and Iron Ages on the southern part of the eastern Adriatic coast.[3] In the vicinity of Grad, there are more than 50 stone mounds, most of them found on the hill of Zmijna, approximately 300 meters north of Grad.[4] The best-explored site is the Spila cave, located under the peak of Kopinje hill, approximately one kilometre northeast of Grad. Alongside older finds dating from the early Neolithic to the Late Bronze Age, the cave included a hidden chamber with an Illyrian sanctuary dating from the end of the 4th century BC to around 35 BC, when Octavian conquered the southern part of the eastern Adriatic coast.[5] The obtained insights indicate that the hillfort settlement of Grad and its surrounding area constitute a complex cultural landscape that could provide new knowledge about the prehistory of Pelješac and the southern part of the eastern Adriatic coast. Consequently, excavations began in the cemetery area of the Zmijna site in 2020 to gather new data and material remains that could contribute to understanding funerary practices and mortuary treatment during the Late Bronze and

1 The finds at Grad include those from Late Antiquity and the Middle Ages.
2 PETRIĆ 1977; 1978; FORENBAHER 2009: 690-692; RAJIĆ ŠIKANJIĆ, FORENBAHER 2010: 71-75.
3 PERKIĆ et al. 2021 with history of research and literature.
4 PETRIĆ 1981: 44-45; FORENBAHER, KAISER, VUJNOVIĆ. 2001: 46-49.
5 The most important: FORENBAHER, KAISER 1999: 75-77; 2001: 677-678; 2003; 2006: 571-582; 2011: 185-193; 2012: 263-274; FORENBAHER, KAISER, KIRIGIN. 2003: 323-331; FORENBAHER, JONES 2011: 425-438; 2014: 7-28; MENALO 2005.

jeme kasnog brončanog i željeznog doba.

Rezultati terenskog pregleda, koji je prethodio iskopavanju, pokazali su kako se ispod hrpta brda na Zmijnoj i njegovim južnim padinama prepoznaju dva tipa kamenih gomila koje se nastavljaju prema sjeverozapadu i položaju brda Golubinici. Izdvojene su gomile tzv. klasičnog kupolastog izgleda za koje se pretpostavlja kako datiraju u razdoblje od kraja eneolitika do u kasno brončano doba, što će svakako biti potrebno provjeriti istraživanjima. Na Zmijnoj su uočene i gomile drukčijeg izgleda i konstrukcije, što se i prepoznaje kod onih koje su već odavno bile devastirane. Ove su gomile pravilnog kružnog tlocrta, a sastoje se od dvaju ili triju koncentričnih prstenova izgrađenih od većih kamenih blokova koji se stepenasto uzdižu prema središnjem ravnom dijelu gdje se nalazi četvrtasta suhozidna grobnica koja je bila zasuta sitnim kamenjem. Prostori između kamenih prstena također su ispunjeni sitnijim kamenjem. Na osnovi površinskih nalaza, gomile ovog oblika datirane su u kraj starijeg i mlađe željezno doba. Osim na Zmijnoj, devastirane gomile ovog tipa nalaze se i na Nakovaniću smještenom zapadno od Grada.[6] Osim gomila, na Zmijnoj su uočene i određene površine na kojima se pretpostavljalo postojanje ravnih grobova, zbog čega su 2020. godine istražene dvije sonde. U sondi 1 otkriven je grob datiran u kraj kasnog brončanog doba, a u sondi 2 grob iz starijeg željeznog doba,[7] koji se namjerava i detaljnije analizirati kako bi se proširile dosadašnje spoznaje o starijem željeznom dobu na Pelješcu.

GROB 2 KRAJ KAMENE GOMILE 3.02

Blizu hrpta brda na Zmijnoj i početku južne padine nalazi se skupina od oko desetak gomila mlađeg tipa čiji je središnji dio s grobom već odavno devastiran. Sa sjeverne strane ove skupine gomila nalazi se ravnija površina ko-

[6] PERKIĆ et al. 2021: 70, 72.
[7] PERKIĆ et al. 2021.

Iron Ages.

The field survey, which preceded the excavations, revealed the presence of two types of stone mounds under the ridge of Zmijna hill and on its southern slopes in the northwest direction towards the site of Golubinica hill. Some of them are mounds of the "classic domed" shape, which are presumed to date from the end of the Eneolithic to the Late Bronze Age, but this hypothesis will have to be verified through excavations. Also, Zmijna includes mounds of different appearance and structure, which is visible even in those that have long been destroyed. These mounds have a regular circular plan and consist of two or three concentric rings built of large stone blocks that rise like steps toward the central flat area with a square dry-wall tomb covered with small stones. The spaces between the stone rings are also filled with small stones. Based on surface finds, mounds of this type have been dated to the end of the Early Iron Age and to the Late Iron Age. Devastated mounds of this type are found not only on Zmijna, but also on Nakovanić hill, west of Grad.[6] Along with the mounds, Zmijna included areas with presumed flat graves, which is why two trenches were excavated in 2020. Trench 1 uncovered a grave dating to the end of the Late Bronze Age, while Trench 2 uncovered a grave from the Early Iron Age,[7] which is planned to be analysed in detail to expand current knowledge about the Early Iron Age on Pelješac.

GRAVE 2 NEAR STONE MOUND 3.02

Near the ridge of Zmijna hill and at the beginning of the southern slope, there is a group of a dozen mounds of the younger type; their central part with the grave has long been destroyed. North of this group of mounds, there is a flatter surface leading to the top of the hill where several large stone blocks have been observed. Two

[6] PERKIĆ et al. 2021: 70, 72.
[7] PERKIĆ et al. 2021.

jom se dolazi do vrha brda na kojoj je uočeno nekoliko većih kamenih blokova. Izdvajaju se dva veća izdužena pravokutna bloka smještena oko tri metra sjeveroistočno od ruba gomile 3.02 koja su na mjestu dodira bila blago uzdignuta, što je strukturi davalo krovasti presjek (sl. 1). S obje dulje strane, uz rubove kamenih blokova, uočavao se niz manjeg nepravilnog kamenja, posebno sa sjeverne strane, dok je površina prema istoku dijelom bila izložena eroziji. Zbog toga se sondom 2, dimenzija 2,5 x 1,5 m, namjeravalo provjeriti pokrivaju li kameni blokovi možda ostatke groba.[8] Nakon dokumentiranja i uklanjanja kamenih blokova dužine oko 1 m, širine 0,30 do 0,40 m i debljine oko 0,20 m, pojavio se sloj smeđe zemlje sa sitnijim kamenjem u kojem su uočene ljudske kosti te metalni i keramički nalazi. Sa zapadne strane otkrivene su dvije tanke kamene ploče postavljene na rub koje su zatvarale strukturu, dok ploča s oštećene istočne strane nije bilo. U zapuni, između rubno posloženog kamenja, pronađena je veća količina ljudskih kostiju kao i 47 sitnih keramičkih ulomaka. Brončani predmeti pronađeni su u istočnom dijelu, dok se po jedan brončani obruč nalazio u uglovima. Nakon čišćenja groba uočila se struktura dimenzija 1,30 x 1,10 m čije je dno iznosilo oko 0,40 m od vrha kamenih blokova.[9] Čini se kako su pokojnici, možda orijentacije istok-zapad i obrnuto, bili položeni u prirodnu plitku udubinu u kamenu (sl. 2), zasuti zemljom sa sitnim kamenjem te su potom pokriveni dvama većim kamenim blokovima. Grob 2, s obzirom na nalaze, datiran je u 7. do početka 6. st. pr. Kr.[10] Zub jednog od pokojnika radiokarbonski (^{14}C) je datiran u rasponu od 1110. do 900. god. pr. Kr., što bi upućivalo na veću starost groba u odnosu na onu koja počiva na analizi pronađenih nalaza.[11] Moguće je objaš-

large elongated rectangular blocks are located approximately three metres northeast of the edge of mound 3.02; they were slightly elevated at the point of contact, giving the structure a roof-like cross-section (Fig. 1). On both longer sides, along the edges of the stone blocks, there was a visible series of small irregular stones, especially on the northern side, while the surface towards the east was partly exposed to erosion. Therefore, trench 2, measuring 2.5 x 1.5 metres, was made to verify if the stone blocks covered the remains of a grave.[8] The stone blocks, measuring around 1 metre in length, 0.30 to 0.40 metres in width, and around 0.20 metres in thickness, were documented and removed, revealing a layer of brown soil with small stones containing human bones and metal and ceramic finds. The excavations on the western side uncovered two thin stone slabs placed at the edge, closing off the structure; there were no slabs on the damaged eastern side. In the fill, between the stones arranged on the edges, there was a large quantity of human bones along with 47 tiny potsherds. Bronze objects were discovered in the eastern part, with one bronze ring in each corner. The cleaning of the grave revealed a structure measuring 1.30 x 1.10 metres, with its bottom approximately 0.40 metres below the top of the stone blocks.[9] It appears that the individuals, possibly lying in an east-west or west-east direction, were laid in a natural shallow depression in the stone (Fig. 2), filled with earth and small stones, and then covered with two large stone blocks. Based on the finds, grave 2 is dated from the 7th to the beginning of the 6th century BC.[10] The tooth of one of the individuals was radiocarbon (^{14}C) dated to 1110–900 BC, indicating a greater age for the grave compared to the one based on the analysis of the finds.[11] One possible explanation

[8] PERKIĆ et al. 2021: 76, Karta 3.
[9] PERKIĆ et al. 2021: 76, sl. 5–7.
[10] PERKIĆ et al. 2021: 79.
[11] DeA-28726, I/2582/2, Nakovana, konvencionalna ^{14}C vrijednost (god. BP) (1 sigma) 2828 ± 33, kalibrirana vrijednost (cal AD/BC) (2 sigma) 1110. – 900. god. pr. Kr.

[8] PERKIĆ et al. 2021: 76, Map 3.
[9] PERKIĆ et al. 2021: 76, Figs. 5-7.
[10] PERKIĆ et al. 2021: 79.
[11] DeA-28726, I/2582/2, Nakovana, conventional ^{14}C age (yrs BP) (1 sigma) 2828 ± 33, Calibrated calendar age (cal AD/BC) (2 sigma) BC 1110-900.



Slika 1. *Kameni blokovi iznad groba 2* (snimio: M. Dizdar)
Figure 1 *The stone lids above grave 2* (photo by M. Dizdar)

njenje kako se u grobu 2 pokopavalo tijekom duljeg razdoblja ili su u mlađi grob dospjeli i ostatci pokojnika iz nekog starijeg groba koji se nalazio na istom dijelu groblja, dok nalazi koji bi pripadali kasnom brončanom dobu u grobu nisu pronađeni. Za detaljnije objašnjenje svakako je potrebno provesti radiokarbonsko datiranje ostataka svih pokojnika iz groba 2 na Zmijnoj.

Ljudske su kosti vrlo fragmentirane, a antropološka analiza, na osnovi prisutnih koštanih elemenata, pokazala je kako je u grobu bilo pokopano najmanje deset pokojnika – četiri djeteta (fetus, dijete staro 1,5 - 3 godine, dijete staro 3 - 9 godina, dijete staro 15 - 18 godina) te šest odraslih pokojnika neodredivog spola (starosti 20 - 50 godina). Analizom su izdvojeni gotovo svi dijelovi tijela, no ni jedno u cjelosti. Tako su kosti lubanje pripisane najmanje dvjema osobama – djetetu i odrasloj

is that burials in grave 2 occurred over a long period, or that a younger grave incorporated the remains of individuals from an older grave located in the same part of the cemetery; however, the grave did not include anything from the Late Bronze Age. For a more detailed explanation, radiocarbon dating should be conducted for the remains of all individuals from grave 2 at Zmijna.

The human bones are highly fragmented. The anthropological analysis of the present bone elements revealed that the grave contained at least ten individuals: four children (a fetus, a child aged 1.5-3 years, a child aged 3-9 years and a child aged 15-18 years) and six adults of undetermined sex (aged 20-50 years). Analysis identified almost all parts of the body, but none in their entirety. The skull bones were attributed to at least two individuals – a child and an adult. Analysis of the teeth iden-



Slika 2. *Grob 2 po završetku istraživanja* (snimio: M. Dizdar)
Figure 2 *Grave 2 after the excavations* (photo by M. Dizdar)

osobi. Analizom zubi izdvojeno je osam setova koji pripadaju dvama djetetima i šestorici odraslih osoba. Dijafize dugih kostiju većinom pripadaju odraslim osobama, no izdvojene su i dijafize lisne kosti i sedam dijafiza dugih kostiju koje pripadaju djetetu starosti 3 – 9 godina. Prepoznati su i ulomak lijeve nadlaktične kosti i desne goljenične kosti fetusa. Na zubima odraslih pokojnika prisutni su karijesi te hipoplastični defekti koji se povezuju s pojavom jakih avitaminoza, neonatalne žutice, anemije, zaraznih bolesti ili kronične neishranjenosti.[12]

tified eight sets belonging to two children and six adults. The diaphyses of long bones mostly belong to adults, but diaphyses of the fibula and seven diaphyses of long bones belonging to a child aged 3–9 years were also identified. Fragments of the left humerus and right tibia of the fetus were recognized. The adults' teeth show cavities and hypoplastic defects associated with severe vitamin deficiencies, neonatal jaundice, anemia, infectious diseases, or chronic malnutrition.[12]

[12] BEDIĆ 2020; 2024. Antropološku analizu groba 2 provela je dr. Željka Bedić s Instituta za antropologiju.

[12] BEDIĆ 2020; 2024. The anthropological analysis of grave 2 was carried out by dr. Željka Bedić from the Institute for Anthropological Research.

NALAZI IZ GROBA 2

Najbrojnije nalaze u grobu 2 predstavljaju keramički ulomci koji, s obzirom na fakturu i boju, pripadaju neukrašenim dijelovima trbuha od najmanje četiriju različitih posuda. Ulomci su pronađeni u cijelom grobu, a s obzirom na izrazitu fragmentiranost, nije moguće odrediti o kojim je oblicima riječ. Na Gradu su u terenskom pregledu prikupljeni brojni keramički ulomci, posebno oni datirani u brončano i željezno doba.[13]

Brončani predmeti, koji pripadaju nakitu i nošnji, u najvećem su broju pronađeni u istočnom dijelu groba te su također izrazito fragmentirani.

1. Dijadema/poramenica (T. 1/1–15)

Bakrena slitina; ukupna sačuvana dužina: 43,8 cm; širina: 0,8–1,0 cm; debljina: 0,05 cm.

Sačuvano je 15 ulomaka dijademe/poramenice izrađene u obliku uske limene trake. Veći dio ulomaka ukrašen je sa šest vodoravno urezanih linija, dok je dio ulomaka ukrašen složenije organiziranim ukrasom. Ti su ulomci uz oba ruba, između po jedne vodoravne linije, ukrašeni nizom kosih urezanih linija. U središnjem dijelu nalazi se šira traka od onih rubnih koja je ukrašena motivom mreže. Između triju ukrašenih vodoravnih zona, dviju rubnih i one središnje, nalaze se dvije vodoravne neukrašene zone. Na jednom ulomku ukrašenom samo vodoravnim linijama sačuvan je ukras s motivom dviju kružnica s točkom. Dva ulomka ukrašena različito organiziranim vodoravnim linijama, koja dijelom prelaze jedan ispod drugog, spojena su kroz okrugle rupice s dvjema zakovicama. Krajevi obaju spojenih dijelova blago su zaobljeni. Na većem ulomku ukrašenom složenijim ukrasom nalaze se dvije rupice za zakovice, a na još trima kraćim također se sačuvala po jedna rupica za zakovicu. Čini

[13] FORENBAHER, RAJIĆ ŠIKANJIĆ 2006: 471; FORENBAHER 2009: 691; RAJIĆ ŠIKANJIĆ, FORENBAHER 2010: 72.

FINDS FROM GRAVE 2

The most numerous finds in grave 2 are potsherds, which, considering their texture and colour, belong to the unadorned portions of the belly of at least four different vessels. The potsherds were found throughout the grave, but their extreme fragmentation makes it impossible to determine the specific shapes. The field surveys at Grad collected numerous potsherds, especially those dating to the Bronze and Iron Ages.[13]

Bronze items of jewellery and costume were mostly found in the eastern part of the grave and are also highly fragmented.

1. Diadem/sash (Pl. 1/1–15)

Copper alloy; total surviving length: 43.8 cm; width: 0.8–1.0 cm; thickness: 0.05 cm.

There are fifteen preserved fragments of the diadem/sash made in the form of a narrow metal strip. Most of the fragments are decorated with six horizontally incised lines, while some are adorned with a more complex ornament. Along both edges, these fragments are decorated with a series of oblique incised lines between single horizontal lines. In the central part, there is a strip that is wider than the edge strips and decorated with a mesh motif. Between the three decorated horizontal zones (two edge zones and a central zone) there are two horizontal undecorated zones. One fragment, decorated with horizontal lines only, has a preserved double-ring-and-dot motif decoration. Two fragments decorated with differently arranged horizontal lines, one partly placed under the other, are joined with two rivets through circular holes. The ends of both joined parts are slightly rounded. A large fragment, decorated with a more complex pattern, has two rivet holes; three shorter fragments have one rivet hole each. The end of the longer perforated part

[13] FORENBAHER, RAJIĆ ŠIKANJIĆ 2006: 471; FORENBAHER 2009: 691; RAJIĆ ŠIKANJIĆ, FORENBAHER 2010: 72.

se kako je završetak duljeg perforiranog dijela blago zaobljen, odnosno vjerojatno je riječ o završetku. Sačuvan je i mali ulomak, izgleda neukrašen, s jednom zakovicom.

2. Narukvica ili sljepoočničarka (T. 2/1)

Bakrena slitina; promjer: 4.5 cm; debljina: 0,1–0,3 cm

Cjelovito sačuvana spiralno savijena narukvica ili sljepoočničarka s trima navojima i okruglog presjeka. U sredini je blago zadebljana, dok su krajevi suženi i završavaju u šiljak.

3. Praporac (T. 2/2)

Bakrena slitina; visina: 3,8 cm; promjer: 1,5 cm; promjer kuglica: 0,2 cm

Praporac sačuvan u ulomcima, s okruglom ušicom na vrhu koja se nastavlja u produžetak rombičnog presjeka iz kojeg izlazi košarica jajolikog oblika s deset rešetki i devet proreza. Unutar košarice nalazila su se najmanje četiri kuglasta zrna. S donje strane košarice nalazi se kraće cilindrično izbočenje ili nožica kružnog presjeka.[14]

4. Dugme (T. 2/3)

Bakrena slitina; promjer glavice: 1,6 cm; visina ušice: 0,3 cm

Slabo sačuvano dugme vjerojatno s niskom kalotastom glavicom i ušicom s donje strane.

5. Saltaleon (T. 2/4)

Bakrena slitina, sačuvana dužina: 0,8 cm; promjer: 0,6 cm; debljina žice: 0,1 cm

Saltaleon sa sačuvanih šest navoja od tanke žice.

6. Obruči (T. 2/5–10)

Bakrena slitina; promjer: 1,3–1,4 cm; debljina: 0,1 cm

Devet obruča okruglog presjeka, od kojih osam cijelih i jedan u ulomcima. Jedan obruč spojen je s još trima, a na njemu se primjećuje mjesto spajanja dviju strana.

[14] PERKIĆ et al. 2021: 78, sl. 8.

seems to be gently rounded, so it is probably a terminal. There is also a small fragment, seemingly undecorated, with a single rivet.

2. Bracelet or temple ring (Pl. 2/1)

Copper alloy; diameter: 4.5 cm; thickness: 0.1–0.3 cm

A fully preserved spiral twisted bracelet or temple ring with three coils and a circular cross-section. It is slightly expanded in the middle, while the ends taper to a point.

3. Bell-shaped pendant (Pl. 2/2)

Copper alloy; height: 3.8 cm; radius: 1.5 cm; bead radius: 0.2 cm

A bell-shaped pendant preserved in fragments, topped by a round loop transitioning into a diamond-sectioned extension from which emerges an egg-shaped basket with ten lattices and nine slots. The basket contained at least four spherical beads. On the underside of the basket, there is a short cylindrical protrusion or foot of circular cross-section.[14]

4. Button (Pl. 2/3)

Copper alloy; head diameter: 1.6 cm; hoop height: 0.3 cm

A poorly preserved button, probably with a low domed head and a hoop on the underside.

5. Saltaleone (Pl. 2/4)

Copper alloy, surviving length: 0.8 cm; radius: 0.6 cm; wire thickness: 0.1 cm

Saltaleone with preserved six coils of thin wire.

6. Rings (Pl. 2/5–10)

Copper alloy; diameter: 1.3–1.4 cm; thickness: 0.1 cm

Nine round-sectioned rings: eight intact and one in fragments. One ring is linked to three others and has a visible point where the two sides are connected.

[14] PERKIĆ et al. 2021: 78, Fig. 8.

DIJADEMA/PORAMENICA

Za datiranje groba 2 na Zmijnoj u starije željezno doba najvažniji predmet, uz praporac, predstavljaju ulomci dijademe/poramenice (T. 1/1–15). S obzirom na veći broj slabo sačuvanih ulomaka, kao i dva različita načina ukrašavanja, nije isključeno kako je riječ o ulomcima dvaju predmeta. No, može biti riječ i o ulomcima istog predmeta s različito ukrašenim zonama, pri čemu sačuvane širine ulomaka također ne omogućavaju njegovo definiranje. Također, kontekst otkrića u grobu 2 ne upućuje na funkcionalnu poziciju predmeta, odnosno je li riječ o dijademi/ama ili poramenici/ama. Ulomci su bili pripisani dijademama/poramenicama glasinačkog tipa te za sada predstavljaju najjužniji nalaz ovog tipa predmeta na istočnom dijelu jadranske obale.[15]

O nastanku dijadema/poramenica, kao jednom od prepoznatljivih oblika glasinačke kulture tijekom starijeg željeznog doba, detaljno je pisao B. Čović koji ističe kako su najčešće bogato ukrašene ugraviranim geometrijskim motivima. Njihovu pojavu datira od faze Glasinac IVb te se još pojavljuju tijekom faze IVc-1.[16] Za njihov nastanak B. Čović uzore je potražio u nalazima dijadema s prostora srednje Bosne gdje se pojavljuju krajem kasnog brončanog doba. Međutim, riječ je o drukčijim oblicima u odnosu na one glasinačke iz starijeg željeznog doba – šire su, dužina im je od 40 do 60 cm, imaju uvijene i razmaknute krajeve, a ukrašene su različito organiziranim iskucanim ornamentom (*puntktbuckel*).[17] Dijademe ovog oblika na istom se prostoru pojavljuju i na početku starijeg željeznog doba,[18] kako pokazuju

[15] PERKIĆ et al. 2021: 78.

[16] BENAC, ČOVIĆ 1957: 33; ČOVIĆ 1959: 73; 1987a: 596, 609, Fig. 35/5, Pl. LXI/9. Dijademe u grobovima faze IVc-1: Ilijak XIX/1, Osovo I/1, Rusanovići XXIV (1895): ČOVIĆ 1987a: 609.

[17] ČOVIĆ 1979: 47–48; GAVRANOVIĆ 2011a: 226–227, sl. 227.

[18] ČOVIĆ 1979: 47–48. Nalazi ovog tipa dijademe npr. s

DIADEM/SASH

The fragments of the diadem/sash (Pl. 1/1–15), alongside the bell-shaped pendant, are the most significant artefacts for dating grave 2 at Zmijna to the Early Iron Age. Considering the large number of poorly preserved fragments, and the two different decorative styles, it is not excluded that these are fragments of two artefacts. However, they may also be fragments of the same artefact with differently decorated zones, as the preserved widths of the fragments do not point to a definition. Also, the discovery context in grave 2 does not indicate the functional position of the artefact – whether it was a diadem(s) or sash(es). The fragments were associated with diadems/sashes of the Glasinac type and currently represent the southernmost find of this type of artefact on the eastern part of the Adriatic coast.[15]

The first appearance of diadems/sashes as a recognizable form of the Glasinac culture in the Early Iron Age was extensively described by B. Čović, who pointed out that they were often richly decorated with engraved geometric motifs. According to him, they appeared in the Glasinac IVb phase and existed in the IVc-1 phase.[16] B. Čović found models for their origin in the diadems found in central Bosnia, where they appeared towards the end of the Late Bronze Age. However, these forms are different from those of the Glasinac culture from the Early Iron Age – they are wider, ranging in length from 40 to 60 cm, with twisted and separated terminals, and are decorated with punched ornamentation (*Punktbuckel*) arranged in different ways.[17] Also, diadems of this form appear in the same area at the beginning of the Early Iron Age,[18] as indicated by

[15] PERKIĆ et al. 2021: 78.

[16] BENAC, ČOVIĆ 1957: 33; ČOVIĆ 1959: 73; 1987a: 596, 609, Fig. 35/5, Pl. LXI/9. Diadems in phase IVc-1 graves: Ilijak XIX/1, Osovo I/1, Rusanovići XXIV (1895): ČOVIĆ 1987a: 609.

[17] ČOVIĆ 1979: 47-48; GAVRANOVIĆ 2011a: 226-227, Fig. 227.

[18] ČOVIĆ 1979: 47-48. There are finds of this diadem type

ulomci iz uništenih grobova iz Gračanice kod Visokog koji su, na osnovi nalaza dvopetljaste fibule s visokom trokutastom nožicom i igle s vratom četvrtastog presjeka, datirani u kasno 8. i rano 7. st. pr. Kr.[19] Ovom se obliku može pripisati i dijadema iz kosturnog groba 3a s grede N. Čegrlja u Donjoj Dolini koji je datiran u drugu polovicu 7. st. pr. Kr. Dijadema je u grobu pronađena u funkcionalnoj poziciji na glavi pokojnice.[20] Dijadema ovog oblika ukrašena iskucavanjem potječe iz Gorice u zapadnoj Hercegovini te se pretpostavlja kako također pripada starijem željeznom dobu.[21]

Istovremeno s dijademama ukrašenim iskucavanjem, početkom starijeg željeznog doba pojavljuju se i dijademe/poramenice glasinačkog tipa koje se od prethodne skupine razlikuju u širini, zatim načinu i motivima ukrašavanja kao i načinu spajanja krajeva pomoću zakovica, iako i kod njih krajevi mogu biti uvijeni i razdvojeni. S obzirom na to da često nedostaju podatci o kontekstu njihovih nalaza, nije uvijek moguće razlikovati dijademe od poramenica, čemu u prilog ide i isti način ukrašavanja. Zbog toga su A. Benac i B. Čović za oba predmeta rabili pojam dijademe.[22] Tom su prilikom istaknuli kako glasinačke dijademe nemaju lokalnih prethodnika iz ranijih faza na Glasincu,[23] zbog čega je B. Čović i pretpostavio kako su mogle nastati pod utjecajem s prostora

Gradine kod Semizovca (MANDIĆ 1933: 3–4, Pl. I/10–11; KOROŠEC 1943: 59, sl. 21–22; ČOVIĆ 1979: 47, bilj. 10).

19 ČOVIĆ 1979: 47, bilj. 12; GAVRANOVIĆ 2011a: 226; 2011b: 59–60, kat. sl. 70/11.

20 TRUHELKA 1904: 85, T. XL/1; GAVRANOVIĆ 2011a: 226, sl. 227/4. S druge strane, na prostoru Podunavlja na početku starijeg željeznog doba zabilježene su višedijelne dijademe sasvim drugog oblika. O načinu njihova nošenja svjedočio bi nalaz ovog tipa dijademe u kosturnom grobu 202 na groblju Vukovar – Lijeva bara iz 8. st. pr. Kr., dok se u grupnoj grobnici 2 na Gomolavi nalazila na glavi djeteta starog 12 godina. Za ove se dijademe smatra kako predstavljaju statusni simbol, pri čemu se idejno povezuju s istovremenim krugom Michalkow-Fokoru (LOŽNJAK DIZDAR 2010: 165–167, sl. 3, Karta 3).

21 TRUHELKA 1902: 12, sl. 11; GAVRANOVIĆ 2011a: 226.

22 BENAC, ČOVIĆ 1957: 33.

23 BENAC, ČOVIĆ 1957: 33.

fragments from destroyed graves in Gračanica near Visoko, dated to the late 8th and early 7th centuries BC based on the grave finds: a double-looped fibula with a high triangular foot and a pin with a square-sectioned neck.[19] This form can also be associated with the diadem from inhumation grave 3a at the ridge of N. Čegrlja in Donja Dolina, dated to the second half of the 7th century BC. In the grave, the diadem was found in its functional position on the head of the dead woman.[20] A diadem of this form, decorated with punching, comes from Gorica in western Herzegovina and is also assumed to belong to the Early Iron Age.[21]

The diadems decorated with punching appeared at the same time – at the beginning of the Early Iron Age – as the diadems/sashes of the Glasinac type, which differ from them in width, in the decoration method and motifs, and in the way the terminals are joined using rivets, although their terminals can also be twisted and separated. Since data on the context of their finds are often missing, it is not always possible to distinguish between diadems and sashes, especially considering their similar decoration methods. Therefore, A. Benac and B. Čović used the term "diadem" for both of them.[22] They also emphasized that Glasinac diadems had no local predecessors from earlier phases at Glasinac,[23] which led

e.g. from Gradina near Semizovac (MANDIĆ 1933: 3-4, Pl. I/10-11; KOROŠEC 1943: 59, Figs. 21-22; ČOVIĆ 1979: 47, fn. 10).

19 ČOVIĆ 1979: 47, fn. 12; GAVRANOVIĆ 2011a: 226; 2011b: 59-60, cat. fig. 70/11.

20 TRUHELKA 1904: 85, Pl. XL/1; GAVRANOVIĆ 2011a: 226, Fig. 227/4. On the other hand, multi-part diadems of a completely different shape from the beginning of the Early Iron Age have been recorded in the Danube basin. The manner of their wear seems to be evidenced by the discovery of this type of diadem in inhumation grave 202 at the cemetery of Vukovar - Lijeva Bara, from the 8th century BC, while the collective tomb 2 at Gomolava included such diadem on the head of a 12-year-old child. These diadems are considered to be a status symbol, conceptually linked to the contemporary sphere of Michalkow-Fokoru (LOŽNJAK DIZDAR 2010: 165-167, Fig. 3, Map 3).

21 TRUHELKA 1902: 12, Fig. 11; GAVRANOVIĆ 2011a: 226.

22 BENAC, ČOVIĆ 1957: 33.

23 BENAC, ČOVIĆ 1957: 33.

srednje Bosne. Razlika je, dakle, primjetna u tehnici i motivima ukrašavanja, odnosno glasinačke dijadame ukrašene su različitim urezanim motivima (npr. šrafirane trake, trokuti i rombovi, malteški križ, kružnica s točkom itd.) organiziranim u složene kompozicije najmlađe faze lokalnog zapadnobalkanskog geometrijskog stila.[24] Bogato ukrašene dijademe/poramenice postaju tako rado nošen predmet koji se izrađivao u lokalnim radionicama. Ipak, ističe se kako za provjeru navedene pretpostavke o njihovu podrijetlu nedostaju nalazi iz grobova datiranih u kraj kasnog brončanog doba na prostoru srednje Bosne.[25] S druge strane, M. Gavranović smatra kako povezanost ovih starijih dijadema s nalazišta u srednjoj Bosni s onima glasinačkog tipa ukrašenima urezanim geometrijskim motivima još nije sasvim jasna.[26] Važno je istaknuti kako se dijademe, ali drukčijih oblika, na Glasincu pojavljuju još tijekom kasnog brončanog doba u fazama IIIa i IIIb,[27] što bi pokazivalo kako je na ovom prostoru postojala duga tradicija nošenja ovog oblika nakita za glavu.

Na osnovi motiva ukrašavanja, N. Lucentini izdvaja tri osnovna tipa dijadema glasinačke kulture iz starijeg željeznog doba te još jedan poseban tip predstavljen samo jednim primjerkom. Prvi tip predstavljaju malobrojne neukrašene dijademe (npr. Ilijak XIX/1; Gosinja XXXVI/5); u drugi tip svrstane su dijademe ukrašene različitim motivima, pri čemu osnovni ukras predstavlja vodoravan niz šrafiranih rombova u središnjoj traci; trećem tipu pripadaju dijademe ukrašene različitim motivima, a osnovni je motiv različito šrafirana traka (npr. motiv niza rombova u negativu); u okviru ovog tipa izdvojena je i varijanta s trakom šrafiranih motiva vučjih zubi. Poseban tip, poznat s jednim primje-

B. Čović to speculate that they may have appeared under the influence of central Bosnia. Therefore, there is a noticeable difference in decorating technique and motifs: the Glasinac diadems are decorated with various engraved motifs (such as hatched bands, triangles and diamonds, Maltese cross, ring-and-dot, etc.) arranged into the complex compositions of the youngest phase of the local West Balkan geometric style.[24] Richly decorated diadems/sashes thus became highly sought-after items that were produced in local workshops. However, it is emphasized that this assumption about their origin cannot be verified because there are no finds from Late Bronze Age graves in central Bosnia.[25] On the other hand, M. Gavranović believes that it is not yet entirely clear how these older diadems from sites in central Bosnia are related to those of the Glasinac type, decorated with engraved geometric motifs.[26] It is important to note that diadems, albeit of different forms, appeared at Glasinac during the Late Bronze Age, in phases IIIa and IIIb,[27] indicating a long tradition of wearing this type of head jewellery in this area.

Based on decoration motifs, N. Lucentini distinguishes three main types of Glasinac culture diadems from the Early Iron Age, as well as one special type with a single representative. The first type consists of a few undecorated diadems (e.g. Ilijak XIX/1, Gosinja XXXVI/5); the second type includes diadems decorated with various motifs, where the basic decoration is a horizontal row of hatched diamonds in the central band; the third type comprises diadems decorated with various motifs, and the main motif is a differently hatched band (e.g. the motif of a row of diamonds in negative); this last type includes the variant with a band of hatched motifs resembling wolf teeth. The special type, having only one represent-

[24] ČOVIĆ 1987a: 640.
[25] ČOVIĆ 1979: 48.
[26] GAVRANOVIĆ 2011a: 226–227.
[27] ČOVIĆ 1981: 115, 121, sl. 1/9, T. IV/10; 1983: 424–425, sl. 28/5.

[24] ČOVIĆ 1987a: 640.
[25] ČOVIĆ 1979: 48.
[26] GAVRANOVIĆ 2011a: 226-227.
[27] ČOVIĆ 1981: 115, 121, Fig. 1/9, Pl. IV/10; 1983: 424-425, Fig. 28/5.

rom, predstavlja dijadema koja uz rubove ima po jednu koso šrafiranu traku (Ilijak III/9).[28] Također, N. Lucentini navodi poznate nalaze s Glasinca, a pojavu dijadema datira od faze I (neukrašena dijadema iz groba Ilijak XIX/1), no smatra ih karakterističnim za fazu II.[29]

Kompleksnije ukrašeni ulomci dijademe/poramenice iz groba 2 na Zmijnoj pripadali bi trećem tipu, dok se ulomci ukrašeni samo vodoravnim linijama ne mogu pripisati ni jednom od izdvojenih tipova prema N. Lucentini. Ovi nalazi, uz mnoge druge sačuvane u cijelosti, pokazuju koliko se podjela na osnovi motiva ukrašavanja čini kompleksnom. Osnovni motiv vodoravnih ukrašenih traka zajednički je velikom broju nalaza, dok se razlike najčešće prepoznaju u ukrašavanju središnje i krajnjih zona. Naime, gotovo svaka cjelovito sačuvana dijadema ukrašena je jedinstvenom kompozicijom, odnosno kao da nema dva ista primjerka. Kako to pokazuju nalazi iz groba 2, od dijadema/poramenica često su sačuvani samo ulomci na osnovi kojih nije moguće pretpostaviti izvoran izgled cjelovitog predmeta. Zbog toga se u osnovi može zadržati podjela N. Lucentini prema osnovnom motivu kojim je ukrašen najveći dio dijademe.

Kako je istaknuto, najveći broj dijadema/poramenica ukrašenih u zapadnobalkanskom geometrijskom stilu zabilježen je na glasinačkom području[30] (sl. 5) te su datirane u faze IVb (725. – 625. pr. Kr.) i IVc-1 (625. – 550. pr. Kr.).[31] Nakovani najbliži nalazi za sada su poznati iz istraživanja tumula iz Gubavice – Vulića ograde kod Mostara, gdje je pronađeno nekoliko ulomaka brončanih dijadema. Nalazište se, na osnovi načina pokopavanja i pronađenih nalaza, pripisuje glasinačkoj kulturi, a nalazi su datirani u faze IVb i IVc-1.[32] U grobu 2 tumula IV, u kojem

[28] LUCENTINI 1981: 87, sl. 5/16–18.
[29] LUCENTINI 1981: 103.
[30] BENAC, ČOVIĆ 1957: 33; ČOVIĆ 1959: 73.
[31] ČOVIĆ 1987a: 596, 609, sl. 35/5, Pl. LXI/9.
[32] ČOVIĆ 1982: 24–26; 1987a: 579, 592, bilj. 91, 609.

ative, is a diadem with a diagonally hatched band along each edge (Ilijak III/9).[28] Also, N. Lucentini mentions the well-known finds from Glasinac, dating the appearance of diadems to phase I (the undecorated diadem from grave Ilijak XIX/1), but considers them characteristic of phase II.[29]

The more intricately decorated fragments of the diadem/sash from grave 2 at Zmijna seem to belong to the third type, while the fragments decorated only with horizontal lines cannot be associated with any of the types identified by N. Lucentini. These finds, along with many others preserved in their entirety, demonstrate how the classification based on decoration motifs appears complex. The basic motif of horizontal decorated bands is common to a large number of finds, while differences are most often recognized in the decoration of the central zone and the end zones. In fact, almost every fully preserved diadem is adorned with a unique composition, and it seems that no two specimens are alike. As shown by the finds from grave 2, diadems/sashes are often preserved only as fragments, making it impossible to speculate about the original appearance of the complete item. Therefore, in general, we can retain Lucentini's classification according to the basic motif that is present on most of the diadem.

As noted, the largest number of diadems/sashes that are decorated in the West Balkan geometric style were found in the Glasinac area[30] (Fig. 5) and dated to phases IVb (725–625 BC) and IVc-1 (625–550 BC).[31] The finds that are most similar to Nakovana are known from the excavations of tumuli at Gubavica – Vulića Ograde near Mostar, where several fragments of bronze diadems were found. The site, based on funerary practices and recovered artefacts, is attributed to the Glasinac culture, and the finds are dated to phases IVb and IVc-

[28] LUCENTINI 1981: 87, Fig. 5/16-18.
[29] LUCENTINI 1981: 103.
[30] BENAC, ČOVIĆ 1957: 33; ČOVIĆ 1959: 73.
[31] ČOVIĆ 1987a: 596, 609, Fig. 35/5, Pl. LXI/9.

su bila pokopana najmanje dva pokojnika, pronađena su tri ulomka dijademe (sl. 3/1). Dva su po sredini ukrašena nizom šrafiranih rombova, dok je treći ulomak ukrašen sa šest urezanih vodoravnih linija, pri čemu je središnja traka najširа.[33] Ovaj ulomak tako odgovara onima iz groba 2 na Zmijnoj. U tumulu IV, u sloju humusa, još su pronađena četiri ulomka dijademe (sl. 3/2), od kojih su tri ukrašena vodoravnim nizom šrafiranih rombova, a na jednom se sačuvala i rupica za zakovicu. Četvrti ulomak ukrašen je okomitim urezanim linijama i na njemu se također nalazi rupica za zakovicu. Za ove se ulomke navodi kako možda potječu iz groba 1 ili 2 tumula IV,[34] s obzirom na to da se i u grobu 1 tumula IV također navodi nalaz malog ulomka dijademe.[35] Još je na površini tumula I pronađen manji neukrašeni ulomak dijademe s dvjema rupicama za zakovice na jednoj i jednom rupicom na drugoj strani (sl. 3/3).[36] Ulomci dijadema iz Gubavice datirani su u fazu 2 starijeg željeznog doba na južnojadranskom području, odnosno u prvu polovicu 7. st. pr. Kr. Za ove se nalaze smatra kako su nastali pod izravnim utjecajem s Glasinca.[37] Ulomak ukrašene dijademe još potječe iz uništene kamene gomile u Glogoviku kod Herceg Novog. Sačuvan je završetak dijademe s uvijenim krajem koja je uz oba ruba ukrašena koso šrafiranom trakom između kojih su okomite trake ili one u obliku znaka X koje su također šrafirane.[38] Prikupljeni nalazi iz ove uništene gomile mogu se pripisati različitim fazama razvoja glasinačke kulture.[39]

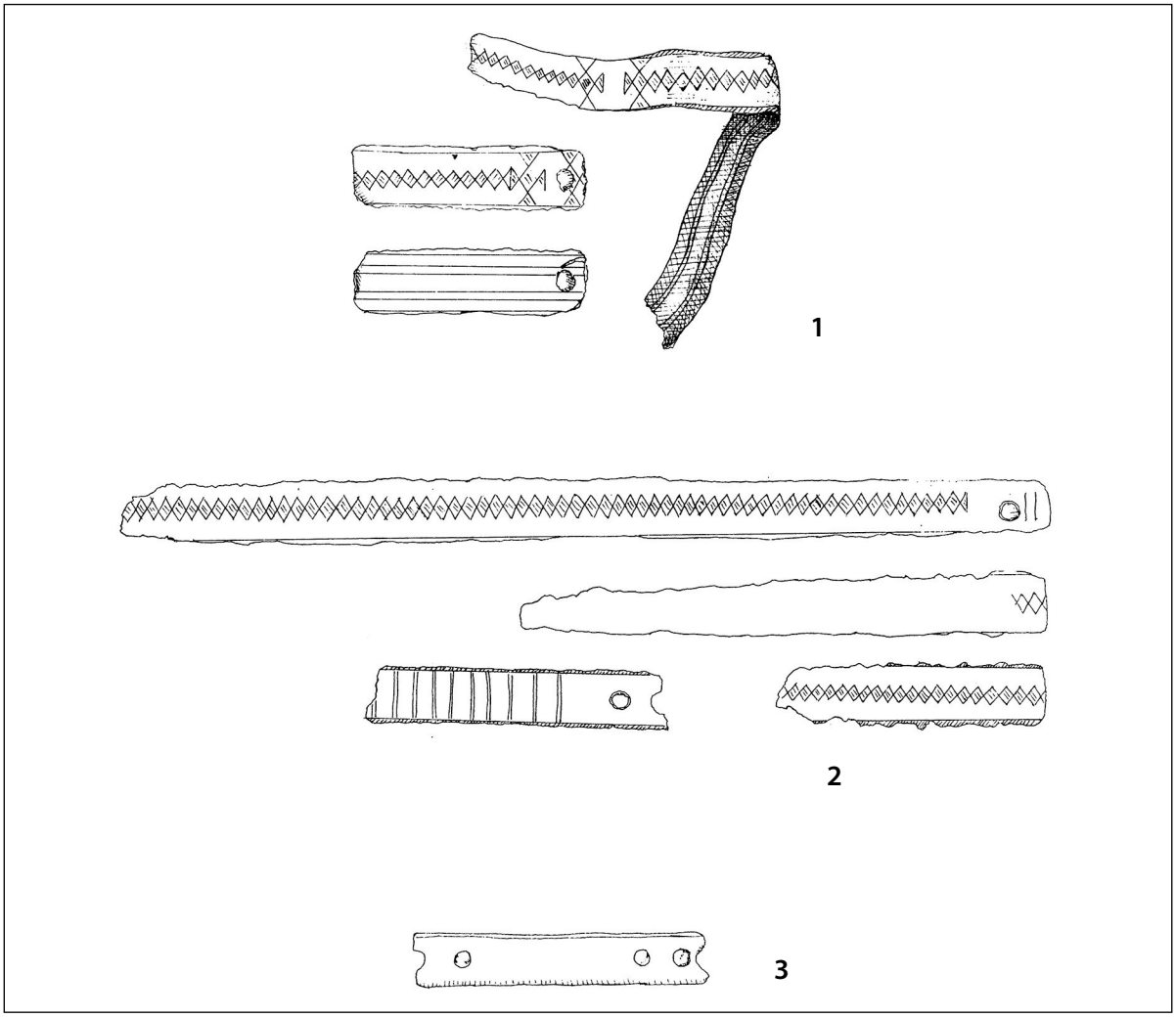
B. Čović ističe kako se dijademe na Glasincu nalaze u grobovima s naoružanjem i bez njega,[40] dok su poramenice pronađene samo u grobovima bez naoružanja, odnosno dio

[33] ČOVIĆ 1982: 18, T. II/6–8.
[34] ČOVIĆ 1982: 19–20, T. IV/4–7.
[35] ČOVIĆ 1982: 18.
[36] ČOVIĆ 1982: 14, T. I/3.
[37] ČOVIĆ 1982: 17–20; MARIJAN 2001: 31–32, 60, sl. 12/12.
[38] PUŠIĆ 1962: 79, T. XI/19; MARIJAN 2001: 33, 60.
[39] ČOVIĆ 1987a: 623.
[40] ČOVIĆ 1987a: 596.

1.[32] Grave 2 of tumulus IV, where at least two individuals were buried, included three fragments of a diadem (Fig. 3/1). Two of them are decorated with a series of hatched diamonds along the middle, while the third fragment is decorated with six engraved horizontal lines, with the central strip being the widest.[33] This fragment thus corresponds to those from grave 2 at Zmijna. In tumulus IV, in the layer of humus, four more fragments of a diadem were found (Fig. 3/2), three of which are decorated with a horizontal series of hatched diamonds, and one has a preserved rivet hole. The fourth fragment is decorated with vertical engraved lines and also features a rivet hole. These fragments are described as perhaps originating from grave 1 or 2 of tumulus IV,[34] since a small fragment of a diadem is also mentioned as a find from grave 1 of tumulus IV.[35] Also, a smaller undecorated fragment of a diadem with two rivet holes on one side and one hole on the other side (Fig. 3/3) was found on the surface of tumulus I.[36] Fragments of diadems from Gubavica are dated to phase 2 of the Early Iron Age in the southern Adriatic region, i.e. to the first half of the 7th century BC. These finds are considered to have been directly influenced by Glasinac.[37] Another fragment of a decorated diadem originates from the destroyed stone mound in Glogovik near Herceg Novi. It has a preserved terminal with a twisted end, decorated with a diagonally hatched strip along both edges; between them are vertical or X-shaped strips, which are also hatched.[38] The collected finds from this destroyed mound can be attributed to different development phases of the Glasinac culture.[39]

B. Čović emphasizes that diadems at Glasinac are found in graves with weaponry

[32] ČOVIĆ 1982: 24-26; 1987a: 579, 592, fn. 91, 609.
[33] ČOVIĆ 1982: 18, Pl. II/6-8.
[34] ČOVIĆ 1982: 19-20, Pl. IV/4-7.
[35] ČOVIĆ 1982: 18.
[36] ČOVIĆ 1982: 14, Pl. I/3.
[37] ČOVIĆ 1982: 17-20; MARIJAN 2001: 31-32, 60, Fig. 12/12.
[38] PUŠIĆ 1962: 79, Pl. XI/19; MARIJAN 2001: 33, 60.
[39] ČOVIĆ 1987a: 623.



Slika 3. *Ulomci brončanih dijadema iz tumula IV i I u Gubavici* (prema: Čović 1982)
Figure 3 *Fragments of the bronze diadems from tumuli IV and I in Gubavica* (after Čović 1982)

su ženske nošnje. Također, ovi se predmeti nalaze u bogato, ali i skromnije opremljenim grobovima. Zaključak počiva na osnovi nalaza s Glasinca prikupljenih krajem 19. i početkom 20. stoljeća,[41] no u tadašnjim istraživanjima manja je pozornost bila posvećena kontekstima i položaju nalaza u grobovima, pa se objavljene grobne cjeline moraju uzeti s oprezom,[42] uostalom, kako to pokazuju i rezultati posljednje analize.[43] Najveći broj dijadema pripisuje se drugom tipu prema podjeli N. Lucentini za koji je kao osnovni motiv karakterističan vodoravan niz šrafira-

and without it,[40] while sashes are found only in graves without weaponry, indicating they are women's costume items. Also, these items are found in both rich and modest graves. This conclusion is based on the finds from Glasinac collected at the end of the 19th and the beginning of the 20th century,[41] but the excavations at that time paid little attention to contexts and positions of finds in graves, so the published grave complexes should be considered with caution,[42] as demonstrated by the results of the latest analysis.[43] The majority of the diadems are associated with Lucentini's second

41 Npr. FIALA 1893: 152, sl. 58 itd.
42 BENAC, ČOVIĆ 1956; 1957.
43 Npr. grob Ilijak III/9: TERŽAN 2021: 48, bilj. 35.

40 ČOVIĆ 1987a: 596.
41 E.g. FIALA 1893: 152, Fig. 58 etc.
42 BENAC, ČOVIĆ 1956; 1957.
43 E.g. grave Ilijak III/9: TERŽAN 2021: 48, fn. 35.

nih rombova, dok se na krajevima ili u sredini pojavljuju i složenije kompozicije, npr. sastavljene od motiva šrafiranog malteškog križa.[44] Trećem tipu pripadaju dijademe kod kojih osnovni motiv predstavlja različito šrafirana traka,[45] poput niza šrafiranih rombova u sredini koji se na vrhu spajaju s po jednim šrafiranim trokutom.[46] Dijademe ovog tipa također su na krajevima i sredini ukrašene kompleksnijim ornamentima. Kao dijademe ukrašene motivom vučjih zubi navode se nalazi obiju dijadema iz groba 5 tumula B na Podilijaku,[47] no samo se jedna od njih može pripisati ovoj varijanti. Kao posebnost navodi se dijadema koja uz rubove ima po jednu koso šrafiranu traku.[48]

Tumuli istraženi tijekom druge polovice 20. stoljeća na Glasincu,[49] s dobro dokumentiranim grobnim cjelinama i položajem nalaza, omogućili su prepoznavanje funkcionalnog položaja dijadema i poramenica koje su bile ukrašene na isti način kao i kombinacija predmeta nošnje i nakita u grobovima.[50] U grobu 2 tumula A na Podilijaku, u kojem je bila pokopana odrasla osoba, na desnom ramenu i s desne strane prsa pronađeni su ulomci definirani kao dijelovi poramenice koja je ukrašena vodoravnim nizom šrafiranih rombova, dok se uz oba ruba nalazi šrafirana traka.[51] U grobu je još pronađena željezna naočalasta fibula. S druge strane, u grobu 3, u kojem je bilo pokopano dijete staro oko 10 godina, oko glave se nalazila dijadema ukrašena na isti način s razmaknutim i uvijenim krajevima koji su izgleda bili spo-

type, characterized by a horizontal series of hatched diamonds as the basic motif, while the ends or the middle can have more complex compositions, such as those composed of hatched Maltese cross motifs.[44] The third type includes diadems where the basic motif is a differently hatched strip,[45] such as a series of hatched diamonds in the middle, each of them merging at the top with a hatched triangle.[46] Diadems of this type also feature more complex ornaments at the ends and in the middle. Both diadems from grave 5 of tumulus B at Podilijak[47] are provided as examples of diadems decorated with motifs of wolf teeth, but only one of them can be associated with this variant. A diadem with a single diagonally hatched strip along each edge is mentioned as a special case.[48]

The tumuli excavated during the second half of the 20th century at Glasinac,[49] with well-documented burial assemblages and the position of the finds, made it possible to identify the functional position of diadems and sashes, which were decorated in the same manner as the combination of the items of clothing and jewellery in the graves.[50] The adult buried in grave 2 of tumulus A at Podilijak had fragments on the right shoulder and the right side of the chest which were defined as parts of a sash decorated with a horizontal row of hatched diamonds, and a hatched strip along both edges.[51] The grave also included an iron spectacle fibula. On the other hand, grave 3, the burial of a child aged around 10 years, included a diadem around the child's head; it was decorated in the same manner, with di-

44 TRUHELKA 1893: 92, sl. 107–108; BENAC, ČOVIĆ 1956: T. III/3; XXIX/4; 1957: T. VI/12; X/11; XIV/13; LUCENTINI 1981: 87; TERŽAN 2021: 48, T. 4/25.

45 BENAC, ČOVIĆ 1956: T. XI/8; 1957: T. XIII/7; LUCENTINI 1981: 87, T. XI/9; ČOVIĆ 1987a: 596, T. LXI/9; TERŽAN 2021: 48, T. 4/13, 33.

46 LUCENTINI 1981: 87, T. VIII/31.

47 LUCENTINI 1981: 87.

48 BENAC, ČOVIĆ 1957: T. XV/14.

49 ČOVIĆ 1979; GOVEDARICA 1978.

50 TERŽAN 2021: 45, sl. 1.

51 ČOVIĆ 1959: 57; TERŽAN 2021: 45, sl. 1, T. 1/22.

44 TRUHELKA 1893: 92, Figs. 107-108; BENAC, ČOVIĆ 1956: Pl. III/3; XXIX/4; 1957: Pl. VI/12; X/11; XIV/13; LUCENTINI 1981: 87; TERŽAN 2021: 48, Pl. 4/25.

45 BENAC, ČOVIĆ 1956: Pl. XI/8; 1957: Pl. XIII/7; LUCENTINI 1981: 87, Pl. XI/9; ČOVIĆ 1987a: 596, Pl. LXI/9; TERŽAN 2021: 48, Pl. 4/13, 33.

46 LUCENTINI 1981: 87, Pl. VIII/31.

47 LUCENTINI 1981: 87.

48 BENAC, ČOVIĆ 1957: Pl. XV/14.

49 ČOVIĆ 1979; GOVEDARICA 1978.

50 TERŽAN 2021: 45, Fig. 1.

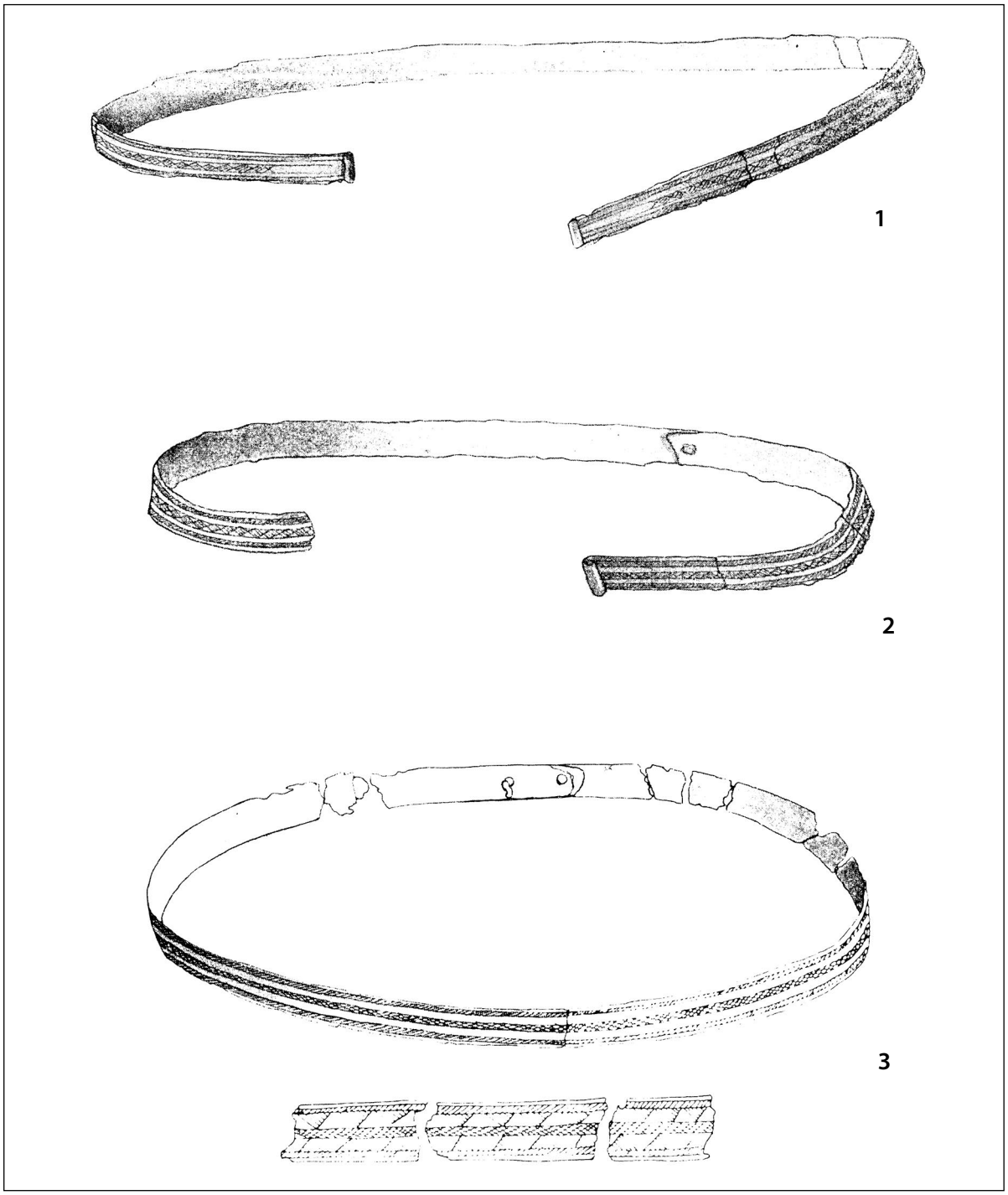
51 ČOVIĆ 1959: 57; TERŽAN 2021: 45, Fig. 1, Pl. 1/22.

jeni nekim organskim materijalom (sl. 4/1).[52] Riječ je o bogato opremljenom grobu iz faze IVb. U grobu 4/5 s dvama pokojnicima, na glavi odraslog pokojnika (grob 5) nalazila se dijadema s uvijenim krajevima koja je također ukrašena središnjim nizom šrafiranih rombova, a uz svaki rub i koso šrafiranom trakom (sl. 4/2). Sačuvana je i jedna zakovica koja spaja dva veća dijela dijademe.[53] Također je riječ o bogato opremljenom grobu faze IVb. Ovi grobovi bili su ukopani u središnji dio tumula oko središnje grobnice. U grobu 5 tumula B bila su pokopana dva djeteta stara 10 – 12 godina koja su oko glave imala dijademu. Obje su dijademe uz rubove ukrašene uskom koso šrafiranom trakom, dok je središnja šira traka ukrašena naizmjenično postavljenim kosim linijama koje čine motiv mreže (sl. 4/3). Na ulomcima slabije sačuvane dijademe, između rubnih i središnje trake, još se nalazi niz šrafiranih trokuta s vrhom usmjerenim prema središnjoj traci (motiv vučjih zubi). Kod bolje sačuvane dijademe dva su dijela spojena zakovicom.[54] Oba su djeteta bila bogatije opremljena, a na osnovi ostalih nalaza grob je datiran u fazu IVb te je bio smješten u središnji dio tumula, u blizini središnje grobnice. Još su u grobu 7 tumula na Crkvini, u kojem su bila pokopana tri odrasla pokojnika, na glavi najdonjeg pokojnika pronađeni ulomci dijademe sa središnjom trakom ukrašenom nizom šrafiranih rombova te uz rubove koso šrafiranom trakom.[55] Ovi nalazi pokazuju kako kombinacije predmeta ženske nošnje i nakita nisu bile uniformne u glasinačkoj kulturi tijekom starijeg željeznog doba, odnosno one su karakteristične prema društvenom statusu žena

verging and twisted terminals that were apparently connected by some organic material (Fig. 4/1).[52] It is a richly equipped grave from phase IVb. In grave 4/5 containing two individuals, the head of one adult (grave 5) had a diadem with twisted ends, also decorated with a central row of hatched diamonds and with an obliquely hatched strip along each edge (Fig. 4/2). There is also a preserved rivet connecting two larger parts of the diadem.[53] Again, it is a richly equipped grave from phase IVb. These graves were buried in the central part of the tumulus around the central tomb. Grave 5 of tumulus B contained two children aged 10–12 years, each wearing a diadem around their heads. Both diadems were decorated with a narrow obliquely hatched strip along the edges, while the central wider strip was decorated with alternately arranged oblique lines forming a mesh motif (Fig. 4/3). The fragments of the more poorly preserved diadem, between the edge strips and the central strip, still feature a series of hatched triangles with the apexes pointing towards the central strip (wolf teeth motif). In the better-preserved diadem, two parts are connected by a rivet.[54] Both children were richly equipped; based on other finds, the grave is dated to phase IVb; it was located in the central part of the tumulus, near the central grave. Also, in grave 7 of a tumulus at Crkvina, which was the burial of three adults, the head of the bottom individual had fragments of a diadem with a central strip decorated with a series of hatched diamonds and an oblique hatched strip along the edges.[55] These finds show that combinations of women's costume and jewellery items were not uni-

[52] ČOVIĆ 1959: 57, T. I/2; TERŽAN 2021: 45, T. 1/1.
[53] ČOVIĆ 1959: 58, T. II/13; TERŽAN 2021: 45, T. 1/17.
[54] ČOVIĆ 1959: 64, T. VII/3, 8; TERŽAN 2021: 45, T. 2/1, 8.
[55] ČOVIĆ 1959: 71. Spominje se i nalaz brončane dijademe u uništenom grobu iz tumula u dvorištu M. Šuke (GOVEDARICA 1978: 20, bilj. 10) u kojem su pronađeni nalazi iz faze Glasinac IIIa (GOVEDARICA 1978: 26). Pitanje jest je li riječ o glasinačkom tipu dijademe ili onom starijem iz kasnog brončanog doba.

[52] ČOVIĆ 1959: 57, Pl. I/2; TERŽAN 2021: 45, Pl. 1/1.
[53] ČOVIĆ 1959: 58; Pl. II/13; TERŽAN 2021: 45, Pl. 1/17.
[54] ČOVIĆ 1959: 64, Pl. VII/3, 8; TERŽAN 2021: 45, Pl. 2/1, 8.
[55] ČOVIĆ 1959: 71. It is also mentioned that a bronze diadem was found in a destroyed grave from a tumulus in the courtyard of M. Šuka (GOVEDARICA 1978: 20, fn. 10), which contained finds from the Glasinac IIIa phase (GOVEDARICA 1978: 26). It is doubtful whether it is a diadem of the Glasinac type or of the older type from the Late Bronze Age.



Slika 4. *Brončane dijademe iz grobova 3 i 5 tumula A i groba 5 tumula B u Podilijaku* (prema: Čović 1959)
Figure 4 *Bronze diadems from graves 3 and 5 in tumulus A and grave 5 in tumulus B in Podilijak* (after Čović 1959)

kao odraz njihove društvene uloge.[56]

Nalazi brončanih dijadema/poramenica poznati su i s Glasincu bliskih područja. Tako je brončana poramenica pronađena na nekropoli pod tumulima Borak brdo – Ždrijelo

[56] TERŽAN 2021: 44, sl. 1–2.

form in the Glasinac culture during the Early Iron Age, but were specific to the social status of females as a reflection of their social role.[56]

Finds of bronze diadems/sashes are also known from areas close to Glasinac. For in-

[56] TERŽAN 2021: 44, Figs. 1-2.

kod Goražda. U kosturnom grobu 1 tumula II pronađeni su ulomci poramenice čiji su dijelovi bili spojeni zakovicama. Uz rubove se nalaze koso šrafirana trake, a u sredini niz šrafiranih rombova. U grobu su još pronađene dvije brončane ukrašene narukvice kao i željezna naočalasta fibula. Grob je datiran u fazu Glasinac IVb.[57] O načinu nošenja poramenice svjedočio bi nalaz iz groba 7 tumula 2 na groblju Kaluđersko polje kod Priboja u kojem je bila pokopana bogato opremljena mlađa žena s brojnim predmetima nošnje i nakita. Čini se kako je poramenica ukrašena uz oba ruba uskom i koso šrafiranom trakom, dok se između njih nalaze motivi šrafiranih malteških križeva ili je cijela površina između rubnih traka ispunjena motivom mreže, odnosno kao niza spojenih rombova od kojih je svaki drugi šrafiran. Grob je datiran u završetak faze Glasinac IVc-1 i početak faze IVc-2, odnosno oko 550. god. pr. Kr.,[58] no vjerojatno ipak na kraj 7. i početak 6. st. pr. Kr. (kraj faze Glasinac IVc-1).

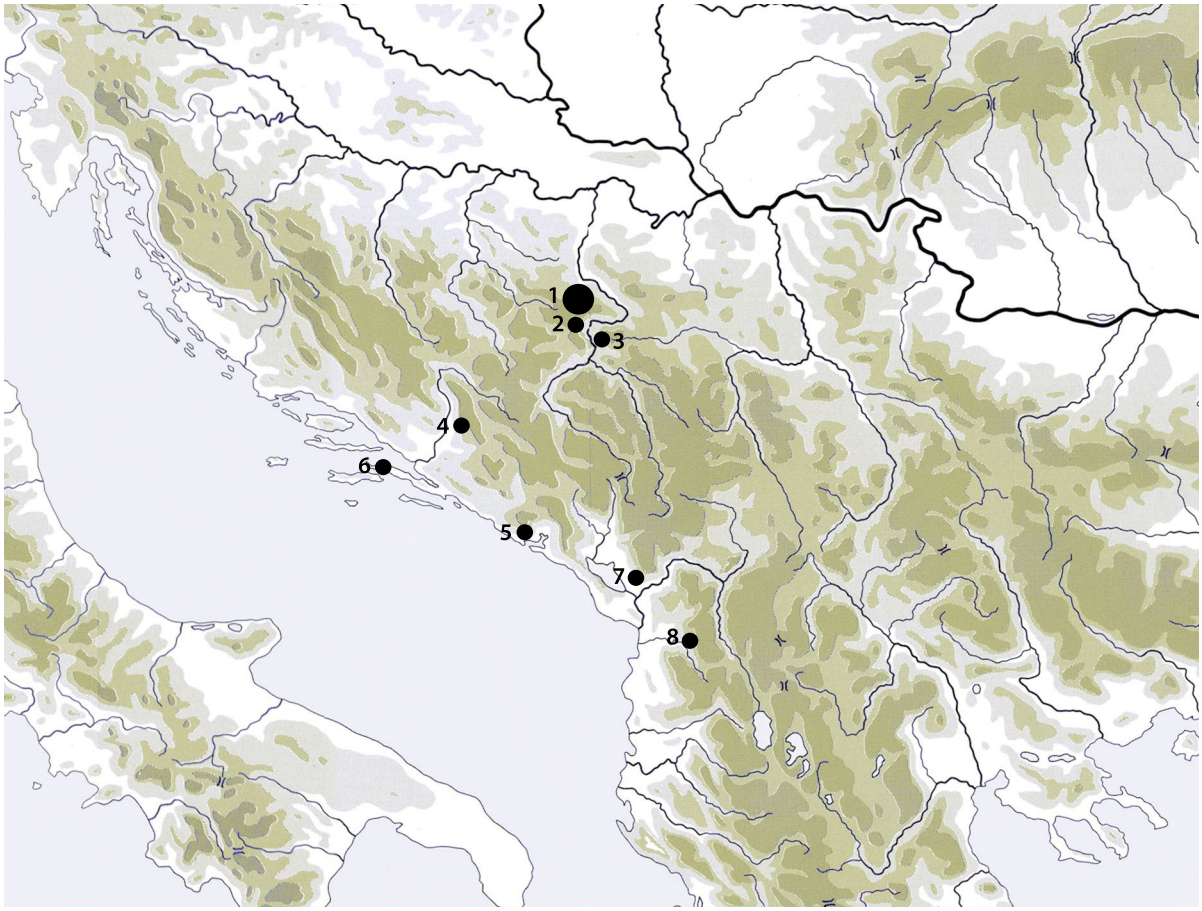
Osim na glasinačkom području te pojedinim nalazištima na južnom dijelu istočnojadranske obale i zaleđa, dijademe glasinačkog tipa pronađene su i na grobljima u sjeverozapadnoj Albaniji (sl. 5).[59] Na groblju Shtoj ulomci dijademe nalazili su se u bogato opremljenom grobu 3 tumula 6. Dijadema je ukrašena trima redovima rombova, središnjim te po jednim uz rubove, dok su krajevi složenije ukrašeni. Grob je datiran u drugu polovicu 8. st. pr. Kr.[60] U oštećenom grobu 5 također su pronađeni ulomci dijademe širine 1,5 cm, čiji su krajevi spojeni zakovicama. Ukrašena je raznolikim motivima raspoređenim u simetrične zone – vodoravni niz šrafiranih rombova, složeno organizirani ukrasi šrafiranih malteških križeva te kružnica s točkom od kojih su neke povezane tan-

[57] KOSORIĆ 1989: 137, 139, 144, T. IV/2.
[58] DERIKONJIĆ 2010: sl. na str. 12.
[59] KURTI 2020: 229, bilj. 40.
[60] KOKA 1990: 34, T. II/8; KURTI 2020: 222, 229, 231, sl. 5c.

stance, a bronze sash was found at the necropolis under the tumuli of Borak Brdo – Ždrijelo near Goražde. Inhumation grave 1 in tumulus II contained fragments of a sash, parts of which were connected by rivets. Along the edges, there are obliquely hatched strips, and in the middle, a series of hatched diamonds. That grave also included two bronze decorated bracelets and an iron spectacle fibula. The grave is dated to the Glasinac IVb phase.[57] How the sash was worn seems to be indicated by the find from grave 7 of tumulus 2 at the Kaluđersko Polje cemetery near Priboj, where a richly equipped young woman with numerous items of costume and jewellery was buried. The sash seems to be decorated with a narrow and obliquely hatched strip along both edges, while there are motifs of hatched Maltese crosses between them, or the entire surface between the edge strips is filled with a mesh pattern, i.e. a series of connected diamonds where empty ones alternate with hatched ones. The grave is dated to the end of the Glasinac IVc-1 phase and the beginning of the IVc-2 phase, around 550 BC,[58] but more probably to the end of the 7th and the beginning of the 6th century BC (the end of the Glasinac IVc-1 phase).

Diadems of the Glasinac type have been found not only in the Glasinac area and certain sites on the southern part of the eastern Adriatic coast and hinterland, but also in cemeteries in northwestern Albania (Fig. 5).[59] On the Shtoj cemetery, fragments of a diadem were found in the richly equipped grave 3 of tumulus 6. The diadem is decorated with three rows of diamonds, one in the centre and one along each edge, while the terminals have more elaborate decorations. The grave is dated to the second half of the 8th century BC.[60] The damaged grave 5 also included fragments of a diadem, 1.5 cm wide, with terminals joined

[57] KOSORIĆ 1989: 137, 139, 144, Pl. IV/2.
[58] DERIKONJIĆ 2010: Fig. on p. 12.
[59] KURTI 2020: 229, fn. 40.
[60] KOKA 1990: 34, Pl. II/8; KURTI 2020: 222, 229, 231, Fig. 5c.



Slika 5. *Rasprostranjenost dijadema/poramenica glasinačkog tipa; 1 područje Glasinca; 2 Borak brdo – Ždrijelo; 3 Kaluđersko polje kod Priboja; 4 Gubavica – Vulića ograde; 5 Glogovik; 6 Nakovana – Zmijna; 7 Shtoj; 8 Burrel* (autor: M. Dizdar)

Figure 5 *Distribution of diadems/sashes of the Glasinac type: 1 Glasinac area; 2 Borak Brdo – Ždrijelo; 3 Kaluđersko Polje near Priboj; 4 Gubavica – Vulića Ograde; 5 Glogovik; 6 Nakovana – Zmijna; 7 Shtoj; 8 Burrel* (made by M. Dizdar)

gentama.[61] Još su u grobu 8 tumula 2, koji nije sadržavao kosturne ostatke, pronađeni ulomci dijademe s krajevima koji se sužavaju. Uz rubove se nalazi uska traka s kosim šrafiranjem, a između su različito ukrašene zone – motivom mreže, kružnica s točkom spojenim tangentama ili spojenim šrafiranim rombovima i trokutima. Nalaz je datiran na kraj faze IVc-1.[62] Na groblju Burrel, u bogato opremljenom grobu 4 koji se nalazio u sredini tumula III, nalazila se dijadema čiji su krajevi spojeni zakovicom. Rubne trake ukrašene su kosim šrafiranjem, dok je središnja traka ukrašena motivom mreže. U središ-

by rivets. It is decorated with various motifs arranged in symmetrical zones – a horizontal series of hatched diamonds, complexly organized decorations of hatched Maltese crosses, and ring-and-dot motifs, some of them connected by tangents.[61] Also, grave 8 of tumulus 2, which did not contain bone remains, included fragments of a diadem with tapering terminals. Along the edges, there is a narrow strip with oblique hatching; inside, there are differently decorated zones: mesh motifs, rings-and-dots connected by tangents, or interconnected hatched diamonds and triangles. The find is dated to the end of phase IVc-1.[62]

[61] KOKA 1990: 34–35, sl. 7, Pl. IV/53.
[62] JUBANI 1992: 27, 39, T. II/3.

[61] KOKA 1990: 34-35, Fig. 7, Pl. IV/53.
[62] JUBANI 1992: 27, 39, Pl. II/3.

njoj zoni dijademe nalaze se metopno organizirani složeni motivi.[63] Grob se fibulama s nožicom u obliku beotskog štita datira u fazu Glasinac IVc-1. Kako ovi nalazi pokazuju, ovi su predmeti nošeni češće oko glave kao dijademe, no ima i onih u funkciji poramenice, a razlikuju se na osnovi promjera. Na grobljima u sjeverozapadnoj Albaniji dijademe/poramenice datirane su u 8. – 7. st. pr. Kr.,[64] odnosno primjećuje se kako nedostaju u grobovima datiranim od druge četvrtine 6. st. pr. Kr.[65]

Nalazi dijadema poznati su i na nekim drugim grobljima u južnoj Albaniji, no one su ukrašene iskucavanjem raznolikih i kompleksno organiziranih motiva. Na groblju Barç ovako ukrašene dijademe pronađene su u tumulu I u grobovima 19, 34 i 78,[66] dok su na groblju Patos pronađene u grobovima 63 i 68 i datirane su u kasno brončano doba.[67] U grobu 9 tumula s groblja Dukat, u kojem su bila pokopana dva pokojnika, od kojih jedan s kopljem, pronađena je dijadema ukrašena iskucavanjem. Na jednom dijelu spojenom zakovicama nalaze se i tri motiva urezane koncentrične kružnice.[68] I s groblja Shtikës potječe dijadema ukrašena iskucanim motivima – uz rubove se nalaze dva niza sitnih iskucanih ukrasa, a u sredini su složeno organizirane kompozcije koje se ponavljaju.[69]

Za proučavanje dijadema važni su rezultati istraživanja tumula Lofkënd u južnoj Albaniji koji je datiran u kasno brončano i starije željezno doba. Dijademe su pronađene u četirima grobovima koji su bili među najbogatije opremljenim, a u njima su bili pokopani mlada žena ili djeca. One su se nalazile na glavama pokojnica, pri čemu su tri groba datirana u kasno 12. – 11. st. pr. Kr., a jedan u

63 KURTI 1983: 91, 96, 103, T. I/19; 2020: 222, 230, sl. 4a.
64 KURTI 1983: 96; KOKA 1990: 49.
65 Vidjeti: KURTI 2020: sl. 8–10.
66 ANDREA 1985: 91, 23, T. IV/2; 25–26, T. V/2; 32–33, T. IX/1.
67 KORKUTI 1981: 44, T. VII.
68 CEKA 1974: 143, T. VI.
69 ALIU 1996: 63, 76, T. IV/1.

At the Burrel cemetery, the richly equipped grave 4 in the centre of tumulus III included a diadem with terminals connected by a rivet. The edge strips are decorated with oblique hatching, while the central strip is decorated with a mesh motif. In the central zone of the diadem, there are complex motifs arranged in metopes.[63] Based on fibulae with a foot in the shape of a Boeotian shield, the grave is dated to phase Glasinac IVc-1. As these finds show, these items were more commonly worn around the head as diadems, but there are also those serving as sashes, which are distinguished by their diameter. Diadems/sashes from northwest Albanian cemeteries are dated to the 8th–7th centuries BC;[64] they are notably absent from graves dated from the second quarter of the 6th century BC.[65]

Diadems were also found at other cemeteries in southern Albania, but they are decorated with a variety of hammered and intricately arranged motifs. At the Barç cemetery, diadems decorated in this way were found in tumulus I in graves 19, 34, and 78;[66] at the Patos cemetery, they were found in graves 63 and 68 and dated to the Late Bronze Age.[67] Grave 9 of the tumulus from the Dukat cemetery – the burial of two individuals, one of them with a spear – included a diadem decorated with hammering. One part, connected by rivets, has three motifs of engraved concentric circles.[68] Also, a diadem from the Shtikës cemetery is decorated with hammered motifs: two rows of tiny hammered ornaments along the edges and intricately arranged compositions that repeat in the middle.[69]

The results of the excavations of tumuli in Lofkënd in southern Albania, dated to the Late Bronze Age and the Early Iron Age, are

63 KURTI 1983: 91, 96, 103, Pl. I/19; 2020: 222, 230, Fig. 4a.
64 KURTI 1983: 96; KOKA 1990: 49.
65 See: KURTI 2020: Figs. 8-10.
66 ANDREA 1985: 91, 23, Pl. IV/2; 25-26, Pl. V/2; 32-33, Pl. IX/1.
67 KORKUTI 1981: 44, Pl. VII.
68 CEKA 1974: 143, Pl. VI.
69 ALIU 1996: 63, 76, Pl. IV/1.

9. st. pr. Kr.[70] U grobu XVII, s pokopom dva djeteta, dijadema se nalazila na glavi starijeg djeteta (7 ± 2 godine). Uz rubove je ukrašena urezanim linijama, dok se u središnjem dijelu nalaze još dvije vodoravne urezane linije. Na sredini je ukras dviju okomitih linija koje čine metopu s urezanim ukrasom motiva riblje kosti s dodatnim šrafiranjem. Čini se da postoje dodatne urezane vertikale i dijagonale linije kod jednog kraja dijademe, pri čemu su krajevi, izgleda, bili spojeni tekstilom.[71] U grobu XVIII bilo je pokopano troje djece. Dijete (4 ± 1 godine) na glavi je imalo neukrašnu dijademu sačuvanu u ulomcima, dok su krajevi bili spojeni dvjema zakovicama.[72] U grobu XXI bila su pokopana dva pokojnika – muškarac star 20 – 25 godina i žena starosti od 15 ± 3 godine koja je na glavi imala dijademu. Dijadema je sačuvana u ulomcima, no bila je veće širine od prethodno spomenutih te je ukrašena urezanim ukrasom.[73] U najmlađem grobu LXX bila je pokopana bogato opremljena žena adolescentske dobi stara 17 – 20 godina, uz raniji ukop u isti grob muškarca u dobi > 45 godina. Dijadema je bila na glavi pokojnice, široka je te bogato ukrašena različitim urezanim motivima. Uz svaki rub nalazi se niz sitnih iskucanih ukrasa, a prepoznaju se i okomito postavljeni nizovi koji razdvajaju zone. Osnovni ukras predstavljaju tri vodoravna niza višestrukih cik-cak linija, zatim slijedi zona s cik-cak višestrukim linijama u sredini, dok su u rubnim zonama cik-cak trake u negativu (s obiju strana motivi šrafiranih trokuta, odnosno motiv vučjih zubi). Dijadema je ukrašena i složeno organiziranim kompozicijama s već spomenutim motivima, uz pojavu motiva kružnica izvedenih sitnim iskucanim kružnicama koje su još dodatno iznutra šrafirane. Za dijademu su bila pričvršćena dva potkovičasta okova s uvijenim

[70] PAPADOPOULOS 2010: 33–35.
[71] PAPADOPOULOS 2010: 37, sl. 4.
[72] PAPADOPOULOS 2010: 37, sl. 7.
[73] PAPADOPOULOS 2010: 40–41, sl. 10.

important for the study of diadems. Diadems were found in four of the most richly equipped graves; a young woman or children were buried in those graves. The diadems were on their heads, with three graves dated to the late 12th and the 11th century BC, and one to the 9th century BC.[70] In grave XVII, which was the burial of two children, the diadem was found on the head of the older child (7 ± 2 years old). Along the edges, it is decorated with engraved lines, while the central part has two more horizontal engraved lines. In the middle, there is a decoration of two vertical lines forming a metope with an engraved ornament – a fish bone motif with additional hatching. There appear to be additional engraved vertical and diagonal lines at one terminal of the diadem, and the terminals seem to have been connected by textile.[71] In grave XVIII, three children were buried. One child (4 ± 1 years old) had the fragments of an undecorated diadem on its head, with the terminals connected by two rivets.[72] Grave XXI contained two individuals – a man aged 20–25 years and a woman aged 15 ± 3 years, who wore a diadem on her head. The diadem, preserved in fragments, was wider than the ones we already mentioned; it was decorated with an engraved ornament.[73] The youngest grave, LXX, contained a richly equipped adolescent woman aged 17–20 years alongside an earlier burial of a man aged >45 years in the same grave. The woman had a diadem on her head; it is wide and elaborately decorated with various engraved motifs. Along each edge, there is a row of small punched decorations, and there are traces of vertically arranged rows separating the zones. The basic decoration consists of three horizontal series of multiple zigzag lines, followed by a zone with multiple zigzag lines in the centre; in the edge zones, there are negative zigzag bands (with motifs of hatched triangles or wolf tooth motifs on both sides). The diadem is also dec-

[70] PAPADOPOULOS 2010: 33-35.
[71] PAPADOPOULOS 2010: 37, Fig. 4.
[72] PAPADOPOULOS 2010: 37, Fig. 7.
[73] PAPADOPOULOS 2010: 40-41, Fig. 10.

krajevima, dok su krajevi dijademe spojeni dvjema zakovicama.[74]

Nalazi iz tumula u Lofkëndi potvrđuju pretpostavke kako se brončane dijademe na grobljima u Albaniji pojavljuju tijekom kasnog brončanog i starijeg željeznog doba, a ukrašene su iskucavanjem ili urezivanjem.[75] Slične dijademe pronađene su i na grobljima u Epiru te grčkom dijelu Makedoniji gdje se datiraju u 9. st. pr. Kr. Također, poznate su s drugih nalazišta u Grčkoj kao npr. u svetištu u Olimpiji gdje su možda bile posvećene Heri, a gdje su pronađene i figurice od terakote s prikazom trake (dijademe) za glavu.[76] Do sada su najdetaljnije analizirane dijademe pronađene na groblju Vergina gdje se u grobovima žena i djece pojavljuju dva tipa dijadema – šire dijademe ukrašene iskucavanjem, dok drugi tip predstavljaju one uže koje su većinom bile neukrašene, a koje su i najbrojnije; za drugu varijantu užih dijadema karakteristični su jednostavni redovi iskucanih ukrasa. Nalazile su se na glavama pokojnica, no katkad su mogle biti položene i pokraj tijela. Za ove se dijademe smatra, osim da su bile nakit, da imaju i oznaku insignije.[77] Šire dijademe ukrašene iskucavanjem na groblju Vergina kao i na ostalim grobljima datirane su u 900. – 850. god. pr. Kr., dok su one uže mlađe i pripadaju arhajskom razdoblju, odnosno 7. st. pr. Kr. Tom se prilikom ovom tipu pripisuju, osim dijadema s grčkih i albanskih nalazišta, i one s Glasinca.[78] Glasinačke su dijademe, ipak, drukčije i pripadaju posebnom tipu s prepoznatljivim ukrašavanjem u zapadnobalkanskom geometrijskom stilu. Bliske spomenutim dijademaorated with complex compositions featuring the aforementioned motifs, along with circular motifs made of small punched circles which are hatched on the inside. The diadem had two attached horseshoe-shaped fittings with twisted ends, and its terminals were connected by two rivets.[74]

The finds from the tumuli in Lofkënd confirm the assumptions that bronze diadems, decorated by punching or engraving, appeared in Albanian cemeteries during the Late Bronze Age and the Early Iron Age.[75] Similar diadems, dated to the 9th century BC, have been found in cemeteries in Epirus and the Greek region of Macedonia. They are also known from other sites in Greece, such as the sanctuary in Olympia, where they may have been dedicated to Hera; the sanctuary included terracotta figurines depicting headbands (diadems).[76] The best-analysed diadems have been found in the cemetery of Vergina, where two types of diadems appear in the graves of women and children: broad diadems decorated by punching, and narrower diadems which are the most numerous and mostly undecorated. The narrower diadems are characterised by simple series of punched decorations. They were found on female heads, but sometimes they were placed beside the body. These diadems are believed to have been not only jewellery, but also insignia.[77] Broader diadems decorated by punching, in Vergina and other cemeteries, are dated to 900–850 BC, while the narrower ones are younger and belong to the Archaic period (the 7th century BC). This type is associated with the diadems from Glasinac along with diadems from Greek and Albanian sites.[78] However, the

74 PAPADOPOULOS 2010: 41–43, sl. 13.

75 PAPADOPOULOS 2010: 45, bilj. 15. O grčkoj riječi koja se vjerojatno upotrebljavala za ove predmete koji su se nosili oko glave, pri čemu je διάδημα malo vjerojatna, a najvjerojatniji izraz je στεφάνη koji je povezan i s pojmom *marriage wreaths*: PAPADOPOULOS 2010: 50–51.

76 PAPADOPOULOS 2010: 33, 45–46.

77 RADT 1974: 132–133, T. 40/1; BRÄUNING, KILIAN-DIRLMEIER 2013: 65–66, Tab. 33, sl. 167/200–201.

78 RADT 1974: 133; BRÄUNING, KILIAN-DIRLMEIER 2013: 66–67, 325, sl. 13, Popis 14.

74 PAPADOPOULOS 2010: 41-43, Fig. 13.

75 PAPADOPOULOS 2010: 45, fn. 15. For the Greek word that was probably used for these objects worn around the head, with διάδημα being unlikely and the most probable term being στεφάνη, which is also related to the notion of marriage wreaths, see: PAPADOPOULOS 2010: 50-51.

76 PAPADOPOULOS 2010: 33, 45-46.

77 RADT 1974: 132-133, Pl. 40/1; BRÄUNING, KILIAN-DIRLMEIER 2013: 65-66, Tab. 33, Fig. 167/200-201.

78 RADT 1974: 133; BRÄUNING, KILIAN-DIRLMEIER 2013: 66-67, 325, Fig. 13, List 14.

ma ukrašenim iskucavanjem jesu i nalazi s prostora Sjeverne Makedonije. U grobu 34 na groblju Dedeli, na glavi bogato opremljene pokojnice, pronađena je dijadema koja po sredini ima vodoravno izbočeno rebro. Grob je datiran u rano 6. st. pr. Kr.[79] Još je u bogatom grobu 9 na groblju Marvinci – Lisičin dol bila pokopana pokojnica s dijademom na glavi koja je ukrašena dvama nizovima sitnih iskucanih izbočenja. Grob se na osnovi fibula datira u kraj 7. i početak 6. st. pr. Kr.[80] Dakle, ovi su nalazi mlađi od onih s nalazišta u Albaniji i Grčkoj.

Ovi nalazi s juga Balkana, u Albaniji i Grčkoj, otvaraju i zanimljivo pitanje nastanka dijadema glasinačkog tipa. Već je M. Gavranović izrazio sumnju o utjecaju dijadema kasnog brončanog doba s prostora srednje Bosne ukrašenih iskucanim motivima,[81] kako je to predlagao B. Čović.[82] Razlike se, osim u načinu ukrašavanja, mogu prepoznati i u oblicima ovih dvaju tipova dijadema. Glasinačkom tipu oblikom su mnogo sličnije one uske kakve se pojavljuju na groblju Vergina gdje su također ukrašene iskucavanjem. Zbog toga se glasinački tip dijademe možda može promatrati kao hibridni u kojem je združen oblik s juga s lokalnim dekorativnim stilom. Na utjecaje s juga upućivalo bi i spajanje dijelova pomoću zakovica. U svakom slučaju, dijademe se mogu smatrati važnim dijelom vizualnog identiteta djevojčica i žena koje su ih nosile te su vjerojatno bile i oznaka statusa u zajednici, kako to pokazuju nalazi iz bogatije opremljenih grobova iz tumula s Podilijaka. Sličan zaključak iznesen je i za dijademe različitih oblika kakve su poznate na velikom prostoru od Podunavlja pa sve do juga Balkana.

Jednu od prepoznatljivosti dijadema glasinačkog tipa predstavlja i njihovo ukrašavanje

[79] MITREVSKI 1991: 26, 65, sl. 33, T. X/4.
[80] VIDESKI 1999: 93–94, T. II/20.
[81] GAVRANOVIĆ 2011a: 226–227.
[82] ČOVIĆ 1979: 47–48.

Glasinac diadems are different: they belong to a distinct type with recognizable decoration in the Western Balkan geometric style. Finds from the area of North Macedonia are similar to the mentioned diadems decorated by punching. In grave 34 at the Dedeli cemetery, a diadem on the head of a richly equipped female had a protruding horizontal rib in the middle. The grave is dated to the early 6th century BC.[79] Also, in the rich grave 9 at the cemetery of Marvinci – Lisičin Dol, the diadem found on a female head was decorated with two rows of tiny punched protrusions. Based on fibulae, the grave is dated to the end of the 7th and the beginning of the 6th century BC.[80] Therefore, these finds are younger than those from sites in Albania and Greece.

These finds from the southern Balkans, in Albania and Greece, also raise the interesting question of the origin of Glasinac-type diadems. M. Gavranović expressed early doubts about the influence of Late Bronze Age diadems decorated with punched motifs from central Bosnia,[81] as had been suggested by B. Čović.[82] These two types of diadems differ in shapes and decoration methods. The shape of the Glasinac type is much more similar to the narrow punch-decorated diadems found at the Vergina cemetery. Therefore, the Glasinac-type diadems might be considered as hybrids combining the southern shape with the local decorative style. Another possible southern influence is the use of rivets to join parts. In any case, diadems can be seen as an important part of the visual identity of girls and women who wore them, and were likely a status symbol in the community, as indicated by the finds from richly equipped graves in tumuli at Podilijak. A similar conclusion has been drawn for diadems of various shapes known across the vast area from the Danube basin to the southern Balkans.

One of the distinctive features of Glasinac-

[79] MITREVSKI 1991: 26, 65, Fig. 33, Pl. X/4.
[80] VIDESKI 1999: 93-94, Pl. II/20.
[81] GAVRANOVIĆ 2011a: 226-227.
[82] ČOVIĆ 1979: 47-48.

u zapadnobalkanskom geometrijskom stilu,[83] a u odnosu na one s nalazišta na jugu Balkana koje su ukrašene iskucavanjem, uostalom kao i već spomenute dijademe iz kasnog brončanog doba u sjevernoj Bosni. Ukrašavanje u ovom stilu pojavljuje se na predmetima iz grobova na Glasincu koji su datirani u 14. i 13. st. pr. Kr., pri čemu je najvažniji motiv spirale.[84] Slično se ukrašavanje različitim geometrijskim motivima pojavljuje na keramičkim oblicima u srednjoj Bosni od kraja 12. i tijekom 11. st. pr. Kr. te se smatra kako je riječ o stilu koji na ovom prostoru nema prethodnika. Urezivanje različitih motiva nalazi se i na brončanim predmetima lokalne i regionalne rasprostranjenosti koji su većinom datirani u 10. i 9. st. pr. Kr., a mogu se podijeliti na tri osnovne grupe. Najmlađa faza stila odgovara početku starijeg željeznog doba i traje u 8. – 7. st. pr. Kr., kada se datiraju i dijademe ukrašene na ovaj način. Ovaj prepoznatljiv dekorativni stil nestaje u kasnom 7. st. pr. Kr. te se prije toga pojavljuju shematizirani prikazi kao i motivi jednostavnih linija, šrafiranih trokuta i rombova.[85] Upravo su na ovakav način ukrašene i dijademe iz Nakovane, Gubavice ili Glogovika.

S obzirom na to da nije poznato tko je nosio dijademe pronađene na ovim nalazištima, odgovore možda mogu ponuditi posljednje analize grobova na Glasincu u kojima su pronađene. B. Teržan iznosi zanimljivu ideju kako su u bogatije opremljenim grobovima s raznovrsnim setovima predmeta nošnje i nakita, koji također uključuju dijadame, bile pokopane djevojke pripremljene za udaju, zatim mladenke i tek udane žene. Smatra se kako se u grobovima udanih žena i udovica, odnosno starijih pokojnica, pojavljuju skromnije kombinacije. Antropološka analiza pokojnika iz grobova iz tumula A i B na Podilijaku pokazuje kako se dijademe nalaze

type diadems is their decoration in the West Balkan geometric style,[83] in contrast to those from sites in the southern Balkans decorated with punching, as well as the aforementioned Late Bronze Age diadems from northern Bosnia. This decorating style appears on objects from Glasinac graves dated to the 14th and 13th centuries BC, with the spiral motif being the most important.[84] Similar decoration with various geometric motifs appears on ceramic forms in central Bosnia from the end of the 12th and in the 11th century BC; it is considered a style with no predecessors in this area. Engraving of various motifs is also found on bronze objects of local and regional distribution, mostly dated to the 10th and 9th centuries BC, which can be divided into three main groups. The youngest phase of the style corresponds to the beginning of the Early Iron Age, the 8th and 7th centuries BC, which is also the dating of diadems decorated in this way. This distinctive decorative style disappears in the late 7th century BC, after the appearance of schematic depictions and motifs of simple lines, hatched triangles, and diamonds.[85] Diadems from Nakovana, Gubavica, or Glogovik are also decorated in this way.

It is unknown who wore the diadems found at these sites, but this may be answered by the latest analyses of the graves at Glasinac that contained the diadems. B. Teržan puts forward an interesting idea: richer graves with diverse costume and jewellery sets, which also include diadems, were the burials of girls prepared for marriage, brides, and recently married women. It is believed that the graves of married women and widows, or older deceased women, contain more modest combinations. Anthropological analysis of the individuals from graves in tumuli A and B at Podilijak shows that diadems are found in graves where children or adults were buried. A possible explanation proposed for the

[83] ČOVIĆ 1984.
[84] GAVRANOVIĆ 2020: 432–434, sl. 2.
[85] GAVRANOVIĆ 2020: 437–444, sl. 7; 9–10.

[83] ČOVIĆ 1984.
[84] GAVRANOVIĆ 2020: 432-434, Fig. 2.
[85] GAVRANOVIĆ 2020: 437-444, Figs. 7; 9-10.

u grobovima u kojima su bila pokopana djeca ili odrasle osobe. Nalazi iz dječjih grobova pokušavaju se objasniti tako da je možda riječ o djevojkama obećanim za udaju već pri rođenju ili u ranom djetinjstvu koje su dijademu skidale nekoliko dana nakon vjenčanja, za što se pronalaze etnološke poveznice na dinarskom prostoru.[86] Zanimljivo, slična ideja predložena je i za nalaze dijadema na groblju Lofkëndi, odnosno dijademe su nosile djevojke koje još nisu stupile u brak te su položene u grob opremljene kao mladenke vjenčane za smrt.[87] Ovakav zaključak, s obzirom na kontekst otkrića, nije moguć za nalaz iz Nakovane, međutim nošenje dijademe, uz rodno, vjerojatno je imalo i određeno simboličko značenje.

OSTALI NALAZI IZ GROBA 2

U grobu 2 na Zmijnoj pronađen je spiralno savijeni predmet s trima navojima okruglog presjeka. U sredini je blago zadebljan, dok su krajevi suženi i završavaju u šiljak (T. 2/1). S obzirom na promjer, može biti riječ o narukvici koja je mogla pripadati djetetu ili sljepoočničarki kao ukrasu za kosu.

Usporedba je poznata iz Rakitnog u Hercegovini odakle potječu spiralno savijeni predmeti sličnog oblika s trima navojima i šiljastim krajevima koji su promjera 4 do 5 cm. Ovi su nalazi definirani kao ukrasi za kosu.[88] Sličnih je dimenzija, samo s nešto većim brojem navoja, i nekoliko predmeta iz Gruda za koje se navodi kako može biti riječ o nakitu ili narukvicama.[89] U uništenom tumulu na nalazištu Potočani kod Livna pronađeni su ulomci sličnih predmeta. Kod jednog su se sačuvala dva spiralna navoja, a smatra se kako je riječ, s obzirom na promjer, o dječjim

[86] TERŽAN 2021: 51–53, sl. 3/1–2.
[87] PAPADOPOULOS 2010: 33, 47–49, Tab. 1.
[88] RADIMSKÝ 1893: 175, sl. 9.
[89] FIALA 1899: 149, sl. 9–10.

finds from children's graves is that those children may have been girls given in marriage at birth or in early childhood, who would remove the diadem a few days after the wedding, as this has ethnological parallels in the Dinaric region.[86] Interestingly, a similar idea has been proposed for the finds of diadems at the Lofkënd cemetery: that the diadems were worn by girls and children who had not yet entered into marriage and were laid in the grave equipped as brides married to death.[87] Such a conclusion, given the context of the discovery, is not applicable to the find from Nakovana; however, wearing the diadem probably had both symbolic and gender significance.

OTHER FINDS IN GRAVE 2

Grave 2 at Zmijno contained a spirally twisted object with three round-sectioned coils. It slightly expands in the middle, while the terminals taper to a point (Pl. 2/1). Given its diameter, it could have been a bracelet belonging to a child or a temple ring as hair ornament.

There is a parallel from Rakitno in Herzegovina: spiral-twisted objects of similar shape with three coils and pointed terminals measuring 4 to 5 cm in diameter. These finds are defined as hair ornaments.[88] Several objects from Grude, of similar dimensions but with more coils, are mentioned as possibly being jewellery or bracelets.[89] Fragments of similar objects were found in a destroyed tumulus at the Potočani site near Livno. One fragment includes two preserved spiral coils; based on the diameter, they are believed to be children's bracelets.[90] A grave with several individuals at the Vašarovine site near Livno, dated to the second half of the 5th and the first half of the 4th century BC, included an object com-

[86] TERŽAN 2021: 51-53, Fig. 3/1-2.
[87] PAPADOPOULOS 2010: 33, 47-49, Tab. 1.
[88] RADIMSKÝ 1893: 175, Fig. 9.
[89] FIALA 1899: 149, Figs. 9-10.
[90] MANDIĆ 1937: 5, Pl. I/2, 15; II/3.

narukvicama.[90] Iz grobnice s više pokojnika na nalazištu Vašarovine kod Livna, koja je datirana u drugu polovicu 5. i prvu polovicu 4. st. pr. Kr., nakitu je pripisan predmet sastavljen od dvaju brončanih spiralnih svitaka i masivnog brončanog obruča. Pretpostavlja se kako je riječ o nakitu za kosu.[91] Spiralnom savijenom predmetu iz groba 2 na Zmijnoj dijelom bi odgovarale tanje narukvice s blago prebačenim krajevima koje se smatraju oblikom duljeg trajanja, od faze Glasinac IVa pa sve do IVc-2.[92] N. Lucentini narukvice s blago prebačenim krajevima izdvaja kao tip A koje mogu biti ukrašene skupinama poprečnih žljebova, dok im je presjek konveksan ili ovalan. One sa šiljastim krajevima izdvaja kao varijantu 1.[93] Ove se narukvice jasno razlikuju od različitih oblika spiralnih narukvica koje su sastavljene od mnogo većeg broja navoja.[94]

S obzirom na promjer spiralno savijenog predmeta iz groba 2 kao i navedene usporedbe, nije moguće zaključiti je li riječ o dječjoj narukvici ili o nakitu za kosu.

Iz groba 2 potječe praporac koji je sačuvan u ulomcima. Na vrhu se nalazi okrugla ušica koja se nastavlja u produžetak rombičnog presjeka iz kojeg izlazi košarica jajolikog oblika s deset rešetki i devet proreza. Unutar košarice nalazila su se najmanje četiri kuglasta zrna. S donje strane košarice nalazi se kraće cilindrično izbočenje ili nožica kružnog presjeka (T. 2/2).

S obzirom na broj okomitih rešetki koji može biti različit (od pet do dvanaest), N. Lucentini izdvaja tri varijante praporaca tipa B čija nožica, za razliku od praporca iz groba 2, završava stožastim zadebljanjem te ima oblik obrnutog slova T. Praporac iz groba 2 može se pripisati varijanti 3 za koju je karakposed of two bronze spiral coils and a massive bronze ring, described as a piece of jewellery. It is assumed to be a hair ornament.[91] The spiral-twisted object from grave 2 at Zmijna partially corresponds to thin bracelets with slightly overlapping terminals, which are considered a long-period form existing in the Glasinac phases from IVa to IVc-2.[92] N. Lucentini distinguishes bracelets with slightly overlapping terminals as type A; they have a convex or oval cross-section and may be decorated with groups of transverse grooves. He classifies those with pointed terminals as variant 1.[93] These bracelets clearly differ from various forms of spiral bracelets composed of a much larger number of coils.[94]

Considering the diameter of the spiral-twisted object from grave 2, as well as the mentioned parallels, it is impossible to conclude whether it is a child's bracelet or a hair ornament.

From grave 2 comes a fragmentarily preserved bell-shaped pendant. It is topped by a round hoop transitioning into a diamond-sectioned extension from which emerges an egg-shaped basket with ten lattices and nine slots. The basket contained at least four spherical beads. On the underside of the basket, there is a short cylindrical protrusion or foot of circular cross-section (Pl. 2/2).

Considering the varying number of vertical lattices (ranging from five to twelve), N. Lucentini distinguishes three variants of the type B bell-shaped pendants; their foot, unlike the bell from grave 2, terminates in a conical extension and has the shape of an inverted letter T. The pendant from grave 2 can be associated with variant 3, which is characterized by having nine to twelve lattices.[95] Pendants with slots and a foot are dated to the Glasinac phases IVc-1 and IVc-2, and most commonly

90 MANDIĆ 1937: 5, T. I/2, 15; II/3.
91 ČOVIĆ, NIKIĆ 1983: 89–90, T. II/11.
92 ČOVIĆ 1987a: 598, sl. 35/2. Npr. BENAC, ČOVIĆ 1956: T. IX/14; XXXXIV/1–2; 1957: T. III/3–4.
93 LUCENTINI 1981: 84, sl. 4/20.
94 LUCENTINI 1981: 85–85, sl. 5/1–2.

91 ČOVIĆ, NIKIĆ 1983: 89-90, Pl. II/11.
92 ČOVIĆ 1987a: 598, Fig. 35/2. E.g. BENAC, ČOVIĆ 1956: Pl. IX/14; XXXXIV/1-2; 1957: Pl. III/3-4.
93 LUCENTINI 1981: 84, Fig. 4/20.
94 LUCENTINI 1981: 85-85, Fig. 5/1-2.
95 LUCENTINI 1981: 90, Fig. 6/12.

teristično da ima devet do dvanaest rešetki.[95] Praporci s prorezima i nožicom datirani su u faze Glasinac IVc-1 i IVc-2 te najčešće imaju T-proširenje na kraju nožice,[96] odnosno u fazu 4 srednjodalmatinske grupe.[97] Praporci ovog oblika, kao dio ženskog nakita, najčešći su na Glasincu, zatim na prostoru zapadne Srbije i sjeverne Albanije, a nalaze se sve do Like na zapadu i Grčke na jugu.[98] Praporci s nožicom T-oblika zabilježeni su i na većem broju nalazišta na južnom Jadranu i zaleđu gdje su datirani u faze 2 i 3, odnosno u 7. i prvu polovicu 6. st. pr. Kr.[99] Nakovani najbliži poznati nalazi potječu iz Stona, od kojih jedan na kraju nožice ima veće diskoidno proširenje.[100] S Graca kod Neuma potječu dva praporca od kojih jedan ima slabo naglašeno proširenje na kraju nožice.[101] Veći broj privjesaka pohranjen je i u zbirci na Humcu kod Ljubuškog.[102] U grobovima se pojavljuje od jednog do više praporaca. O mogućem načinu nošenja svjedoče nalazi iz groba 7 tumula 2 na već spomenutom groblju Kaluđersko polje kod Priboja u kojem je bila pokopana bogato opremljena mlađa žena. Dvanaest praporaca s T-završetkom nosilo se obješeno o pojas s nizom salteleona i dvjema bačvastim perlama.[103] Na groblju Lisijevo polje pronađeno je 29 praporaca s T-završetkom koji su bili obješeni na krajevima lančića te se smatra kako je riječ o pektoralu.[104]

U grobu 2 još su pronađeni dugme s ni-

have a T-shaped extension at the end of the foot,[96] or to phase 4 of the Central Dalmatian group.[97] Bell-shaped pendants of this type, as women's jewellery items, are most common in Glasinac, followed by western Serbia and northern Albania, but have been found as far as Lika to the west and Greece to the south.[98] Pendants with a T-shaped foot have also been found at many sites in the southern Adriatic and hinterland, where they are dated to phases 2 and 3, or the 7th and the first half of the 6th century BC.[99] The closest known finds to those from Nakovana originate from Ston; one of them has a large discoid extension at the end of the foot.[100] Gradac near Neum is the site of two pendants, one of which has a weakly emphasized extension at the end of the foot.[101] A large number of bell-shaped pendants are also stored in the collection at Humac near Ljubuški.[102] Graves contain from one to several these pendants. How they were possibly worn is evidenced by the finds from grave 7 of tumulus 2 at the Kaluđersko Polje cemetery near Priboj, which was the burial of a richly equipped young woman. Twelve bell-shaped pendants with T-ends were suspended from a belt with a series of saltaleones and two barrel-shaped beads.[103] The Lisijevo Polje cemetery included 29 pendants with T-ends hanging from the terminals of chains, indicating they might have been a pectoral.[104]

Grave 2 also included a button with a low domed head and hoop (Pl. 2/3) and a frag-

95 LUCENTINI 1981: 90, sl. 6/12.
96 ČOVIĆ 1987a: 611, 622, sl. 35/27, T. LXII/27. Npr. BENAC, ČOVIĆ 1957, T. IX/2; XXXIV/11; XXXVI/14.
97 ČOVIĆ 1987b: 455, T. L/14.
98 KILIAN-DIRLMEIER 1979: 94–96, T. 102B; 29/551–552; 108/8–9, 15, 17; TEBMANN 2001: 76–79, sl. 46, Popis 19; GAVRANOVIĆ 2011a: 236, sl. 238/5–7; KURTI 2020: 227, 229, sl. 7/5–7.
99 MARIJAN 2001: 69, sl. 13/10; T. 14/4; 16/4; 17/15.
100 POSEDEL 1909: 102, T. XXI/12, 18.
101 MARIJAN 1989: 40, T. II/9.
102 ČOVIĆ 1985: 56, T. IV/5; ODŽA 2010: 180, T. 2/7.
103 DERIKONJIĆ 2010: sl. na str. 12. Sličan položaj praporaca kod pojasa npr. na groblju Burrel u grobu 4 tumula III (KURTI 2020: 223, sl. 4a) ili u grobu 76 tumula I (KURTI 2020: 236, sl. 9g).
104 SREJOVIĆ, MARKOVIĆ 1981: 71, T. III; IV/1–6.

96 ČOVIĆ 1987a: 611, 622, Fig. 35/27, Pl. LXII/27. E.g. BENAC, ČOVIĆ 1957, Pl. IX/2; XXXIV/11; XXXVI/14.
97 ČOVIĆ 1987b: 455, Pl. L/14.
98 KILIAN-DIRLMEIER 1979: 94-96, Pl. 102B; 29/551-552; 108/8-9, 15, 17; TEBMANN 2001: 76-79, Fig. 46, List 19; GAVRANOVIĆ 2011a: 236, Fig. 238/5-7; KURTI 2020: 227, 229, Fig. 7/5-7.
99 MARIJAN 2001: 69, Fig. 13/10; Pl. 14/4; 16/4; 17/15.
100 POSEDEL 1909: 102, Pl. XXI/12, 18.
101 MARIJAN 1989: 40, Pl. II/9.
102 ČOVIĆ 1985: 56, Pl. IV/5; ODŽA 2010: 180, Pl. 2/7.
103 DERIKONJIĆ 2010: Fig. on p. 12. For a similar position of the bell-shaped pendants at the belt see e.g. the Burrel cemetery: grave 4 of tumulus III (KURTI 2020: 223, Fig. 4a) or grave 76 of tumulus I (KURTI 2020: 236, Fig. 9g).
104 SREJOVIĆ, MARKOVIĆ 1981: 71, Pl. III; IV/1-6.

skom kalotastom glavicom i ušicom (T. 2/3) te ulomak saltaleona (T. 2/4).

Brončano dugme s ušicom pronađeno je i u kasnobrončanodobnom grobu 1 na groblju Zmijna.[105] S obzirom na promjer, dugme se može pripisati varijanti 2 za koju su karakteristična dugmad čiji je promjer minimalno 1,5 cm.[106] Dugmad s kalotastom glavicom i ušicom pojavljuje se u grobovima datiranim u kasno brončano doba duž istočne obale Jadrana, o čemu svjedoče nalazi čak 30 dugmadi s Babina polja na Mljetu, od toga sedam većih i 23 koja su promjera 1,1 cm.[107] Kalotasta dugmad pojavljuje se i dalje tijekom starijeg željeznog doba. Na Glasincu ih je moglo biti i više u jednom grobu,[108] a katkad se nalaze i s ulomcima saltaleona.[109] Iz Gorice potječu nalazi četiriju kalotastih dugmeta s ušicom,[110] u grobnici s nalazišta Crvenica – Ritke Liske pronađena su dva kalotasta dugmeta promjera 1,5 cm,[111] a u grobnici iz Vašarovina kod Livna nalazilo se malo dugme promjera 0,8 cm.[112]

Ulomak saltaleona vjerojatno je predstavljao dio ogrlice ili je mogao biti dio složenog ukrasa koji je visio s pojasa kako to pokazuje primjer groba 7 tumula 2 na groblju Kaluđersko polje.[113] Svakako je riječ o čestom i rasprostranjenom nalazu iz kasnog brončanog i starijeg željeznog doba na području istočne obale Jadrana i zaleđa.

U grobu 2 na Zmijnoj pronađeno je i devet obruča okruglog presjeka, od toga osam cijelih i jedan u ulomcima. Jedan obruč spojen je s još drugim trima (T. 2/5–10). Lančić od raznoliko povezanih obruča manjeg promjera, vjerojatno dio nekog predmeta,

105 PERKIĆ et al. 2021: 76.
106 LUCENTINI 1981: 81. sl. 3/26.
107 MAROVIĆ 1969: 18–20, sl. 8/5; BATOVIĆ 1983: 315, 345, 362, sl. 24/5, T. XLIII/13–16; LI/3–4, 8; PERKIĆ 2010: 67, sl. na str. 71.
108 Npr. BENAC, ČOVIĆ 1957: T. XXXIX/5.
109 BENAC, ČOVIĆ 1957: T. II/8–10.
110 TRUHELKA 1902: 38, sl. 90.
111 ČOVIĆ 1969: 35, sl. 11/8.
112 MARIJAN 1986: 26, T. II/9.
113 DERIKONJIĆ 2010: sl. na str. 12.

ment of a saltaleone (Pl. 2/4).

A bronze button with a hoop was also found in Late Bronze Age grave 1 at the Zmijna cemetery.[105] Given its diameter, the button can be associated with variant 2, which is characterized by buttons with a minimum diameter of 1.5 cm.[106] Buttons with a domed head and hoop appear in graves dated to the Late Bronze Age along the eastern coast of the Adriatic Sea, as evidenced by as many as 30 buttons found at Babino Polje on Mljet: seven larger ones and 23 with a diameter of 1.1 cm.[107] Domed buttons continue to appear throughout the Early Iron Age. There could have been several of them per grave at Glasinac,[108] and sometimes they are found together with fragments of saltaleones.[109] The finds from Gorica include four domed buttons with hoops;[110] a tomb at the Crvenica – Ritke Liske site included two domed buttons with a diameter of 1.5 cm;[111] a tomb from Vašarovina near Livno included a small button with a diameter of 0.8 cm.[112]

The fragment of the saltaleone was probably part of a necklace or of a complex ornament that hung from a belt, as shown by the example of grave 7 in tumulus 2 at the Kaluđersko Polje cemetery.[113] In any case, it is a common and widespread find from the Late Bronze Age and Early Iron Age at the eastern Adriatic coast and the hinterland.

Grave 2 at Zmijna included nine round-sectioned rings: eight complete and one fragmented. One ring was connected to three others (Pl. 2/5–10). Also, a chain made of variously connected small-diameter rings, likely part of an object, was found in a stone mound

105 PERKIĆ et al. 2021: 76.
106 LUCENTINI 1981: 81. Fig. 3/26.
107 MAROVIĆ 1969: 18-20, Fig. 8/5; BATOVIĆ 1983: 315, 345, 362, Fig. 24/5, Pl. XLIII/13-16; LI/3-4, 8; PERKIĆ 2010: 67, Fig. on p. 71.
108 E.g. BENAC, ČOVIĆ 1957: Pl. XXXIX/5.
109 BENAC, ČOVIĆ 1957: Pl. II/8-10.
110 TRUHELKA 1902: 38, Fig. 90.
111 ČOVIĆ 1969: 35, Fig. 11/8.
112 MARIJAN 1986: 26, Pl. II/9.
113 DERIKONJIĆ 2010: Fig. on p. 12.

pronađen je i u kamenoj gomili iz Glogovika kod Herceg Novog.[114] Na Glasincu su nizovi spojenih obruča izdvojeni kao privjesci tipa B.[115] Lančić od spojenih manjih obruča pronađen je u grobu 1 tumula I iz Hrastovače koji se datira u fazu Glasinac IVc-2.[116] Na groblju pod tumulima Borak brdo – Ždrijelo u grobu 2 tumula III pokraj glave pokojnice pronađen je lančić sastavljen od četiriju spojenih manjih obruča koji su okruglog ili D-presjeka. Na obručima se vidi kako su im krajevi bili spojeni. Grob je datiran u kasno brončano doba, u fazu Glasinac IIIb.[117] U grobu iz Borajne nalazio se privjesak u obliku dvaju spojenih obruča. Kroz donji prolazi obruč s kojeg još vise četiri druga obruča. Pretpostavlja se kako je mogla biti riječ o privjesku koji je visio s neke od fibula.[118] Spojeni obruči manjeg promjera mogu se nalaziti i kao privjesci na fibulama, posebno onima tipa Rusanovići čija nožica završava malim obručem kroz koji je provučen obruč koji je potom spojen s još nekoliko obruča.[119] Lančići sastavljeni od manjih obruča mogu se pojavljivati i na fibulama drugih oblika.[120] Ovi nalazi pokazuju kako su obruči spojeni u lančić najčešće bili dio nekog predmeta, vjerojatno u funkciji privjeska ili na koje je neki drugi privjesak bio obješen te se mogu smatrati rasprostranjenim i kronološki manje osjetljivim nalazom.

ZAKLJUČAK

Na prostoru Nakovane, na padini brda Zmijne, pronađeni su ostatci groba koji se, na osnovi pronađenih nalaza, može datirati

114 PUŠIĆ 1962: 79, T. XI/18.
115 LUCENTINI 1981: 88, sl. 5/21.
116 BENAC, ČOVIĆ 1957: 19, T. XXXVII/16.
117 KOSORIĆ 1989: 136, 139, T. III/3.
118 ČOVIĆ 1980: 119, T. II/12.
119 Npr. BENAC, ČOVIĆ 1957: T. XXXV/1–2; XXXVIII/9; JEVTIĆ 1997: 306, sl. 12/1–2 itd.
120 Npr. BENAC, ČOVIĆ 1957: T. XXXVII/7; MARKOVIĆ 1997: 326–327, T. II/5; III/1, 4 itd.

at Glogovik near Herceg Novi.[114] Rows of connected rings at Glasinac are classified as type B pendants.[115] A chain made of connected small rings was found in grave 1 of tumulus I at Hrastovača, dating to the Glasinac IVc-2 phase.[116] Grave 2 of tumulus III at the cemetery of Borak Brdo – Ždrijelo included a chain near the head of the buried female; it was composed of four connected small rings, which were circular or D-shaped in cross-section. The rings show evidence of their terminals being connected. The grave is dated to the Late Bronze Age, to the Glasinac IIIb phase.[117] A grave in Borajna included a pendant in the form of two connected rings. The lower one is traversed by a ring that still has four other rings hanging from it. It is assumed that this could have been a pendant hanging from one of the fibulae.[118] Connected small-diameter rings can also be found as pendants on fibulae, especially on those of the Rusanovići type, which have the foot ending with a small ring traversed by another ring, which is then connected to several other rings.[119] Chains made of small rings can also appear on fibulae of other shapes.[120] These finds indicate that rings connected into chains were most commonly part of an object, likely serving as a pendant or on which another pendant was hung; they can be considered widespread and less chronologically sensitive finds.

CONCLUSION

The remains of a grave found on the slope of Zmijna hill in the Nakovana area can be dated to the Early Iron Age based on the finds.

114 PUŠIĆ 1962: 79, Pl. XI/18.
115 LUCENTINI 1981: 88, Fig. 5/21.
116 BENAC, ČOVIĆ 1957: 19, Pl. XXXVII/16.
117 KOSORIĆ 1989: 136, 139, Pl. III/3.
118 ČOVIĆ 1980: 119, Pl. II/12.
119 E.g. BENAC, ČOVIĆ 1957: Pl. XXXV/1-2; XXXVIII/9; JEVTIĆ 1997: 306, Fig. 12/1-2 etc.
120 E.g. BENAC, ČOVIĆ 1957: Pl. XXXVII/7; MARKOVIĆ 1997: 326-327, Pl. II/5; III/1, 4 etc.

u starije željezno doba. Ostaci pokojnika – četiri djeteta i šest odraslih neodredivog spola – nalazili su se u prirodnoj udubini koja je uz dulje rubove bila omeđena kamenjem, dok su se na kraćim stanama nalazile okomito postavljene kamene ploče. Središnji dio pokrivala su dva veća kamena bloka koja su označavala grob u prostoru, zbog čega je bio i jasno vidljiv. Ispod blokova su, osim ostataka pokojnika, pronađeni predmeti nakita i nošnje kao i keramički ulomci koji pripadaju najmanje četirima različitim posudama. Grob se nalazi u blizini mlađih kamenih gomila, dok je nešto južnije otkriven i ravni grob iz kasnog brončanog doba, što bi pokazivalo kako je prostor Zmijne bio nekropola stanovnika Grada tijekom dugog razdoblja.

Dosadašnje spoznaje upućivale su na to kako se tijekom starijeg željeznog doba na prostoru južnog Jadrana sa zaleđem grobovi na ravnom pojavljuju od 6. st. pr. Kr., odnosno predstavljaju mlađi način pokopavanja u odnosu na onaj pod gomilama. Također, smatra se kako se ovakav način pokopavanja pojavljuje pod utjecajem s područja Dalmacije i jugozapadne Bosne ili iz, možda, grčko-sredozemnog kruga.[121] Na području Hercegovine prelazak na pokopavanje u ravnim grobovima datirao se od faze Glasinac Va.[122] Otkriće u Nakovani pokazuje kako se grobovi na ravnom pojavljuju i mnogo prije.

U grobu 2 pronađeni su ostatci više pokojnika svih dobnih skupina. Ovakav način pokopavanja na južnom dijelu istočne obale Jadrana i zaleđa prakticirao se još od srednjeg brončanog doba,[123] što se nastavilo i tijekom kasnog brončanog i starijeg željeznog doba, kako to svjedoče grobovi pronađeni na ravnom na Zmijnoj.[124] Pretpostavlja se kako se pokopavanje više pokojnika u grob provodilo vjerojatno tijekom iste ili možda više

[121] MARIJAN 2001: 119–121, 134–135, 161.
[122] ČOVIĆ 1987a: 639, bilj. 304.
[123] DELLA CASA 1996: 87–88.
[124] PERKIĆ et al. 2021.

Human remains – four children and six adults of undetermined gender – were situated in a natural depression, bordered by stones along the longer edges, with erected stone slabs at the shorter edges. The central part was covered by two large stone blocks, which spatially marked the grave, making it clearly visible. Beneath the blocks, human remains were found together with jewellery and costume items and potsherds belonging to at least four different vessels. The grave is located near younger stone mounds; also, a flat grave from the Late Bronze Age was discovered more to the south, suggesting that the Zmijna area served as a necropolis for the inhabitants of Grad over a long period.

Current research indicates that, during the Early Iron Age, flat graves began to appear in the southern Adriatic region and its hinterland from the 6th century BC, meaning that they represent a younger funerary practice compared to mound burials. It is also believed that this funerary practice emerged under the influence from Dalmatia and southwest Bosnia or possibly the Greek-Mediterranean sphere.[121] In Herzegovina, the transition to burial in flat graves is dated from the Glasinac Va phase.[122] The discovery in Nakovana shows that flat graves appeared much earlier.

Grave 2 contained the remains of multiple individuals from all age groups. This funerary practice on the southern part of the eastern Adriatic coast and its hinterland was practised since the Middle Bronze Age,[123] continuing into the Late Bronze and Early Iron Ages, as evidenced by flat graves found in Zmijna.[124] It is assumed that the burial of multiple individuals in one grave was probably conducted over the same or possibly several generations[125] and indicates ancestor worship.[126] Similar mortu-

[121] MARIJAN 2001: 119-121, 134-135, 161.
[122] ČOVIĆ 1987a: 639, fn. 304.
[123] DELLA CASA 1996: 87-88.
[124] PERKIĆ et al. 2021.
[125] ČOVIĆ 1987b: 448, 469-470, 477; MARIJAN 2001: 43, 56, 122-124, fn. 410.
[126] MARIJAN 2001: 136-137.

generacija[125] te da svjedoči o kultu predaka.[126] Sličan je pogrebni tretman često dokumentiran i na glasinačkom području, o čemu svjedoče rezultati istraživanja za koje su poznati rezultati antropoloških analiza. Smatra se da ovakav način pokopavanja vjerojatno upućuje na bliski odnos pokojnika.[127] Grobovi u kojima su pokopana dva ili više pokojnika upućuju na različite vrste društvenih veza između pokojnika, zbog čega je zajednica imala razloge za ovakav način pokopa, odnosno bilo je važno u pogrebnom tretmanu iskazati socijalnu povezanost između pokojnika, možda čak onu osobnu i emocionalnu.[128] Kroz danas dostupne interdisciplinarne analize bit će važno provjeriti postoji li i neka biološka povezanost između pokojnika čiji su ostatci pronađeni u grobu 2 na Zmijnoj.

U grobu 2, osim keramičkih ulomaka, pronađeni su samo predmeti ženskog nakita i nošnje koji bi se mogli datirati u kraj 7. i početak 6. st. pr. Kr., što bi odgovaralo kraju faze Glasinac IVc-1. Iako nedostaju podatci o funkcionalnoj poziciji nalaza, s obzirom na pokopavanje više pokojnika u grobu, usporedbe s drugim istovremenim nalazima upućuju na kulturni identitet za vrijeme starijeg željeznog doba na južnom dijelu istočne obale Jadrana sa zaleđem. Izdvaja se veći broj ulomaka dijademe/poramenice glasinačkog tipa za koju se najbrojnije usporedbe pronalaze na eponimnom području, no poznate su i iz istočne Hercegovine (Gubavica) i Boke kotorske (Glogovik) te sjeverozapadne Albanije (sl. 5). Riječ je o predmetu koji je predstavljao dio ukrasa za glavu, s pretpostavkom kako su ga možda nosile djevojke koje su bile pred udaju ili su se tek udale,[129] dok je katkad riječ o poramenicama. Oba su predmeta

[125] ČOVIĆ 1987b: 448, 469–470, 477; MARIJAN 2001: 43, 56, 122–124, bilj. 410.
[126] MARIJAN 2001: 136–137.
[127] ČOVIĆ 1959: 78; GOVEDARICA 1978: 29–30.
[128] Npr. BOULESTIN, DUDAY 2006: 160–164; WENDLING 2020: 64–65; BOULESTIN 2022; BOULESTIN, COURTAUD 2022: 63–67 itd.
[129] TERŽAN 2021: 51–53.

ary treatment was often documented in the Glasinac area, as evidenced by excavation results that include anthropological analyses.

It is believed that such funerary practices probably point to a close relationship among the buried individuals.[127] Graves containing two or more individuals suggest various kinds of social relations between them, indicating that the community had its reasons for such funerary practices; it was important for the mortuary treatment to express social closeness of the deceased, and possibly even personal and emotional ties.[128] By using interdisciplinary analyses available today, it will be important to investigate whether there is any biological connection between the individuals whose remains were found in grave 2 at Zmijna.

Aside from potsherds, grave 2 contained only items of women's jewellery and costume, which could be dated to the end of the 7th and the beginning of the 6th century BC, corresponding to the end of the Glasinac IVc-1 phase. Although there is no data on the functional position of the finds, considering the burial of multiple individuals in the grave, comparisons with other contemporaneous finds point to a cultural identity during the Early Iron Age on the southern part of the eastern Adriatic coast and hinterland. There is a large number of fragments of a Glasinac-type diadem/sash, which has most parallels in the eponymous area, but there are also known parallels in eastern Herzegovina (Gubavica) and the Bay of Kotor (Glogovik), as well as northwestern Albania (Fig. 5). This object was part of a head ornament, with the assumption that it may have been worn by girls who were about to be married or had recently married,[129] and sometimes it functioned as a sash. Both objects were adorned with various

[127] ČOVIĆ 1959: 78; GOVEDARICA 1978: 29-30.
[128] E.g. BOULESTIN, DUDAY 2006: 160-164; WENDLING 2020: 64-65; BOULESTIN 2022; BOULESTIN, COURTAUD 2022: 63-67 etc.
[129] TERŽAN 2021: 51-53.

bila ukrašena raznovrsnim motivima najmlađe faze lokalnog zapadnobalkanskog geometrijskog stila.[130] S obzirom na kompozicije motiva, gotovo da i nema dva ista primjerka, pa se tako i ukrašeni ulomci iz groba 2 čine jedinstvenim. Motivi kojim su ulomci ukrašeni također upućuju na najmlađu fazu geometrijskog stila. Ostali su nalazi malobrojni, od kojih se može izdvojiti brončani praporac koji, poput dijademe/poramenice, upućuje na kulturnu povezanost s područjem istočne Hercegovine i dalje sve do Glasinca. Područje istočne Hercegovine tijekom starijeg željeznog doba, s obzirom na pronađene nalaze, smatralo se dijelom prostora rasprostiranja glasinačke kulture,[131] dok su s druge strane nalazišta na ovom prostoru, kao i ona južno od Neretve, pripisana posebnoj južnojadranskoj skupini.[132] Na osnovi posljednje analize zaključuje se kako su glasinački utjecaji primjetni na prostoru sjevernog dijela istočne Hercegovine tijekom 7. i prve polovice 6. st. pr. Kr. (faze 2 i 3),[133] odnosno na područjima južne Dalmacije i istočne Hercegovine gdje se od početka 6. st. pr. Kr. razvijala zasebna kulturna pojavnost.[134] Tijekom faze 5 (5. – 4. st. pr. Kr.) počinje prevladavati materijalna ostavština sredozemnog podrijetla, dok lokalni oblici postaju sve slabije primjetni.[135] Usporedbe za nalaze dijademe/poramenice i praporca iz groba 2 potvrđuju kulturnu povezanost Pelješca tijekom početka starijeg željeznog doba sa širokim prostorom od Glasinca preko istočne Hercegovine, pa sve do Crne Gore i sjeverozapadne Albanije, što se prije isticalo izdvajanjem Glasinac-Mati kulturnog kompleksa.[136] Zaista se na ovom velikom prostoru mogu primijetiti mnoge sličnosti u pogrebnim običajima i materijalnoj ostavštini, no sasvim jasno prepoznaju

[130] GAVRANOVIĆ 2020: 439.
[131] ČOVIĆ 1982: 26; 1987a: 575–576, 633–634.
[132] BATOVIĆ 1983: 357; 1986: 6; MARIJAN 2001.
[133] MARIJAN 2001: 44, 54, 64, 66, 71, 84, 146–151.
[134] MARIJAN 2001: 72, 84, 148, 150–151.
[135] MARIJAN 2001: 100–103, 149, 152.
[136] ČOVIĆ 1987a: 575, 642–643.

motifs characteristic of the youngest phase of the local West Balkan geometric style.[130] Regarding the compositions of the motifs, there are almost no two identical pieces, and the decorated fragments from grave 2 seem to be unique too. The motifs decorating the fragments also point to the youngest phase of the geometric style. Other finds are scarce but include a bronze bell-shaped pendant, which, like the diadem/sash, suggests cultural connections with eastern Herzegovina and further to Glasinac. During the Early Iron Age, the area of eastern Herzegovina, based on the discovered finds, was considered part of the territory of the Glasinac culture;[131] on the other hand, sites in this area, as well as those south of the River Neretva, were associated with a distinct South Adriatic group.[132] Based on the latest analysis, it has been concluded that Glasinac influences are noticeable in the northern part of eastern Herzegovina during the 7th and the first half of the 6th century BC (phases 2 and 3),[133] and that a separate cultural phenomenon developed in southern Dalmatia and eastern Herzegovina from the beginning of the 6th century BC.[134] During phase 5 (the 5th–4th century BC), material heritage of Mediterranean origin began to prevail, while local forms became less and less prominent.[135] Parallels for the finds of diadems/sashes and the bell-shaped pendant from grave 2 confirm that in the beginning of the Early Iron Age there was cultural connectivity between the Pelješac Peninsula and a wide area from Glasinac through eastern Herzegovina all the way to Montenegro and northwest Albania, as emphasized earlier by singling out the Glasinac-Mati cultural complex.[136] Indeed, this vast territory has many similarities in burial customs and material

[130] GAVRANOVIĆ 2020: 439.
[131] ČOVIĆ 1982: 26; 1987a: 575-576, 633-634.
[132] BATOVIĆ 1983: 357; 1986: 6; MARIJAN 2001.
[133] MARIJAN 2001: 44, 54, 64, 66, 71, 84, 146-151.
[134] MARIJAN 2001: 72, 84, 148, 150-151.
[135] MARIJAN 2001: 100-103, 149, 152.
[136] ČOVIĆ 1987a: 575, 642-643.

se i lokalne posebnosti koje pokazuju kako je riječ o različitim zajednicama koje su intenzivno komunicirale te razmjenjivale svoja znanja i materijalnu ostavštinu te dijelile sličan kôd nošnje.[137]

Rezultati budućih istraživanja groblja na Zmijnoj svakako mogu doprinijeti boljem poznavanju starijeg željeznog doba na južnom dijelu istočne obale Jadrana na kojem se mogu pratiti složeni pogrebni običaji i tretman pokojnika, dok materijalna ostavština svjedoči o dinamičnim društvenim komunikacijama i kulturnoj povezanosti među različitim zajednicama.[138]

heritage, but there are also obvious local peculiarities, indicating that different communities communicated intensively, exchanged knowledge and material legacies, and shared a similar dress code.[137]

The results of future research on the Zmijna cemetery can certainly contribute to a better understanding of the Early Iron Age on the southern part of the eastern Adriatic coast, where we can observe complex funerary practices and mortuary treatments, while the material legacy bears witness to dynamic social communication and cultural connectivity between different communities.[138]

Translation and proof-reading: by authors

[137] GAVRANOVIĆ 2018: 429–431, sl. 1.

[138] Ovaj je rad dijelom nastao u okviru projekta *Transformacije identiteta kroz prošlost* (TIPS) koji financira Europska unija – NextGenerationEU.

[137] GAVRANOVIĆ 2018: 429-431, Fig. 1.

[138] This paper was partly supported by the project *Transformation of identities through the past* (TIPS) funded by the European Union - NextGenerationEU.

Literatura / References

ALIU, S. 1996, Tuma e Shtikës / Le tumulus de Shtikë, *Iliria*, 26, 57–78.

ANDREA, Zh. 1985, *Kultura ilire e tumave në pellgun e Korçës*, Tiranë.

BATOVIĆ, Š. 1983, Kasno brončano doba na istočnom jadranskom Primorju, u/in: *Praistorija jugoslavenskih zemalja. IV: Bronzano doba*, A. Benac (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 271–373.

BATOVIĆ, Š. 1986, Dalmatska kultura željeznog doba, *Radovi Filozofskog fakulteta Zadar*, 25(12) (1985–1986), 5–60.

BEDIĆ, Ž. 2020, *Rezultati antropološke analize ljudskog osteološkog materijala s nalazišta Nakovana i Zakotorac*, Stručni Izvještaj EP - 315 – 12/20, Zagreb.

BEDIĆ, Ž. 2024. Bioarheološka analiza ljudskih koštanih ostataka s nalazišta Nakovana i Zakotorac. Stručni izvještaj EP - BA" - 11/24, Zagreb.

BENAC, A., ČOVIĆ, B. 1956, *Glasinac, Dio I, Bronzano doba*, Katalog Prapovijesne zbirke Zemaljskog muzeja u Sarajevu, Sarajevo.

BENAC, A., ČOVIĆ, B. 1957, *Glasinac, Dio II, Željezno doba*, Katalog Prapovijesne zbirke Zemaljskog muzeja u Sarajevu, Sarajevo.

BOULESTIN, B. 2022, The accompanying dead, u/in: *The Routledge Handbook of Archaeothanatology. Bioarchaeology of Mortuary Behaviour*, C. J. Knüsel, E. M. J. Schotsmans (ur./eds.), Abingdon: Routledge, 89–105.

BOULESTIN, B., DUDAY, H. 2006, Ethnology and Archaeology of Death: From the Illusion of References to the Use of a Terminology, *Archaeologia Polona*, 44, 149–169.

BOULESTIN, B., COURTAUD, P. 2022, Words between two worlds. Collective graves and related issues in burial terminology, u/in: *The Routledge Handbook of Archaeothanatology. Bioarchaeology of Mortuary Behaviour*, C. J. Knüsel, E. M. J. Schotsmans (ur./eds.), Abingdon: Routledge, 55–68.

BRÄUNING, A., KILIAN-DIRLMEIER, I. 2013, *Die eisenzeitlichen Grabhügel von Vergina. Die Ausgrabungen von Photis Petsas 1960-1961*, Monographien des Römisch-Germanischen Zentralmuseums 119, Mainz: Verlag des Römisch-Germanischen Zentralmuseums.

CEKA, N. 1974, Gërmimi i një tume në Dukat, *Iliria*, 3, 131–151.

ČOVIĆ, B. 1959, Glasinac 1957, Rezultati revizionog iskopavanja tumula glasinačkog tipa, *Glasnik zemaljskog muzeja NS*, XIV, 53–85.

ČOVIĆ, B. 1969, Grobnice željeznog doba iz Crvenice kod Duvna, *Vjesnik za arheologiju i historiju dalmatinsku*, LXIII-LXIV (1961–1962), 25–48.

ČOVIĆ, B. 1979, Ostava Brgule, *Glasnik zemaljskog muzeja NS*, XXXIV, 43–48.

ČOVIĆ, B. 1980, Grobni nalaz iz Borajne, *Članci i građa za kulturnu istoriju istočne Bosne*, XIII, 117–122.

ČOVIĆ, B. 1981, Neka pitanja hronologije bronzanog doba glasinačkog područja, *Glasnik zemaljskog muzeja NS*, 35/36 (1980/1981), 99–146.

ČOVIĆ, B. 1982, Tumuli željeznog doba u Gubavici, *Hercegovina*, 2, 13–33.

ČOVIĆ, B. 1983, Glasinačka kulturna skupina, u/in: *Praistorija jugoslavenskih zemalja. IV: Bronzano doba*, A. Benac (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 413–432.

ČOVIĆ, B. 1984, Umjetnost kasnog bronzanog i starijeg željeznog doba na istočnoj jadranskoj obali i u njenom zaleđu / Die Kunst der Spatbronze- und alteren Eisenzeit an der ostlichen Adriakuste und in deren Hinterland, u/in: *Duhovna kultura Ilira. Simpozijum Herceg-Novi, 4-6*

novembra 1982 / Culture Spirituelle des Illyriens. Symposium Herceg-Novi, 4-6 novembre 1982, A. Benac (ur./ed.), Posebna izdanja 67, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja 11, 7–40.

ČOVIĆ, B. 1985, Praistorijska zbirka Franjevačkog samostana na Humcu kod Ljubuškog, u/in: *100 godina Muzeja na Humcu (1884-1984), Zbornik radova*, A. Zelenika (ur./ed.), Ljubuški 1, Ljubuški, 49–59.

ČOVIĆ, B. 1987a, Glasinačka kultura, u/in: *Praistorija jugoslavenskih zemalja. V: Željezno doba*, A. Benac (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 575–642.

ČOVIĆ, B. 1987b, Srednjodalmatinska grupa, u/in: *Praistorija jugoslavenskih zemalja. V: Željezno doba*, A. Benac (ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 442–480.

ČOVIĆ, B., NIKIĆ, D. 1983, Grobnice željeznog doba iz Vašarovina kod Livna, *Zbornik Arheološkog društva Bosne i Hercegovine knjiga I: Arheološka problematika zapadne Bosne*, B. Govedarica (ed.), Sarajevo, 87–92.

DELLA CASA, P. 1996, *Velika Gruda II. Die bronzezeitliche Nekropole Velika Gruda (Opš. Kotor, Montenegro)*, Universitätsforschungen zur prähistorischen Archäologie, 33, Bonn: Verlag Dr. Rudolf Habelt GmbH.

DERIKONJIĆ, S. 2010, *Tragom jarmovačkih rudara*, katalog izložbe, Priboj na Limu: Zavičajni muzej Priboj.

FIALA, F. 1893, Die Ergebnisse der Untersuchung prähistorischer Grabhügel auf dem Glasinac im Jahre 1892, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, I, 126–168.

FIALA, F. 1899, Griechische Bronzehelme aus Bosnien und der Herzegovina, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, VI, 148–153.

FORENBAHER, S. 2009, Redni broj 310: Grad (Nakovana), *Hrvatski arheološki godišnjak*, 5 (2008), 690–692.

FORENBAHER, S., KAISER, T. 1999, Obnovljeno istraživanje u Spili kod Nakovane (Pelješac), *Obavijesti Hrvatskog arheološkog društva*, XXXI (3), 75–77.

FORENBAHER, S., KAISER, T. 2001, Nakovana Cave: an Illyrian ritual site, *Antiquity*, 75(290), 677–678. https://doi.org/10.1017/S0003598X00089122

FORENBAHER, S., KAISER, T., VUJNOVIĆ, N. 2001, Terenski pregled Nakovanske visoravni (Poluotok Pelješac), *Obavijesti Hrvatskog arheološkog društva*, XXXIII(2), 46–49.

FORENBAHER, S., KAISER, T. 2003, *Ilirsko svetište na Pelješcu*, Zagreb: V.B.Z.

FORENBAHER, S., KAISER, T., KIRIGIN, B. 2003, Ilirsko svetište u Spili kod Nakovane, u/in: *Arheološka istraživanja u Naroni i dolini Neretve, Znanstveni skup, Metković, 6.-9. listopada 2001.*, E. Marin (ur./ed.), Izdanja Hrvatskog arheološkog društva, 22, Zagreb: Hrvatsko arheološko društvo, 323–331.

FORENBAHER, S., KAISER, T. 2006, Spila Nakovana: an Illyrian Sanctuary from the Hellenistic Period, u/in: *Homage to Milutun Garašanin*, N. Tasić, C. Grozdanov (ur./eds.), Beograd: Serbian Academy of Sciences and Arts, 571–582.

FORENBAHER, S., RAJIĆ ŠIKANJIĆ, P. 2006, The Prehistoric Hillfort at Grad (Pelješac, Dalmatia) – Preliminary Results of Intensive Srurface Survey, *Collegium antropologicum*, 30(3), 467–473.

FORENBAHER, S., JONES, A. 2011, The Nakovana Zodiac: Fragments of an Astrologer's Board from an Illyrian-Hellenistic Cave Sanctuary, *Journal for the History of Astronomy*, XLII, 425–438. https://doi.org/10.1177/002182861104200401

FORENBAHER, S., KAISER, T. 2011, Rituais Ilirios na caverna Nakovana, Croacia, u/in: *Cavernas, rituais e religiao*, L. E. P. Travassos, E. D. Magalhaes, E. P. Barbosa (ur./eds.), Belo Horizonte: Tradicao Planalto, 185–193.

FORENBAHER, S., KAISER, T. 2012, Recognizing Ritual in the Dark, Nakovana Cave and the End of the Adriatic Iron Age, u/in: *Sacred Darkness: a Global Perspective on the Ritual Use of Caves*, H. Moyes (ur./ed.), Boulder: University of Colorado Press, 263–274.

FORENBAHER, S., JONES, A. 2014, Zodijak iz Nakovane, *Vjesnik arheološkog muzeja u Zagrebu*, 46, 7–28.

GAVRANOVIĆ, M. 2011a, *Die Spätbronze- und Früheisenzeit in Bosnien. Teil I*, Universitätsforschungen zur prähistorischen Archäologie, 195, Bonn: Verlag Dr. Rudolf Habelt GmbH.

GAVRANOVIĆ, M. 2011b, *Die Spätbronze- und Früheisenzeit in Bosnien*. *Teil II*, Universitätsforschungen zur prähistorischen Archäologie, 195, Bonn: Verlag Dr. Rudolf Habelt GmbH.

GAVRANOVIĆ, M. 2018, No Group, no People? Archaeological Record and Creation of Groups in the Western Balkans, u/in: *Archaeology Across Frontiers and Borderlands. Fragmentation and Connectivity in the North Aegean and the Central Balkans from the Bronze Age to the Iron Age*, S. Gimatzidis, M. Pieniążek, S. Mangaloğlu-Votruba (ur./eds.), Oriental and European Archaeology 9, Wien: Verlag der Österreichischen Akademie der Wissenschaften, 427–445.

GAVRANOVIĆ, M. 2020, Late Bronze Age Geometric Decoration in the Western Balkans – Sytle and Status, u/in: *Object, Ideas and Travelers. Contacts between the Balkans, The Aegean and Western Anatolia during the Bronze and Early Iron Age, Volume to the Memory of Alexandru Vulpe. Proceedings of the Conference in Tulcea, 10-13 November, 2017*, J. Maran, R. Băjenaru, S.-C. Ailincăi, A.-D. Popescu, S. Hansen (ur./eds.), Universitätsforschungen zur Prähistorischen Archäologie, 350, Bonn: Verlag Dr. Rudolf Habelt GmbH, 431–446.

GOVEDARICA, B. 1978, Novi arheološki prilozi istraživanju tumula na glasinačkom području, *Godišnjak Centra za balkanološka ispitivanja*, XVII/15, 15–35.

JEVTIĆ, M. 1997, Prehistoric barrows at Gračani near Novi Pazar, u/in: *Uzdarje Dragoslavu Srejoviću povodom šezdesetpet godina života od prijatelja, saradnika i učenika*, M. Lazić (ur./ed.), Centar za arheološka istraživanja 17, Beograd: Univerzitet u Beogradu, Filozofski fakultet, 301–314.

JUBANI, B. 1992, Gërmime në tumat nr. 2 dhe 3 të Fushës së Shtojit / Fouilles des tumulus 2 et 3 de la plaine de Shtoi, *Iliria*, 22, 23–58.

KILIAN-DIRLMEIER, I. 1979, *Anhänger in Griechenland vom den mykenischen bis zur spätgeometrischen Zeit (Griechiches Festland, Ionische Inseln dazu Albanien und Jugoslawisch Mazedonien)*, Prähistorische Bronzefunde VIII/23, München: C.H. Beck'sche Verlagsbuchhandlung.

KOKA, A. 1990, Tuma 6 e Shtojit / Le tumulus 6 de Shtoji, *Iliria*, 20/1, 27–73.

KORKUTI, M. 1981, Tuma e Patosit / Le tumulus de Patos, *Iliria*, 11/1, 7–55.

KOROŠEC, J. 1943, Noviji neobjavljeni predmeti predpoviestne zbirke, *Glasnik Hrvatskih zemaljskih muzeja u Sarajevu*, LIV (1942), 51–59.

KOSORIĆ, M. 1989, Naselje i humke na Borak-brdu kod Goražda, *Glasnik zemaljskog muzeja NS*, 44, 129–151.

KURTI, D. 1983, Tumat ilire të Burrelit (Tuma III) / Les tumulus illyriens de Burreli (Tumulus III), *Iliria*, 13/1, 85–108.

KURTI, R. 2020, Common Trends and Regional Particularities in the Western Balkan Iron Age: The Female Belt Adornment in the 7th–6th Centuries BCE Northern Albania, u/in: *Spheres of Interaction Contacts and Relationships between the Balkans and Adjacent Regions in the Late Bronze / Iron Age (13th–5th Centuries BCE), Proceedings of the Conference held at the Institute of Archaeology*, *Belgrade 15–17 September, 2017*, M. Gavranović, D. Heilmann, A. Kapuran, M. Verčík

(ur./eds.), Perspectives on Balkan Archaeology 1, Rahden/Westf.: Verlag Marie Leidorf GmbH, 217–252.

LOŽNJAK DIZDAR, D. 2010, Grobovi uglednica mlađe faze kulture polja sa žarama u sjevernoj Hrvatskoj, Prilog poznavanju ženske nošnje kasnog brončanog doba na prostoru južne Panonije, *Vjesnik Arheološkog muzeja u Zagrebu*, XLII (2009), 157–182.

LUCENTINI, N. 1981, Sulla cronologia delle necropoli di Glasinac nell'eta del ferro, u/in: *Studi di protoistoria Adriatica 1*, R. Peroni (ur./ed.), Quaderni di cultura materiale 2, Roma, 67–171.

MANDIĆ, M. 1933, Prehistorijski nalazi prigodom rekognosciranja u okolici Kaknja, Semizovca i Novog Šehera kod Žepča (u mjesecu julu i augustu god 1933), *Glasnik Zemaljskog muzeja u Bosni i Hercegovini*, XLV/2, 1–6.

MANDIĆ, M. 1937, Skeletne gromile halštatskog doba u okolici Livna i Rogatice, *Glasnik Zemaljskog muzeja u Bosni i Hercegovini*, XLIX/1, 5–9.

MARIJAN, B. 1986, Zajednička grobnica željeznog doba iz Vašarovina kod Livna, *Glasnik zemaljskog muzeja u Sarajevu NS*, 40–41(1985–1986), 23–38.

MARIJAN, B. 1989, Grobni nalazi iz Graca kod Neuma, *Glasnik zemaljskog muzeja u Sarajevu NS*, 42/43 (1987/1988), 35–59.

MARIJAN, B. 2001, Željezno doba na južnojadranskom području (Istočna Hercegovina, Južna Dalmacija), *Vjesnik za arheologiju i historiju dalmatinsku*, 93 (2000), 7–221.

MARKOVIĆ, Č. 1997, Humke u Lisjevom polju, u/in: *Uzdarje Dragoslavu Srejoviću povodom šezdesetpet godina života od prijatelja, saradnika i učenika*, M. Lazić (ur./ed.), Centar za arheološka istraživanja 17, Beograd: Univerzitet u Beogradu, Filozofski fakultet, 323–337.

MAROVIĆ, I. 1969, Nekoliko nalaza iz halštatskog perioda u Dalmaciji, *Vjesnik za arheologiju i historiju dalmatinsku*, LXIII–LXIV (1961–1962), 5–23.

MENALO, R. 2005, *Ilirsko svetište na Pelješcu, Spila Nakovana*, Dubrovnik: Dubrovački muzeji.

MITREVSKI, D. 1991, *Dedeli, Nekropola od železnoto vreme vo Dolno Povardarje*, Posebno izdanje III, Skoplje: Muzej na Makedonija.

ODŽA, A. 2010, Prilog poznavanju nakita srednjodalmatinske kulturne skupine, *Histria Antiqua*, 19, 177–192.

PAPADOPOULOS, J. 2010, The bronze headbands of Prehistoric Lofkënd and their Aegean and Balkan connections, *Opuscula. Annual of the Swedish Institutes at Athens and Rome*, 3, 33–54.

PERKIĆ, D. 2010, Prapovijesni arheološki lokaliteti na širem području Babinog polja, u/in: *Nacionalni park Mljet 1960.–2010.: 50. Obljetnica osnivanja*, Goveđari: Javna ustanova Nacionalni park Mljet, 64–71.

PERKIĆ, D., DIZDAR, M., POTREBICA, H., PAMIĆ, I. 2021, Prapovijesni grobovi na ravnome iz Nakovane na Pelješcu, *Annales Instituti Archeologici*, XVII, 69–81.

PETRIĆ, N. 1977, Nakovana, Pelješac – prethistorijsko višeslojno nalazište, *Arheološki pregled*, 19, 22.

PETRIĆ, N. 1978, Gradina Grad u Nakovani na Pelješcu, u/in: *Novija i neobjavljena istraživanja u Dalmaciji, Znanstveni skup Vodice, 10.-13. V. 1976.*, Ž. Rapanić (ur./ed.), Izdanja Hrvatskog arheološkog društva 3, Zagreb: Hrvatsko arheološko društvo, 35–48.

PETRIĆ, N. 1981, Nakovana, Pelješac – ilirski tumul, *Arheološki pregled*, 22, 44–45.

POSEDEL, K. 1909, Ein prähistorisches Gräberfeld bei Stagno, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, XI, 101–103.

PUŠIĆ, I. 1962, Glogovik, Kuti, Herceg Novi – ilirska gomila, *Arheološki pregled*, 4, 76–79.

RADIMSKÝ, W. 1893, Die Alterthümer der Hochebene Rakitno in der Hercegovina, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, I, 169–179.

RADT, W. 1974, Die früheisenzeitliche Hügelnekropole bei Vergina in Makedonien, u/in: *Beiträge zu italienischen und griechischen Bronzefunden*, H. Müller-Karpe (ur./ed.), Prähistorische Bronzefunde XX/1, München: C.H. Beck'sche Verlagsbuchhandlung, 98–147.

RAJIĆ ŠIKANJIĆ, P., FORENBAHER, S. 2010, Gradina "Grad" u Nakovani na Pelješcu: rezultati sustavnog pregleda površine, u/in: *Arheološka istraživanja u Dubrovačko – Neretvanskoj županiji, Znanstveni skup, Dubrovnik, 18.-21. listopada 2005.*, D. Perkić (ur./ed.), Izdanja Hrvatskog arheološkog društva 24, Zagreb: Hrvatsko arheološko društvo, 71–75.

SREJOVIĆ, D., MARKOVIĆ, Č. 1981, A Find from Lisijeno polje near Ivangrad (Montenegro), *Archaeologia Iugoslavica*, XX–XXI (1980–1981), 70–79.

TERŽAN, B. 2021, Female costume from the Early Iron Age period at Glasinac in the heart of Western Balkans, *Godišnjak Centra za balkanološka ispitivanja*, 50, 43–66.

TEBMANN, B. 2001, Schmuck und Trachtzubehör aus Prozor, Kroatien. Ein Beitrag zur Tracht im japodischen Gebiet, *Acta Praehistorica et Archaeologica*, 33, 28–151.

TRUHELKA, Ć. 1893, Hügelgräber und Ringwälle auf der Hochebene Glasinac, *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, I, 61–112.

TRUHELKA, Ć. 1902, Zwei prähistorische Funde aus Gorica (Bezirk Ljubuški), *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, VIII, 3–47.

TRUHELKA, Ć. 1904, Der vorgeschichtliche Pfahlbau im Savebette bei Donja Dolina (Bezirk Bosnisch-Gradiška), Bericht über die Ausgrabungen bis 1904., *Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina*, IX, 1–156.

VIDESKI, Z. 1999, Лисичин Дол-Марвинци: некропола од железното време (Истражувања 1997) / Lisičin Dol-Marvinci: Iron Age necropolis (Researches in 1997), *Macedoniae Acta Archaeologica*, 15, 91–112.

WENDLING, H. 2020, Pompous ladies and guarded children – Early Iron Age special burials at Dürrnberg 'Eislfeld' (Austria), *Studia Hercynia*, XXIV/2, 59–77.

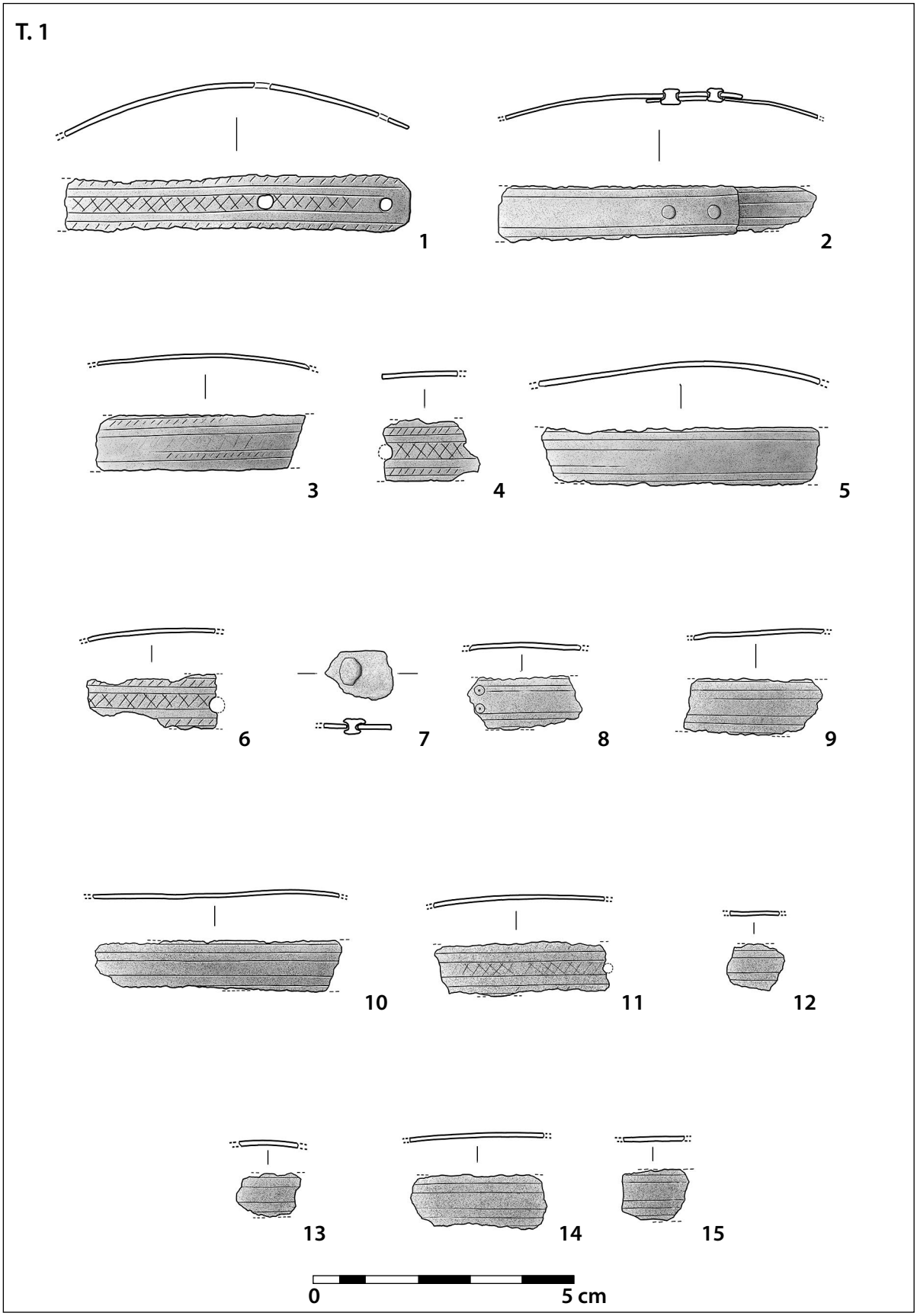


Tabla 1. *Ulomci brončane dijademe/poramenice iz groba 2* (crtež: M. Perkić; izradio: D. Perkić)
Plate 1 *Fragments of the bronze diadem/sash from grave 2* (drawing by M. Perkić; made by D. Perkić)

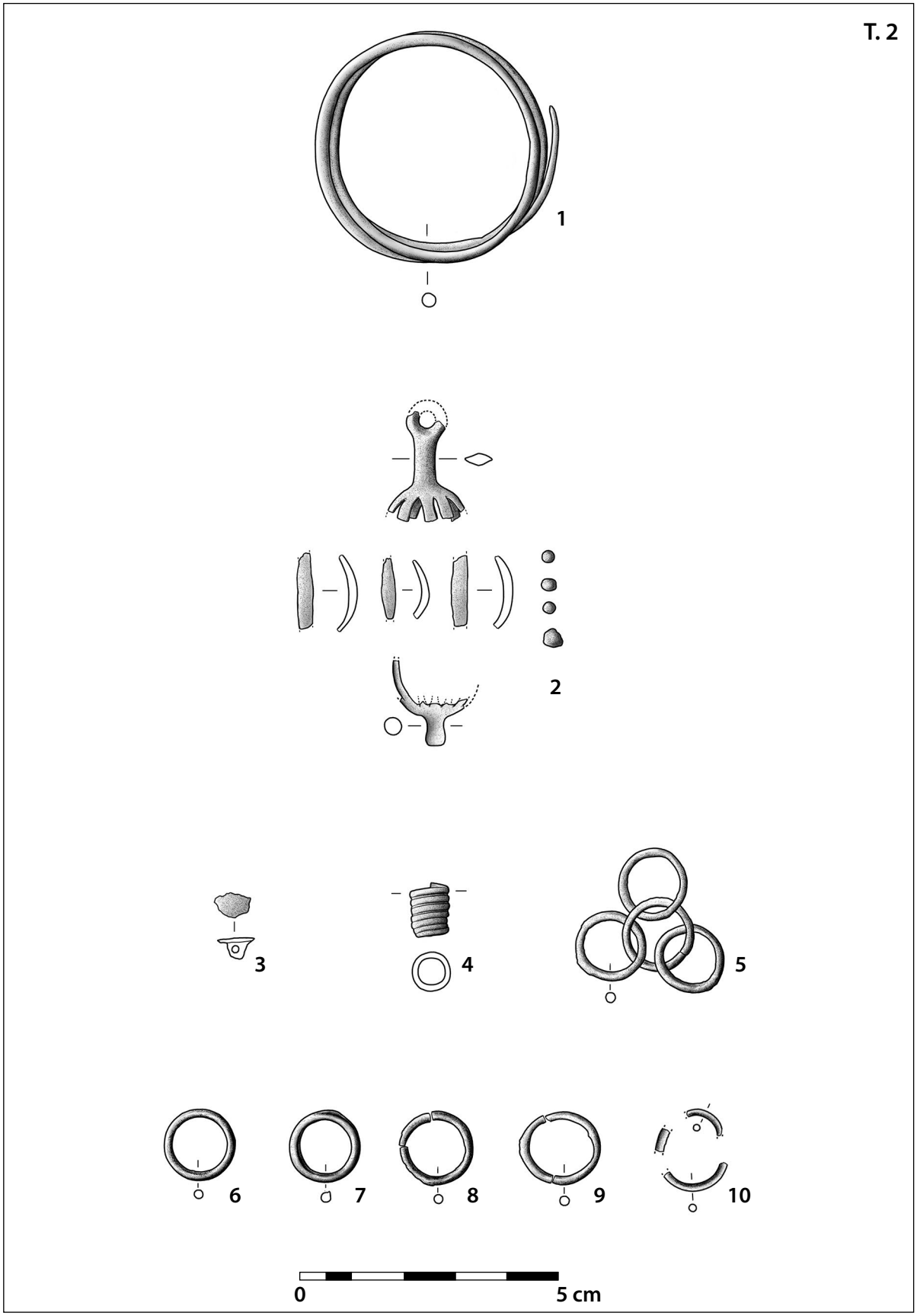


Tabla 2. *Drugi brončani predmeti iz groba 2* (crtež: M. Perkić; izradio: D. Perkić)
Plate 2 *Other bronze objects from grave 2* (drawing by: M. Perkić made by D. Perkić)

FIBULE TIPA CERTOSA Ic, Id I Ie U KONTEKSTU NOVIH NALAZA IZ NADINA

Ic-, Id- AND Ie-TYPE CERTOSA FIBULAE IN THE CONTEXT OF NEW FINDS FROM NADIN

MARTINA ČELHAR

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of Archaeology
Obala kralja Petra Krešimira IV., 2
HR-23000 Zadar
celhar.martina@gmail.com

UDK: 903.25:739(497.581.1)"638"
DOI: 10.15291/archeo.4699
Izvorni znanstveni članak / Original scientific papaer
Primljeno / Received: 2024-6-20
Prihvaćeno / Accepted: 2024-9-15

Ključne riječi:
fibule tipa Certosa Ic, Id i Ie, Nadin, nekropola, željezno doba, Liburni, Japodi

Fibule tipa Certosa Ic i Id odavno su prepoznate kao kronološki mlađa, za liburnsko i japodsko područje autohtona inačica u bogatom korpusu raznolikih prerada široko rasprostranjenih i kvantitativno iznimno dobro zastupljenih fibula Certosa vrste. Njihov broj znatno je povećan recentnim sustavnim istraživanjima nekropole na ravnom u Nadinu s novootkrivena 42 primjerka. Zajedno s prethodno publiciranim dvjema fibulama iz grobnice 1 u Nadinu, njihova je ukupna količina u Nadinu premašila 40 % u udjelu cjelokupnoga poznatog korpusa fibula tipa Certosa Ic i Id. U članku se raspravlja o nadinskim, ali komparativno i ostalim fibulama ove vrste uz poseban osvrt na njihovu tipološko-kronološku problematiku. S obzirom na tipološku varijabilnost nadinskih primjeraka, predloženo je uvođenje nove inačice neukrašena luka (Ie) s trima podvarijantama (Ie1, Ie2 i Ie3), a vrijeme konačne uporabe fibula tipa Certosa Ic, Id i Ie neznatno je produženo i kroz (barem) prvu polovicu 1. st. pr. Kr.

Key words:
Certosa Ic-, Id- and Ie-type fibulae, Nadin, necropolis, Iron Age, Liburnians, Iapodians

In the extensive body of diversely worked, widely distributed and quantitatively extremely well-represented Certosa-type fibulae, Certosa Ic- and Id-type fibulae have long been identified as chronologically younger variants, autochthonous of the territories occupied by the Liburnians and Iapodians. Their number has significantly increased following recent systematic excavations of the flat necropolis in Nadin, in which 42 specimens were recovered. Together with the two previously published fibulae from Tomb 1 at Nadin, their total volume there exceeds 40 per cent of the entire known body of Certosa Ic- and Id-type fibulae. The article discusses the Nadin fibulae, comparing them with others of this type, in particular dealing with their possible typological and chronological classification. Regarding the typological variability of the Nadin specimens, the introduction of a new variant – of undecorated bow (Ie), with three sub-variants (Ie1, Ie2 and Ie3) – is proposed. At the same time, the conclusion of the use of the Certosa Ic-, Id- and Ie-type fibulae is to be dated slightly later than previously assumed, to (at least) the first half of the 1st century BC.

UVOD

Višegodišnja sustavna istraživanja Gradine u Nadinu pružila su niz iznimno vrijednih podataka o organizaciji i transformacijama i naseobinskog i pogrebnog areala (pra)povijesne zajednice koja je tu kontinuirano boravila od kraja 11. st. pr. Kr. pa sve do završnog 6. st. po Kr.[1] U Nadinu su dokumentirane i djelomično istražene obje osnovne vrste nekropola: ona pod humcima koja predstavlja stariju tradiciju,[2] te ona na ravnom koja se u Nadinu, prema situaciji na dosad istraženom arealu, počinje upotrebljavati znatno poslije, tek od 7. st. pr. Kr., no ubrzo postaje glavni, a nakon nekog vremena, čini se, i isključivi prostor korišten za pokapanje.[3] Liburnska, a zatim i rimska nekropola na ravnom u Nadinu podignuta je na sjeverozapadnoj padini nadinske glavice, uz staru prometnicu koja je vodila u Gradinu, istovremeno je povezujući s drugim važnim liburnskim središtima. Tijekom nekoliko arheoloških kampanja (2005., 2009., 2013., 2015., 2018. – 2020. godine)[4] dokumentirana je osnovna planimetrija željeznodobne nekropole koju karakterizira relativno pravilan gust raster grobnih polja naznačenih ogradama od masivnoga lomljenog, u pravilu okomito postavljenog kamenja uokolo grobova najčešće u obliku kamene škrinje. U mlađemu željeznom dobu počinju se rabiti monumentalne grobnice koje su, premda znatno monumentalnije i pravilnije, svojom arhitekturom u osnovi bliske starijim ogradama koje su omeđivale grobove. U njima je prakticira-

[1] Sveobuhvatni popis bibliografskih jedinica o istraživanjima kod: ČELHAR, BORZIĆ 2024. O organizaciji prapovijesnog naselja tijekom vremena kod: ČELHAR, ZARO 2025.

[2] BATOVIĆ, ČONDIĆ 2005; KUKOČ 2005; 2009; KUKOČ, BATOVIĆ 2005.

[3] KUKOČ 2009; KUKOČ, ČELHAR 2019.

[4] Tijekom 2013. i 2015. godine istraživanja su provođena u sklopu terenske nastave studenata Odjela za arheologiju Sveučilišta u Zadru pod vodstvom prof. dr. sc. B. Marijanovića kojem stoga na ovom mjestu posvećujem ovaj rad čiji sastavni dio čine i fibule dokumentirane tijekom navedenih arheoloških kampanja.

INTRODUCTION

Multiple years of systematic excavations at Gradina in Nadin have provided a series of extremely valuable data on the organisation and transformation of both the settlement and the funerary space of the (pre)historic community continuously occupying the site from the end of the 11th century BC until the late 6th century AD.[1] In Nadin, both basic necropolis types have been documented and partially excavated: the older, traditional mound necropolis[2] as well as the flat necropolis. The current state of excavations suggests a much later beginning of the use of the latter – as late as from the 7th century BC; however, soon it would become the prevailing (and after a while seemingly the only) burial space.[3] The Liburnian – and later Roman – flat necropolis in Nadin was erected on the northwestern slope of the Nadin hilltop, along an old road leading to Gradina (the hillfort), at the same time connecting it with other significant Liburnian centres. In several archaeological campaigns (2005, 2009, 2013, 2015, 2018–2020),[4] the basic planimetry of the Iron Age necropolis was documented. It is characterised by a relatively regular, dense grid of grave plots divided by enclosures made of massive unworked stone blocks, as a rule arranged vertically around the graves, usually in the form of stone cists. In the Late Iron Age, monumental tombs came into use. Although they are far larger in scale and more regular, their architecture is basically reminiscent of the earlier grave enclosures. They were used to successively bury a rather large number of deceased individuals over a longer period.[5] In this context, Grave 105, ex-

[1] For a comprehensive list of bibliographic units on the excavations, s. ČELHAR, BORZIĆ 2024. On the organisation of the prehistoric settlement over time, s. ČELHAR, ZARO 2025.

[2] BATOVIĆ, ČONDIĆ 2005; KUKOČ 2005; 2009; KUKOČ, BATOVIĆ 2005.

[3] KUKOČ 2009; KUKOČ, ČELHAR 2019.

[4] In 2013 and 2015, excavations were conducted as part of field teaching for students of archaeology at the University of Zadar under the guidance of Professor B. Marijanović, PhD, to whom I dedicate this paper.

[5] BATOVIĆ, BATOVIĆ 2013; KUKOČ, ČELHAR 2019.

no sukcesivno pokapanje većeg broja pokojnika tijekom dužeg vremena.[5] U tom kontekstu treba posebno istaknuti grob 105 istražen tijekom 2018. godine. Riječ je o jedinoj intaktnoj grobnici te vrste ne samo u Nadinu nego i na širemu liburnskom prostoru što je prvi put omogućilo precizno određivanje broja sahranjenih individua, vrste i količinu popratnih nalaza i priloga te vremena u kojem je grobnica korištena. Zapanjujućih 228 pokojnika obaju spolova i svih dobnih skupina pokopano je u svojim raskošnim nošnjama i s prilozima lončarije simpozijastičkog karaktera tijekom posljednjih dvaju stoljeća prije Krista. Među mnogobrojnim predmetima grobnog odijela, kao kategorija koja se kvantitativno i kvalitativno osobito ističe jesu raznovrsni tipovi fibula zastupljeni s više od 700 primjeraka.[6] Za ovu priliku odabran je tek jedan od njih, brojno dokumentiran u grobnici 105, ali i u drugim kontekstima nadinske nekropole na ravnom. Riječ je o fibulama tipa Certosa varijante Ic i Id. Obiman korpus i tipološka varijabilnost nadinskih primjeraka omogućili su ponovnu raspravu o njihovoj tipokronološkoj problematici te potencijalnim produkcijskim središtima.

FIBULE TIPA CERTOSA Ic I Id – DOSADAŠNJA RAZMATRANJA

Fibule tipa Certosa karakterističan su dio nošnje na širokom arealu od Bolonje i sjeverne Italije preko jugoistočnoga alpskog i predalpskog prostora do jugozapadne Panonije i zapadnog Balkana, ponajprije obilježavajući vrijeme kraja 6. do 3. st. pr. Kr., iznimno pak do kraja 2. st. pr. Kr.[7] Na osnovi iznimne tipološke varijabilnosti podijeljene su u 13 glavnih

[5] BATOVIĆ, BATOVIĆ 2013; KUKOČ, ČELHAR 2019.

[6] ČELHAR, UGARKOVIĆ 2021: 298, 312–314; ČELHAR, BORZIĆ 2024.

[7] TERŽAN 1976: 318, 341 i d., Pril. 1-2. Vidi i: PRIMAS 1967.

cavated in 2018, stands out. This has been the only intact tomb of this type found, not only at Nadin, but also over the wider Liburnian area. For the first time, it enabled a precise determination of the number of individuals buried, the type and amount of accompanying finds and grave goods, and the time during which the tomb was used. As many as 228 deceased individuals of both sexes and all age groups were buried in opulent attire, and with symposiastic pottery types as grave goods, over the course of the last two centuries BC. Among numerous burial costume items, a particularly prominent category in terms of quantity and quality is that of various fibula types, represented by more than 700 specimens.[6] Discussed in this paper is a single type, many specimens of which were documented in Tomb 105, but also in other contexts of the flat necropolis at Nadin: the Certosa variant Ic and Id fibula type. The extensive body and typological variability of the Nadin specimens has enabled a revision of their typological-chronological problem issues and potential production centres.

CERTOSA Ic- AND Id-TYPE FIBULAE – CURRENT CONSIDERATIONS

The Certosa fibulae were a characteristic part of attire in a broad geographic area, from Bologna and northern Italy through the southeastern Alpine and pre-Alpine areas to southwestern Pannonia and the western Balkans, primarily dating to the period from the end of the 6th to the 3rd century BC, in exceptional instances until the end of the 2nd century BC.[7] On the basis of their exceptional typological variability, they were classified into 13 major types, of which each has a series of additional variants.[8] Two of the later variants – Certosa Ic and Id – were, at an early stage, identified as products of local craftsmen within

[6] ČELHAR, UGARKOVIĆ 2021: 298, 312-314; ČELHAR, BORZIĆ 2024.

[7] TERŽAN 1976: 318, 341ff, Add. 1-2. S. also: PRIMAS 1967.

[8] TERŽAN 1976: 319-341.

tipova, svaki s nizom dodatnih varijanti.[8] Dvije od tih kasnih inačica, Certosa Ic i Id, rano su prepoznate kao produkt lokalne obrtničke inicijative na liburnskom i japodskom području o čemu nedvosmisleno svjedoči areal njihove distribucije.[9]

U relativno kratkom vremenu, tijekom 70-ih do samog početka 80-ih godina 20. stoljeća, fibule tipa Certosa Ic i Id bile su predmet nekoliko tipološko-kronoloških razmatranja pri čemu su i imenovane na različite načine. Prema klasifikaciji Fulvie Lo Schiavo određene su kao *fibule s dugmetom u obliku boce*, a kao osnovna forma prepoznata je ona s konkavnim presjekom luka ukrašenog dvama poprečnim rebrima. Lo Schiavo je dodatno izdvojila četiri varijante (A-D) koje su se ponajprije odvajale presjekom i ukrasom luka. Varijante A, B i D odlikuje luk ukrašen trima zadebljanjima koje međusobno imaju različito oblikovane i (ne)ukrašene kuglice/rebra. Varijanta C donekle se izdvaja specifičnim presjekom luka u obliku slova V i manjim dimenzijama,[10] ali i činjenicom da je navedeni oblik poslije gotovo potpuno izostavljen iz rasprava povezanih s Certosa Ic i Id fibulama. Treba napomenuti da je Lo Schiavo obradila *fibule s dugmetom u obliku boce* izdvojeno od grupe Certosa fibula uvrstivši ih u svoju grupu fibula s izdignutim završetkom noge (grupa XXV) u koju su, među ostalim, uvršteni i brojni drugi tipovi, poput npr. fibula tipa Baška, tipa Kompolje i pseudocertosa fibula sa zoomorfnim završetkom noge, ali s druge strane i neki morfološki potpuno različiti oblici, poput npr. fibula tipa Jezerine.[11]

Sljedeći autor koji se detaljnije pozabavio navedenim fibulama bio je Šime Batović pri obradi nalaza iz ostave u Jagodnji Gornjoj.[12]

the Liburnian and Iapodian territories, as clearly evidenced by their distribution areas.[9]

In a relatively short period (the 1970s and at the beginning of the 1980s), the Certosa Ic- and Id-type fibulae were on several occasions subject to typological and chronological considerations and differently termed. Fulvia Lo Schiavo labelled them as *fibulae with bottle-shaped button*, while identified as the basic form was that with a concave bow cross-section, decorated with two transversal ribs. Lo Schiavo additionally singled out four variants (A–D) with characteristic cross-sections and bow decorations. Variants A, B and D have bows decorated with three thickenings; each has distinctively shaped small globules / ribs, decorated or not. Variant C, with its specific V-shaped bow cross-section and smaller size,[10] is somewhat different; also noteworthy is the fact that it has been almost completely left out of any discussions related to Certosa Ic and Id fibulae. It should be mentioned that Lo Schiavo classified the *fibulae with bottle-shaped button* separately from the Certosa fibula group, placing them as fibulae with a raised termination of the foot (group XXV). This group also includes numerous other types, such as Baška-type fibulae, Kompolje-type fibulae, and pseudo-Certosa fibulae with a zoomorphic foot terminal. On the other hand, it also encompasses some morphologically entirely different forms, such as Jezerine-type fibulae.[11]

Another author who dealt with the details of the above-mentioned fibulae was Šime Batović, in the course of processing hoard finds from Jagodnja Gornja.[12] He termed them *certosoid fibulae with a bottle-shaped foot extension*, mapped them and identified them as a local phenomenon in the Liburnian and Iapodian regions in the period from the 4th to the 2nd century BC, due to the number and representation of variants whose origin was assumed to be somewhere in Libur-

8 TERŽAN 1976: 319–341.
9 BATOVIĆ 1974: 187, Karta 2; TERŽAN 1976: 319–320, 382; TEŽAK-GREGL 1981: 32–33.
10 LO SCHIAVO 1970: 448, T. XX/1, 7; XXII/3; XXXII/8, 12, 15, 17–18.
11 LO SCHIAVO 1970: 447–450, T. XXXII/2–18.
12 BATOVIĆ 1974: 185–190, Karta 2, Sl. 2.

9 BATOVIĆ 1974: 187, Map 2; TERŽAN 1976: 319-320, 382; TEŽAK-GREGL 1981: 32-33.
10 LO SCHIAVO 1970: 448, Pl. XX/1, 7; XXII/3; XXXII/8, 12, 15, 17-18.
11 LO SCHIAVO 1970: 447-450, T. XXXII/2-18.
12 BATOVIĆ 1974: 185-190, Map 2, Fig. 2.

Imenovao ih je *certosoidnim fibulama s produžetkom noge u obliku boce*, kartirao ih i odredio kao lokalnu pojavu na liburnskom i japodskom prostoru u razdoblju od 4. do 2. st. pr. Kr., pretpostavivši s obzirom na broj i zastupljenost varijanti njihovo ishodište negdje na tlu Liburnije. Tri osnovne varijante izdvojio je ponajprije na osnovi kriterija izvedbe ukrasa na luku: one bez zadebljanja na luku, s dvama rebrastim zadebljanjima na luku te one s trima loptastim ili astragalnim zadebljanjima na luku pri čemu je potonja prema detaljima izvedbe zadebljanja dodatno podijeljena na četiri podvarijante.[13]

Svega dvije godine nakon Batovićeve publikacije izlazi opsežan rad Bibe Teržan o Certosa fibulama gdje su one uvrštene u veliku grupu fibula tipa Certosa, i to kao lokalne inačice Ic i Id. Prema autorici, Certosa fibule inačice Ic obuhvaćaju fibule najčešće čunastog luka ukrašenog urezima ili rebrima, dok one Id varijante odgovaraju fibulama s masivnim lukom ukrašenim zadebljanjima.[14] Fibule neukrašena luka, kao ni one s lukom V-presjeka nisu posebno izdvojene, ali ni uvrštene u popis fibula navedenih inačica.[15] Teržan navodi da s obzirom na oblik i detalje izrade ishodišni oblik i uzor treba tražiti u inačici Ib s identičnim završetkom noge u obliku bikoničnog dugmeta s čepastim dodatkom, no s dvama parovima rebara na luku lećastog presjeka.[16] Fibule Certosa Ic i Id određuje u najmlađe inačice Certosa fibula čija je uporaba bila istovremena inačici Certosa VIIf, i to u vremenu negdje od kasnog 4. st. pr. Kr. do prijelaza 2. u 1. st. pr. Kr.[17]

13 BATOVIĆ 1974: 187, 189, Sl. 2.
14 TERŽAN 1976: 319.
15 Tako npr. u popisu (TERŽAN 1976: 320) nema fibule iz groba 37 iz Nina koju je publicirao Batović (BATOVIĆ 1974: Sl. 2/1), kao ni one s prostora sjeverne Dalmacije koju donosi Lo Shiavo (LO SCHIAVO 1970: 422, 449, Tav. XX/1; XXXII/15), iako je iz popisa lokaliteta razvidno da autorica poznaje i citira oba navedena rada.
16 TERŽAN 1976: 382.
17 TERŽAN 1976: 382.

nian territories. He isolated three basic variants, primarily according to differences in the bow ornaments: without thickening on the bow; with two ribbed bow thickenings; and with three globular (or astragal) bow thickenings. The latter were further divided into four subvariants according to the details of the thickening workmanship.[13]

Only two years after Batović's publication, a comprehensive work by Biba Teržan on Certosa fibulae was published, where these fibulae were attributed to a large Certosa-type fibulae group as local Ic and Id variants. According to Teržan, Certosa Ic fibula variants included fibulae with (most often) a boat-shaped bow decorated with incisions or ribs, while the Id variants corresponded to fibulae with a massive bow decorated with thickenings.[14] Fibulae with an undecorated bow, as well as those with a V-section bow, were not specifically singled out, nor included in the list of fibulae of the above variants.[15] Teržan stated that the shape and workmanship details would suggest that the original form and pattern were to be sought in variant Ib, which has an identical foot terminal, in the shape of a biconical button with a stopper-like extension, but features two pairs of ribs on a bow with a lenticular cross-section.[16] She attributed the Certosa Ic and Id fibulae as the most recent Certosa fibula variants, used contemporaneously with the Certosa VIIf variant anywhere between the late 4th century BC and the turn of the 2nd and 1st centuries BC.[17]

Ultimately, in 1981, Tihomila Težak-Gregl defined them as type 8 in a suggested typology of Certosa fibulae from the Iapodian area. In her text, this author distinguished between three variant types: with a two-ribbed bow, with three globular thickenings on the bow, and with an un-

13 BATOVIĆ 1974: 187, 189, Fig. 2.
14 TERŽAN 1976: 319.
15 To take an example, the list (TERŽAN 1976: 320) did not include the fibula from Grave 37 at Nin published by Batović (BATOVIĆ 1974: Fig. 2/1), or the one from the area of northern Dalmatia, published by Lo Schiavo (LO SCHIAVO 1970: 422, 449, Tav. XX/1; XXXII/15), although the list of sites clearly indicates that the author was familiar with both publications.
16 TERŽAN 1976: 382.
17 TERŽAN 1976: 382.

U konačnici ih 1981. godine Tihomila Težak-Gregl određuje kao tip 8 u ponuđenoj tipologiji Certosa fibula s japodskog prostora. Iako autorica u tekstnom dijelu razlaže tip na tri varijante: s dvama rebrima na luku, trima kuglastim zadebljanjima na luku te neukrašena luka,[18] u katalogu poznaje tek dvije varijante označene kao 8a i 8b.[19] Jedinu fibulu neukrašena luka iz Prozora uvrstila je u katalogu u varijantu 8a,[20] zajedno s fibulama s lukom ukrašenim dvama rebrima i trakastoga, čunasto oblikovanog presjeka, unatoč činjenici da je prozorska fibula prema oblikovanju masivnog luka ovalnog presjeka u osnovi bliža inačici s trima zadebljanjima na luku, naravno, bez ovih karakterističnih dodatnih ukrasnih elemenata. Početak pojave Certosa fibula tipa 8 vidi nešto ranije u odnosu na prijedlog Bibe Teržan, i to već početkom 4. st. pr. Kr. s njihovim korištenjem sve do u 2. st. pr. Kr.[21]

Certosa Ic i Id fibula doticali su se i, u manjoj ili većoj mjeri, pojedini autori najčešće u sklopu studija o pojedinim lokalitetima i/ili regijama gdje se one javljaju.[22] Nešto opsežniji općenit osvrt ponudila je u recentno vrijeme Asja Tonc u okviru svoje doktorske disertacije.[23]

TIPOLOGIJA

U recentnoj je znanstvenoj literaturi već duže vrijeme ustaljena nomenklatura koju je predložila Teržan s podjelom na inačicu Certosa Ic s dvama rebrima ili dvjema grupama ureza na padinama luka prema nozi i prema opruzi, odnosno Certosa Id s trima zadebljanjima.[24] Prema tipologiji koju je ponudila Teržan, Certosa Ie ima tri zadebljanja na luku, ali i dodatne ukrase u obliku ureza na luku.[25]

[18] TEŽAK-GREGL 1981: 32.
[19] TEŽAK-GREGL 1981: 44–45.
[20] TEŽAK-GREGL 1981: 44, br. 66, T. 6/8.
[21] TEŽAK-GREGL 1981: 33.
[22] Npr.: GLOGOVIĆ 1989: 32, T. 32/1–4; 1998: 35, T. II/5; 2014: 10, Pl. 9b/54, 61, 13a: 1; MIHOVILIĆ 1995: 86-87, T. 1/2–3; BLEČIĆ 2002: 88, 115–116, T. 3/1.4; BLEČIĆ KAVUR 2010: 316–318, T. 32/433; 33/3; 34/471; 46/675–676; 2015: 169–171; BATOVIĆ, BATOVIĆ 2013: 51, T. XIII/16; XIV/22; LXXXVI; MARIĆ 2017: 25-28, Pl. I/1–3.
[23] TONC 2015: 103-107, T.2.

decorated bow.[18] However, in the catalogue, she mentioned only two variants, labelled 8a and 8b.[19] She categorised the fibula from Prozor – the only one with an undecorated bow – as variant 8a,[20] along with fibulae with two-ribbed bow decoration and a boat-shaped cross-section. This was despite the fact that, with its massive bow with oval cross-section, basically the Prozor fibula is morphologically closer to the variant with three thickenings on the bow (of course without these characteristic additional decorative elements). She dated the beginning of the occurrence of type-8 Certosa fibulae somewhat earlier than suggested by Biba Teržan, to as early as the beginning of the 4th century BC, and their use until the 2nd century BC.[21]

Individual authors have most often dealt with Certosa Ic and Id fibulae, to a greater or lesser extent, as part of studies of specific sites and/or regions of their occurrence.[22] A more extensive general review has recently been provided in Asja Tonc's dissertation.[23]

TYPOLOGY

Once established, the nomenclature proposed by Teržan has continued into recent scientific literature. It includes the classification into the variants Certosa Ic, with two ribs (or two sets of incisions) at the lower slope of the bow towards the foot and the spring, and Certosa Id, with three thickenings on the bow.[24] According to the current typology, Certosa Ie has three thickenings on the bow, but also additional decorations in the form of incisions on the bow.[25]

[18] TEŽAK-GREGL 1981: 32.
[19] TEŽAK-GREGL 1981: 44-45.
[20] TEŽAK-GREGL 1981: 44, No. 66, Pl. 6/8.
[21] TEŽAK-GREGL 1981: 33.
[22] E.g.: GLOGOVIĆ 1989: 32, Pl. 32/1-4; 1998: 35, Pl. II/5; 2014: 10, Pl. 9b/54, 61, 13a: 1; MIHOVILIĆ 1995: 86-87, Pl. 1/2-3; BLEČIĆ 2002: 88, 115-116, Pl. 3/1.4; BLEČIĆ KAVUR 2010: 316-318, Pl. 32/433; 33/3; 34/471; 46/ 675-676; 2015: 169-171; BATOVIĆ, BATOVIĆ 2013: 51, Pl. XIII/16; XIV/22; LXXXVI; MARIĆ 2017: 25-28, Pl. I/1-3.
[23] TONC 2015: 103-107, Pl. 2.
[24] Certainly worth mentioning is the find of a silver certosoid fibula from Nesactium (MIHOVILIĆ 1995: 81-82; Pl. 1/1) and a bronze one from Burnum (JADRIĆ-KUČAN, ZANINOVIĆ 2015: 14, 80 (cat. No. 1), Pl. 1/1) that are close to the Certosa Id type, but with different bow decorations.

njima na luku.[24] Prema trenutačnom stanju, uključujući i nove nalaze iz Nadina, poznate su 34 fibule tipa Certosa Ic te 33 fibule tipa Certosa Id (tab. 1). Međutim, u navedenoj podjeli nije uvažena prisutnost inačice neukrašena luka koju prepoznaju i Batović i Težak-Gregl, a koja je, do nedavno, uistinu i bila poprilično rijetko zastupljena, ali i shvaćana na različite načine. Tako npr. Batović uvrštava u svoju inačicu fibula *bez odebljanja na luku* i primjerak iz ninskog groba 37 s potpuno neukrašenim lukom, ali i jednu fibulu iz Aserije te fibule iz Ribića, Golubića i Jezerina[25] koje nemaju dva rebrasta zadebljanja na padinama luka, no imaju na istim pozicijama na luku ureze. Teržan izričito navodi da inačica Ic može imati luk ukrašen ili urezima ili rebrima,[26] a navedeni primjerci iz pounskih nalazišta bez iznimke su uvršteni u inačicu Ic i kod svih drugih autora izuzev Batovića.[27] Marić čak predlaže uvođenje dviju podvarijanti: Ic1 (s urezima) i Ic2 (s rebrima), s obzirent state of research, including the new finds from Nadin, 34 Certosa Ic-type fibulae and 33 Certosa Id-type fibulae (Tab. 1) are known. However, this classification does not take into account the presence of the undecorated-bow variant, recognised by both Batović and Težak-Gregl, which until recently was not only quite rarely represented but also interpreted in different ways. Thus, Batović, for example, attributed to his fibula variant *without thickening on the bow* not only the specimen from Grave 37 at Nin with a completely undecorated bow, but also a specimen from Asseria as well as fibulae from Ribić, Golubić and Jezerine[25] with two incisions on the bow in place of two ribbed thickenings. Teržan explicitly stated that variant Ic can occur with a bow decorated with either incisions or ribs,[26] while all other authors (with the exception of Batović) classified the aforementioned examples from the Una valley (Pounje) sites as variant Ic.[27] Marić even proposed the introduction of two subvariants based on bow decoration: Ic1 (with incisions) and Ic2 (with ribs).[28]

More recently, especially with the discovery of

[24] Svakako treba spomenuti nalaz jedne srebrne certosoidne fibule iz Nezakcija (MIHOVILIĆ 1995: 81–82; T. 1/1) i jedne brončane iz Burnuma (JADRIĆ-KUČAN, ZANINOVIĆ 2015: 14, 80 (kat. br. 1), T. 1/1) koje su bliske tipu Certosa Id, a od njih se razlikuju po izvedbi ukrasa na luku. Naime, na njima je vidljivo oblikovanje četiriju zadebljanja u nizu, u burnumskom slučaju s još jednom dodatnom užom profilacijom prema nozi fibule. U načelu ih se može shvatiti kao izvedenicu, odnosno jednu od podvarijanti Certosa Id fibula. S obzirom na malobrojnost i neke morfološke razlike među njima (jednodijelna/dvodijelna konstrukcija; srebro/bronca; manje razlike u oblikovanju zadebljanja; (ne)ukrašenost noge; nemogućnost usporedbe dugmeta na kraju noge koje nije očuvano na nezakcijskom primjerku), zasad su ipak izostavljene iz rasprave. Ukras na fibuli iz Burnuma donekle je blizak nadinskoj fibuli na T. III/2 kod koje je prostor između zadebljanja/kuglica zaobljeniji nego inače, pa bi se i mogao interpretirati kao niz od 5 zadebljanja. Međutim, na nadinskoj fibuli se pojedina zadebljanja, posebno središnje, izdvajaju dimenzijama (visinom), pa je možda takav izgled posljedica oblikovanja kalupa, ne nužno namjere izvedbe specifičnog ukrasa. U svakom slučaju i ove fibule iznova potvrđuju iznimnu varijabilnost u izvedbi pojedinih detalja na fibulama Certosa ili njima bliskih vrsta.

[25] BATOVIĆ 1974: 187–188, Karta 2. Također, Batović u istu inačicu ubraja i fibulu s prostora sjeverne Dalmacije s V - presjekom luka (BATOVIĆ 1974: 187).

[26] TERŽAN 1976: 319.

[27] TONC 2015: 106; MARIĆ 2017: 26.

While both exhibit four thickenings in a row, the latter also has a narrow profile towards the fibula foot. Basically, both can be interpreted as derivatives or subvariants of the Certosa Id fibulae. Nevertheless, they have so far been left out of the discussion, given their small number and specific morphological differences (one-piece/two-piece construction; silver/bronze; minor differences in the formation of thickenings; (the absence of) foot decorations; the inability to make a comparison of the buttons at the foot terminal due to the fact that this has not been preserved in the Nesactium specimen). The decoration on the Burnum fibula is partially similar to that of the Nadin fibula in Pl. III/2 in which the room between the thickenings / small globules is more rounded than usual and could therefore be interpreted as a series of five thickenings. However, some thickenings on the Nadin fibula are somewhat higher, especially the central one, suggesting that its appearance is a result of the form of the mould, and not necessarily an intentionally worked decoration. In any case, these fibulae once more confirm the exceptional variability in the working of certain details in Certosa fibulae or those akin to them.

[25] BATOVIĆ 1974: 187-188, Map 2. In addition, Batović classified a fibula from the area of northern Dalmatia with a V-shaped bow cross-section as the same variant (BATOVIĆ 1974: 187).

[26] TERŽAN 1976: 319.

[27] TONC 2015: 106; MARIĆ 2017: 26.

[28] MARIĆ 2017: 26.

rom na izvedbu ukrasa na njihovu luku.[28]

U novije vrijeme, posebno s otkrićem većeg broja nalaza iz Nadina, broj fibula s neukrašenim lukom znatno se povećao i dosegnuo brojku od 31 primjerka, što svakako nije zanemariva brojka. No, i fibule neukrašena luka međusobno pokazuju varijacije u izvedbi, i to ponajprije presjekom luka pri čemu ih možemo u osnovi razdijeliti na one masivnoga, punog i one stanjenoga trakastog luka. Kod ovih prvih presjek može varirati od ovalnoga, polukružnog do kružnog,[29] dok su kod potonjih prisutne dvije glavne varijacije: fibule čunastog presjeka luka, dakle identičnog inačici Ic, ali bez ukrasa, ili pak one s udubljenom ili konkavnom gornjom plohom fibule pri čemu se presjek luka približava plitkom U- ili V-presjeku, inačici koju je, kao što je već spomenuto, uočila Fulvia Lo Shiavo.[30] Osim izostanka ukrasa na luku, zajednička karakteristika svih neukrašenih fibula, neovisno o presjeku luka, jesu i njihove uniformne dimenzije. Iako nam nisu dostupni podatci preciznih dimenzija za sve primjerke,[31] jasno je da je bez iznimke riječ o relativno malenim fibulama čije se dužine kreću u rasponu od 3,7 do 5,75 cm. S druge strane, kod inačica Ic i Id varijacije su znatnije, pa tako ove prve imaju dužinu u rasponu od 3,65 do 10 cm, a potonje od 4 do 10,55 cm. Također, iako

[28] MARIĆ 2017: 26.

[29] Dio tih fibula ima na najvišem dijelu donje strane luka malu kružnu udubinu (T. V/9; VI/1, 5, 7; v. i: BATOVIĆ, BATOVIĆ 2013: 20, T. XIV/22). Nije jasno je li riječ o namjernoj izvedbi ili posljedici proizvodnog procesa.

[30] LO SCHIAVO 1970: 448, Tav. XXXII/15.

[31] Treba naglasiti da su u ovu brojku uključene i četiri fibule s Ljupča (BRUSIĆ 2002: Sl. 37/2, 5, 8–9), od kojih jedna sigurno ima neukrašen luk. Kod drugih je triju vidljivo zadebljanje prema nozi (kod nekih i s gornje i donje strane luka!), no istovremeno ono nije jasno uočljivo na dijelu prema opruzi. S obzirom na kvalitetu fotografija i jaku korodiranost predmeta, nije sigurno da je uistinu riječ o ukrasu. Fibule su, nažalost, nedostupne za ponovnu inspekciju. S obzirom na sve navedeno, relativnu ujednačenost njihovih dimenzija i naizgled puni presjek luka, uvrštene su u inačicu Ie1. Kao fibule neukrašena luka opisuje ih i Tonc (TONC 2015: 105), dok ih Marić interpretira kao jednu fibulu neukrašena luka, a ostale tri uvrštava u svoju podvarijantu Ic2 s lukom ukrašenim parom rebara (MARIĆ 2017: 26).

a larger number of finds in Nadin, the number of fibulae with undecorated bows has increased significantly, having now reached the figure of 31 specimens: by no means a negligible number. However, fibulae with undecorated bows also display variations in workmanship, primarily of the bow cross-section: it is possible to differentiate between those with a massive, full bow and a thinned band-shaped bow. The cross-section of the first can vary (oval, semi-circular or circular),[29] while the second shows two main variations: fibulae with a boat-shaped bow cross-section (identical to variant Ic, but without decorations), and those with a depressed or concave upper fibula surface, with the bow cross-section approaching a shallow U- or V-shape: the variant mentioned by Fulvia Lo Schiavo.[30] In addition to the absence of decorations on the bow, another common characteristic of all undecorated fibulae, regardless of the bow cross-section, is their uniform size. Although no precise data on the size of all specimens are available,[31] clearly the fibulae are relatively small, with lengths ranging from 3.7 to 5.75 cm. On the other hand,some of the Ic and Id variants are significantly larger; thus, the length of the former ranges from 3.65 to 10 cm, and that of the latter from 4 to 10.55 cm. Also, although the categorisation of variants within the Certosa I fibula

[29] Some of these fibulae have a small circular recess on the highest part of the bow inside (Pl. V/9; VI/1, 5, 7; s. also: BATOVIĆ, BATOVIĆ 2013: 20, Pl. XIV/22). It is not clear whether this was a deliberate rendering or a result of the production process.

[30] LO SCHIAVO 1970: 448, Tav. XXXII/15.

[31] It should be noted that this figure includes also four fibulae from Ljubač (BRUSIĆ 2002: Fig. 37/2, 5, 8-9), one of which certainly has an undecorated bow. In the other three, a thickening towards the foot is visible (in some this is the case on both the upper and the lower side of the bow!), but at the same time it is not clearly visible in the section towards the spring. Given the quality of the photos and the extensive corrosion of the artefacts, it is not certain that this was really a decoration. Unfortunately, the fibulae are unavailable for re-inspection. Given all of the above, as well as their relatively uniform size and the apparently full cross-sections of their bow, they were classified as variant Ie1. Tonc also described them as fibulae with an undecorated bow (TONC 2015: 105), while Marić interpreted them as a single fibula with an undecorated bow, and three Ic2 sub-variant fibulae with bows decorated with a pair of ribs (MARIĆ 2017: 26).

se pri razdjeljivanju varijanti unutar grupe I Certosa fibula uzimao u obzir niz elemenata (presjek noge, presjek luka, ukras luka, oblik dugmeta na nozi itd.), čini se da je ipak jedan od važnijih kriterija bio ukras luka koji je bez iznimke prisutan na svim fibulama. Tako npr. inačice Ia i Ib imaju istovjetan T-presjek (te često i ukras) noge, oblik i lećast presjek luka, a razlikuju se ponajprije prema ukrasu luka i obliku dugmeta na nozi. Inačice c i d imaju uglavnom isti C- ili J-presjek noge, oblik dugmeta na nozi, oblik luka, a razlikuju se prema presjeku luka i načinu na koji je on ukrašen. S obzirom na to da na promatranim fibulama nema dodatnog ukrasa na luku, to bi bio vodeći kriterij njihova vizualnog raspoznavanja. Stoga se predlaže njihovo izdvajanje u posebnu inačicu, Certosa Ie u koju bi bile uvrštene sve fibule neukrašena luka bilo da su punoga, lijevanog luka (Ie1), čunastog (Ie2) ili U- ili V-presjeka luka (Ie3) (tab. 1). Treba napomenuti da jedna fibula inačice Ie3 iz Nadina (T. VI/10) ipak odudara od ostalih jer ima dodatni ukras u vidu triju plitkih ureza. Međutim, urezi su prisutni samo na jednoj strani luka, prema opruzi, što odudara od standardnog načina ukrašavanja Certosa I grupe fibule s barem dvjema zonama ukrašavanja na padinama luka.[32] Riječ je o malobrojno dokumentiranoj podvarijanti sa svega sedam poznatih primjeraka, od kojih tri s Cvijine gradine još nisu detaljno publicirane.[33] Svi su poznati primjerci izrađeni od

[32] Urezi su katkad i popratni ukras lukova Certosa Ic i Id fibula, pozicionirani uglavnom na istom dijelu, prema opruzi (vidjeti npr. BATOVIĆ 1974: T. IX/2–3; 1981: 115, Sl. 8/28). Zanimljiva je situacija s dijelom srebrnih Certosa Id fibula iz groba 105. Naime, pojedine takve fibule imaju tri zadebljanja na luku uz čije su rubove pridodani urezi, a pojedine (T. III/3; IV/1; V/1–2, 4) imaju još i dodatan par jače ili slabije uočljivih ureza prema opruzi ili i prema nozi i opruzi. Riječ je u svakom slučaju o raskošnijoj izvedbi osnovnog ukrasa koji kombinira i plastične, vizualno svakako dominantne elemente ukrasa s onim pomoćnim, izvedenim urezivanjem.

[33] Fibula tipa Certosa Ic i dvije fibule Certosa Ie3 publicirane su na skupnim fotografijama u dvama izdanjima kataloga kojima su popraćene izložbe posvećene istraživanju Cvijine gradine u Obrovcu (JURJEVIĆ, ČONDIĆ 2013: 28) i

group encompassed a number of elements (such as foot cross-section, bow cross-section, bow decoration and foot button shape), it seems that one of the most important criteria was the bow decoration, which is present in all fibulae without exception. Thus, for example, variants Ia and Ib have the same T-shaped foot cross-section (and often also the same foot decoration), as well as the same bow shape and lenticular bow cross-section, while they differ primarily in the bow decoration and the foot knob shape. Variants c and d mostly have the same C- or J-shaped foot cross-section, the same foot knob shape and bow shape, while their bow cross-sections and decorations differ. Given that the observed fibulae have no additional bow decorations, this should be considered the main criterion of their visual distinction. Therefore, introducing a separate variant, Certosa Ie, is proposed, which would include all fibulae with an undecorated bow: full, cast bow (Ie1); boat-shaped bow (Ie2); or bow with a U- or a V-cross-section (Ie3) (Tab. 1). It should be noted that a Ie3 variant fibula from Nadin (Pl. VI/10) is still set apart from the others, having an additional decoration in the form of three shallow incisions. However, the incisions are present only on one side of the bow, towards the spring, which is different from the standard decoration method in the Certosa I fibula group, which have at least two decoration zones on the bow incline.[32] This is a poorly documented subvariant with only seven known specimens, the details of three of which (from Cvijina Gradina) have not yet been published.[33] All known specimens are made

[32] The incisions sometimes serve as accompanying decorations of bows of the Certosa Ic and Id fibulae, positioned mainly in the same section, towards the spring (s. e.g. Batović 1974: Pl. IX/ 2-3; 1981: 115, Fig. 8/28). The situation with a part of the silver Certosa Id fibulae from Grave 105 is interesting. Namely, some such fibulae have three thickenings on the bow with incisions at the edges, while others (Pl. III/3; IV/1; V/1-2, 4) have an additional pair of incisions (some more noticeable than others) towards the spring, or both the foot and the spring. In any case, this is a more luxurious variant of the basic decoration that combines both plastic, visually predominant decoration elements with the auxiliary incised ones.

[33] A single Certosa Ic-type fibula and two Certosa Ie3-type fibulae were published in group photographs in two cata-

bronce, a neke odlikuje i prisustvo ukrasa na nozi koji se javlja i na pojedinim fibulama Certosa Ic i Id tipa, te iznimno na jednoj fibuli Certosa Ie1 tipa iz Picuga (tab. 1).

Sve Certosa Ic, Id i Ie fibule (uključujući i podvarijante) povezuje gotovo isključivo prisustvo noge C- ili J-presjeka, što ih istovremeno udaljava od ostalih fibula Certosa grupe s T-presjekom noge.[34] Jedina je iznimka Certosa Ic fibula koja potječe negdje s prostora sjeverne Dalmacije, a čuva se u Arheološkom muzeju u Splitu.[35] Noga završava bikoničnim, koničnim, rjeđe gotovo kuglastim ili, pak, spljoštenim dugmetom s čepastim završetkom. Noga je često i ukrašena, i to najčešće kombinacijom pravocrtnih i/ili cik-cak linija koje mogu biti izvedene jednostavnim urezivanjem, tremoliranim cik-cak linijama ili nizom punciranih točkica. Najčešće zastupljen motiv izveden je na način da jednostruka ili dvostruka linija teče uzduž noge, a zatim se od nje na obje strane pružaju kose ili cik-cak linije.[36] U jednom slučaju, nadinska fibula Certosa Ie3 (T. VI/9) nosi ukras jednakokračnog trokuta s dodatnom unutrašnjom linijom koja ga dijeli na dva dijela izveden punciranim točkicama. Ukras noge

of bronze, and some of them are characterised by foot decorations that occur on certain Certosa Ic and Id fibulae, and exceptionally on a Certosa Ie1 fibula from Picugi (Tab. 1).

Certosa Ic, Id, and Ie fibulae (including their subvariants) have, nearly without exception, a C-shaped or J-shaped cross-section foot. This is what sets them apart from the other Certosa group fibulae, which have a T-shaped cross-section foot.[34] The only exception is a Certosa Ic fibula from northern Dalmatia that is kept in the Split Archaeological Museum.[35] The foot ends with a button that can be biconic, conic, less frequently almost globular or, occasionally, flattened, and has a stopper-like extension. Often, the foot is also decorated, most frequently with a combination of straight and/or zigzag lines that could be made by simple incising, tremolo zigzag lines, or a series of punched points. The most commonly represented motif is designed in such a way that a single or double line runs along the foot, with oblique or zigzag lines on its both sides.[36] In one case, a Nadin Certosa Ie3 fibula (Pl. VI/9) bears

Zadru (ČONDIĆ 2014: 53). Iako se luk Certosa Ic fibule jasno razaznaje na fotografijama, to nije slučaj s Certosa Ie3 fibulama. One su uvrštene u navedenu podvarijantu nakon osobnog uvida u građu, kada je uočeno da je na lokalitetu pronađena još barem jedna, djelomično očuvana fibula iste vrste. Nije isključeno da među građom ima još fibula koje se mogu uvrstiti u inačice Certosa Ic, Id ili Ie jer nije pregledana sva građa. Također, kako će lokalitet biti detaljno publiciran od istraživača, u tablici nedostaju detaljni podatci o kontekstu i dužini fibula, no sve one Certosa Ie3 su malih dimenzija. Na dobivenim podatcima i mogućnosti da osobno pogledam građu najiskrenije zahvaljujem muzejskoj savjetnici Arheološkog muzeja u Zadru Nataliji Čondić koja vodi dugogodišnja istraživanja naselja i nekropole Cvijine Gradine.

34 TERŽAN 1976: 319.

35 LO SCHIAVO 1970: Tav. XX/7.

36 Usp. T. I/1.4, ali i fibule iz Jagodnje Gornje (BATOVIĆ 1974: T. XIV/2–6; XV/7–8), Aserije (https://artefacts.mom.fr/: FIB-3914 (br. 2–8) i okolice Otišića (MAROVIĆ 1984: Sl. 23/14). Nažalost, za dvije fibule iz Vinice ukras nije slikovno predočen, već samo opisno, a riječ je o uzorcima cik-cak linija (40-77-40/10678; 40-77-40/10758:https://collections.peabody.harvard.edu/search/vinica).

logue editions accompanying exhibitions dedicated to the excavations of Cvijina Gradina in Obrovac (JURJEVIĆ, ČONDIĆ 2013: 28) and Zadar (ČONDIĆ 2014: 53). Although the Certosa Ic fibula bow is clearly visible in the photos, this is not the case with the Certosa Ie3 fibulae. They were included in the above subvariant after a personal insight into the material, following the observation that at least one partially preserved fibula of the same type has been found at the site. Given that not all the materials have been reviewed, it is not excluded that among the material are more fibulae that can be included in the Certosa Ic, Id or Ie variants. Furthermore, since details about the site are going to be published by the researchers, detailed data on the context and length of the fibulae are missing in the table (although all Certosa Ie3 are small). I would like to express my sincere gratitude to the museum adviser at the Archaeological Museum in Zadar, Natalija Čondić, who has for many years led the excavations of the settlement and the necropolis of Cvijina Gradina, for providing the data and the opportunity to examine the material in person.

34 TERŽAN 1976: 319.

35 LO SCHIAVO 1970: Tav. XX/7.

36 Cf. Pl. I/1.4, but also fibulae from Jagodnja Gornja (BATOVIĆ 1974: Pl. XIV/2-6; XV/7-8), Asseria (https://artifacts.mom.fr/: FIB-3914 (No. 2-8) and the surroundings of Otišić (MAROVIĆ 1984: Fig. 23/14). Unfortunately, the decorations of two fibulae from Vinica have not been depicted, but rather just described as samples of zigzag lines (40-77-40/10678; 40-77-40/10758:https://collections.peabody.harvard.edu/search/vinica).

TABLICA 1. *Lista Certosa Ic, Id i Ie fibula* (izradila: M. Čelhar)
TABLE 1 *List of Certosa Ic, Id and Ie fibulae* (made by M. Čelhar)

Certosa Ic						
	Nalazište / Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1	Nadin	grob 1	6 cm	S	-	BATOVIĆ 1987: T. XLI/13; BATOVIĆ 1990: Sl. 32/1; BATOVIĆ, BATOVIĆ 2013: 19, T. XIII/16; LXXXVI
2	Nadin	grob 16	3,7 cm	S	+	**T. I/2**
3	Nadin	grob 57	6,35 cm	S	+	KUKOČ, ČELHAR 2019: Sl. 19; **T. I/1**
4	Nadin	grob 104	6,2 cm	B	+	**T. I/4**
5–12	Nadin	grob 105	8,3 cm; 5,4 cm; 6,3 cm; 6,9 cm; 5,5 cm; 3,2 cm*; 3,4 cm*; 1,75 cm*	S	-	**T. I/5–6; II/1–6**
13	Nadin	izvan grobne cjeline	5,15 cm	S	+	**T. I/3**
14–17	Aserija	grob 80	7,5 cm; 4,5 cm; 3,9 cm; 3,65 cm	S	+	GALLI 1940: Tav. II/3; BATOVIĆ 1965: T. XII; Abb. 19a/1, 6, 9, 10; 2011: Prilog 2. https://artefacts.mom.fr/: FIB-3914 (br. 2, 4, 7–8)
18	Ljubač	nekropola	~3,7 cm	S	-	GLOGOVIĆ 1998: T. II/5
19	Nin	grob 82		S	-	BATOVIĆ 1959: T. I/9; 1965: T. XIV, Abb. 20/6; 1968: T. XIX
20–26	Jagodnja Gornja	ostava	5,9 cm; 5,8 cm; 4,3 cm*; 7,5/8,2 cm; 8,3 cm; 5,3 cm; 5,35 cm	S	+	BATOVIĆ 1974: 169–170, T. XIV/2–6; XV/7–8; XXVI/2–8
27	Cvijina gradina	nekropola		B		JURJEVIĆ, ČONDIĆ 2013: 28; ČONDIĆ 2014: 53.
28	Sjeverna Dalmacija		5,8 cm	B	-	LO SCHIAVO 1970: 423, Tav. XX/7
29	Vrebac	grob 2	9 cm	B	-	DRECHSLER-BIŽIĆ 1958: 43, T. X/74; TEŽAK-GREGL 1981, 45, T. 6/6
30	Vrebac	grob 4	10 cm	B	-	DRECHSLER-BIŽIĆ 1958: 44, T. XI/84; TEŽAK-GREGL 1981, 45, T. 6/7

* *necjelovite fibule / incomplete fibulae*

31	Krbavica	slučajni nalaz	10 cm	B	-	TEŽAK-GREGL 1981: 44, T. 6/5
32	Jezerine	grob 269	7,3 cm*	B	-	RADIMSKÝ 1893: 371, T. VI/8; 1895: 124, Fig. 315; MARIĆ 1968: Sl. 5/2; MARIĆ 2017: 210, Pl. I/1.
33	Golubić	izvan grobne cjeline	5,7 cm*	B	-	RAUNIG 1968: 93, T. V/1; MARIĆ 2017: 210, Pl. I/3
34	Ribić	grob 199	7,3 cm*	B	-	MARIĆ 1968: T. IX/3; MARIĆ 2017: 210, Pl. I/2
Certosa Id						
	Nalazište /Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1–11	Nadin	grob 105	8,7 cm; 8,7 cm; 8,4 cm; 10,55 cm; 10 cm; 7,2 cm; 8,3 cm*; 6,55 cm*; 7,55 cm*; 5,5 cm*; 4,7 cm*	S B (T. IV/ 2)	-	**T. III/3–5; IV/1–3; V/1–5**
12	Nadin	grob 127	8 cm	S	-	**T. III/1**
13	Nadin	izvan grobne cjeline	6,1 cm	B	-	**T. III/2**
14–16	Asseria	Grob 80	4,5 cm; 4,5 cm, 8,3 cm	S	+	BATOVIĆ 1965: T. XII/ Abb. 19a/2–3, 8; 1974: Sl. 2/3; 2011: Prilog 2; https://artefacts.mom.fr/: FIB-3914 (br. 3, 5–6)
17	Ljubač					BATOVIĆ 1974: 189, Karta 2
18	Nin, Ždrijac	nekropola F	~ 7,6 cm			BRUSIĆ 2002: Sl. 16/6
19	Nin	grob 76		S		BATOVIĆ 1968: T. XVIII; BATOVIĆ 2011: Prilog 3
20	Nin					BATOVIĆ 1974: Sl. 2/4
21	Nin	izvan grobne cjeline	7 cm	S	-	BATOVIĆ 1981: 115, Sl. 8/28
22	Kastav	nekropola (bez grobne cjeline)	5,23 cm	B	-	GLOGOVIĆ 1989: T. 32/4; BLEČIĆ 2002: 88, T. 3/1.4: BLEČIĆ KAVUR 2010: 407, T. 3/33

* *necjelovite fibule / incomplete fibulae*

23	Osor; Kavanela	nekropola	3,5 cm*	S		GLOGOVIĆ 1989: T. 32/2; BLEČIĆ KAVUR 2010: 512, T. 46/676; 2015: Sl. 61a
24	Krk	slučajan nalaz	7,5 cm	B	-	LO SCHIAVO 1970: 424, T. XXII/3; GLOGOVIĆ 1989: T. 32/3; BATOVIĆ 2003: Sl. 14/4; BLEČIĆ KAVUR 2010: 481, T. 34/471
25	Baška	ostava	8,5 cm	S	-	VINSKI 1956: Sl. 2; BATOVIĆ 2003: Sl. 14/3; 15/5; BLEČIĆ KAVUR 2010: 476, T. 32/433.
26	Mazin	ostava	4,8 cm*	B	-	BRUNŠMID 1897: T. XVI/6; TEŽAK-GREGL 1981: 45, T. 6/9; BERTOL STIPETIĆ 2022: 186, 316/1542
27	Prozor	bez grobne cjeline	4 cm*	B	-	TEŽAK-GREGL 1981: T. 6/10
28	Vrebac	grob 4	4 cm	B	-	DRECHSLER-BIŽIĆ 1958: 44, T. XI/85; BATOVIĆ 1974: Sl. 2/6; TEŽAK-GREGL 1981: 45
29	Jezerine	slučajan nalaz	4.5 cm	B	-	ARSENIJEVIĆ, ĐUKIĆ, SIMONOVIĆ 2008: 90 (kat. br. 107)
30–31	Vinica	grob 76	8,5 cm; 7,9 cm	B	+; -	40-77-40/10678; 40-77-40/10679: https://collections.peabody.harvard.edu/search/vinica
32	Vinica	grob 88	4,9 cm	B	+	40-77-40/10758; https://collections.peabody.harvard.edu/search/vinica
33	Nezakcij	hram „B“	4,2 cm*	B	+	MIHOVILIĆ 1995: 86, T. 1/2
Certosa Ie1						
	Nalazište / Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1	Nadin	grob 1	4,1 cm	S	-	BATOVIĆ, BATOVIĆ 2013: 20, T. IV/22; LXXXVI
2–9	Nadin	grob 105	5 cm; 5,5 cm; 4,6 cm; 5,1 cm*; 4,7 cm; 5,4 cm; 3,5 cm*; 3 cm*	S B (T. VI/2)	-	**T. VI/1–8**

** necjelovite fibule / incomplete fibulae*

10	Nadin	grob 107	5,6 cm	S	-	**T. V/7**
11	Nadin	grob 110	4,15 cm*	B	-	**T. V/10**
12	Nadin	izvan grobne cjeline	5,75 cm*	B	-	**T. V/9**
13	Nadin	izvan grobne cjeline	2,8 cm*	S		**T. V/11**
14	Nadin	izvan grobne cjeline	5,3 cm	B	-	**T. V/8**
15–18	Ljubač	nekropola	~ 4,5 - 6 cm	B		BRUSIĆ 2002: 237, Sl. 37/2, 5, 8–9
19	Osor, Kavanela	nekropola	4,2 cm	S	-	ĆUS-RUKONIĆ 1981: T. II/1; GLOGOVIĆ 1989, T. 32/1.; BLEČIĆ KAVUR 2010: 512, T. 46/675; 2015: Sl. 61a
20	Picugi		4,4 cm	B	+	BATOVIĆ 1987a: T. XVII/6; GABROVEC, MIHOVILIĆ 1987: T. XXXIV/5; MIHOVILIĆ 1995: T. 1/3
21	Prozor	bez grobne cjeline	4,5 cm	bronca	-	TEŽAK-GREGL 1981: 44, T. 6/8
Certosa Ie2						
	Nalazište / Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1	Nin Ždrijac	grob 37		S	+	BATOVIĆ 1974: Sl. 2/1; 1987: T. XLI/3; HILLER 1991: 367, T. 22/240
2	Dragišić	grob 14	4 cm	B	-	GLOGOVIĆ 2014: 40, Pl. 9b/54
Certosa Ie3						
	Nalazište / Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1.	Nadin	grob 89	4,9 cm	B	+	**T. VI/10**
2.	Nadin	izvan grobne cjeline	4,7 cm	B	+	**T. VI/9**
3–5	Cvijina gradina	nekropola		B	-	JURJEVIĆ, ČONDIĆ 2013: 28; ČONDIĆ 2014: 53
6.	Sjeverna Dalmacija		3,7 cm	B	-	LO SCHIAVO 1970: 422, 449, Tav. XX/1; XXXII/ 15
7.	Okolica Otišića			B	+	MAROVIĆ 1984: 57, Sl. 23/14

* *necjelovite fibule / incomplete fibulae*

Neodredive / indeterminable						
	Nalazište / Site	**Kontekst / Context**	**Dužina / Lenght**	**Materijal / Material** (S = srebro / Silver; B = bronca / Bronze)	**Ukras na nozi / Foot decoration**	**Literatura / Bibliography**
1.	Nadin	grob 89	2,8 cm*	B	+	**T. VI/11**
2.	Nadin	izvan grobne cjeline	2,6 cm*	B	-	**T. VI/12**
3.	Nin	grob 37		S	-	HILLER 1991: 367, T. 22/241
4.	Dragišić	grob 14	3,3 cm*	B	-	GLOGOVIĆ 2014: 40, Pl. 9b/61
5.	Dragišić	grob 20	2cm*	B	-	GLOGOVIĆ 2014: 42, Pl. 13a/1

** necjelovite fibule / incomplete fibulae*

nadinske fibule s T. VI/11 zasad je jedini primjerak s trima poprečnim paralelnim linijama, a izdvaja se i ukras noge fibule iz Picuga s dvostrukim X urezima.[37] U konačnici treba spomenuti i ukras na nozi fibule iz groba 37 u Ninu koji ima dvostruki V ukras na početku noge, svaki izveden dvostrukim nizom punciranih točkica.[38]

Konstrukcijski je riječ o fibulama koje su uglavnom izrađene u jednom dijelu, ali mogu se naći i dvodijelne. Dvodijelna konstrukcija većinom se povezuje s Certosa Ic i tek iznimno Certosa Id fibulama (primjerak iz Mazina[39]). Međutim, u nekim, ako ne i svim, slučajevima sigurno je riječ o popravcima nakon puknuća fibula kao što zorno pokazuju fibule iz ostave s Gradine u Jagodnji Gornjoj, ponajprije jedna gdje zbog mjesta loma visoko na luku nije očuvano drugo rebro, no fibula je svejedno popravljena na način da su prelomljeni krajevi postavljeni jedan preko drugog i spojeni zakovicom.[40] U prilog tezi da je riječ o popravcima ide i već spomenuta činjenica da se dvodijelna konstrukcija u najvećoj mjeri povezuje s fibulama tipa Certosa Ic koje su zbog tankog luka i bile podložnije pucanju.

an ornament of an isosceles triangle worked in punched dots, and with an additional inner line dividing it into two parts. The foot decoration of one Nadin fibula (Pl. VI/11) is for now the only specimen with three transverse parallel lines; different is also the foot decoration of the fibula with double X incisions from Picugi.[37] Finally, worth mentioning is also the foot decoration of the fibula from Grave 37 at Nin, decorated with a double-chevron pattern at the beginning of the foot, both worked in a double row of punched dots.[38]

In terms of their construction, the fibulae are mainly made in a single piece, but there are also two-part examples. The two-part construction is mostly associated with Certosa Ic, and exceptionally Certosa Id fibulae (the specimen from Mazin[39]). However, in some – if not all – cases, once-broken fibulae must have been repaired, as is clearly demonstrated by fibulae from the hoard at Gradina in Jagodnja Gornja. This is particularly evident in one specimen, whose second rib had not been preserved due to a fracture point high on the bow. Nevertheless, the fibula had been repaired by overlapping the broken ends and joining them with a rivet.[40] The thesis that these were indeed repairs is also supported by

37 MIHOVILIĆ 1995: T. 1/3.
38 BATOVIĆ 1987: T. XLI/3. Međutim, treba naglasiti da u drugoj publikaciji na crtežu iste fibule nije vidljiv ukras (HILLER 1991: T. 22/240).
39 TEŽAK-GREGL 1981: T. 6/9.
40 BATOVIĆ 1974: 170, T. XIV/6; XV/7–8.

37 MIHOVILIĆ 1995: Pl. 1/3.
38 BATOVIĆ 1987: Pl. XLI/3. However, it should be pointed out that in the second publication, which included a drawing of the same fibula, no decoration is visible (HILLER 1991: Pl. 22/240).
39 TEŽAK-GREGL 1981: Pl. 6/9.
40 BATOVIĆ 1974: 170, Pl. XIV/6; XV/7-8.

Osim podvarijante Ie3, sve su izrađivane i od srebra i od bronce. Međutim, uz iznimku Osora,[41] srebrne fibule koncentrirane su na sjevernodalmatinskom prostoru gdje kvantitativno dominiraju u odnosu na brončane primjerke i gdje su, po svemu sudeći, i proizvođene. Takvu situaciju dobro ilustrira situacija u Nadinu gdje je od 13 fibula Certosa Ic svega jedna izrađena od bronce, omjer za Certosa Id fibule iznosi 13 srebrnih napram dvjema brončanim, dok su od 14 fibula Certosa Ie1 njih četiri brončane. Certosa Ie2 nije dokumentirana u Nadinu što ne iznenađuje s obzirom na to da je riječ o iznimno skromno dokumentiranoj podvarijanti sa svega dva primjerka: srebrnim iz Nina,[42] te brončanim iz Dragišića[43]. Kao što je već navedeno, podvarijanta Certosa Ie3 proizvođena je, prema trenutačnom stanju, isključivo od bronce.

DISTRIBUCIJA

U zadnjim desetljećima broj poznatih primjeraka uvelike se povećao, i to ponajprije na liburnskom prostoru, dosegnuvši respektabilnu količinu od 102 fibule s 22 lokaliteta. Od tog broja, njih čak osamdeset pronađeno je na lokalitetima sjeverne Dalmacije (Nin, Ljubač, Cvijina gradina, Nadin, Jagodnja Gornja, Aserija, Dragišić), pet na kvarnerskom prostoru (Kastav, Krk, Baška, Osor), sedam u Lici (Krbavica, Mazin, Vrebac, Prozor), četiri na lokalitetima u dolini Une (Jezerine, Golubić, Ribić), tri u Beloj Krajini (Vinica) uz pojedinačne sporadične nalaze na lokalitetima u Istri (Picugi i Nezakcij), te u srednjoj Dalmaciji (okolica Otišića) (Karta 1). Iako se broj nalazišta na kojima su dokumentirane u sjevernoj Dalmaciji ne izdvaja u odnosu na japodski

[41] Iako se prvotno navodilo da je riječ o brončanim fibulama (BLEČIĆ KAVUR 2010: 512), poslije su dvije fibule iz Osora ipak određene kao srebrne (BLEČIĆ KAVUR 2015: 171, Sl. 61A).

[42] BATOVIĆ 1974: Sl. 2/1; 1987, T. XLI/3; HILLER 1991, 367, T. 22/240–241.

[43] GLOGOVIĆ 2014, 40, Pl. 9b/54.

the previously mentioned fact that the two-part construction has mostly been associated with the Certosa Ic fibulae, which were more prone to breakage due to their thin bow.

With the exception of the Ie3 subvariant, all were made from either silver or bronze. However, notwithstanding Osor,[41] silver fibulae are concentrated in northern Dalmatia, where their numbers prevailed in comparison to bronze specimens and where, in all likelihood, they were also produced. This is best illustrated by the situation at Nadin, with the following bronze to silver fibulae ratios: Certosa Ic, 1 : 12; Certosa Id, 2 : 13; and Certosa Ie1, 4 : 10. Certosa Ie2 has not been documented at Nadin, which comes as no surprise, given that it is an extremely scarcely documented subvariant with only two specimens: one made of silver from Nin,[42] and one made of bronze from Dragišić[43]. As already mentioned, the subvariant Certosa Ie3 was produced exclusively of bronze.

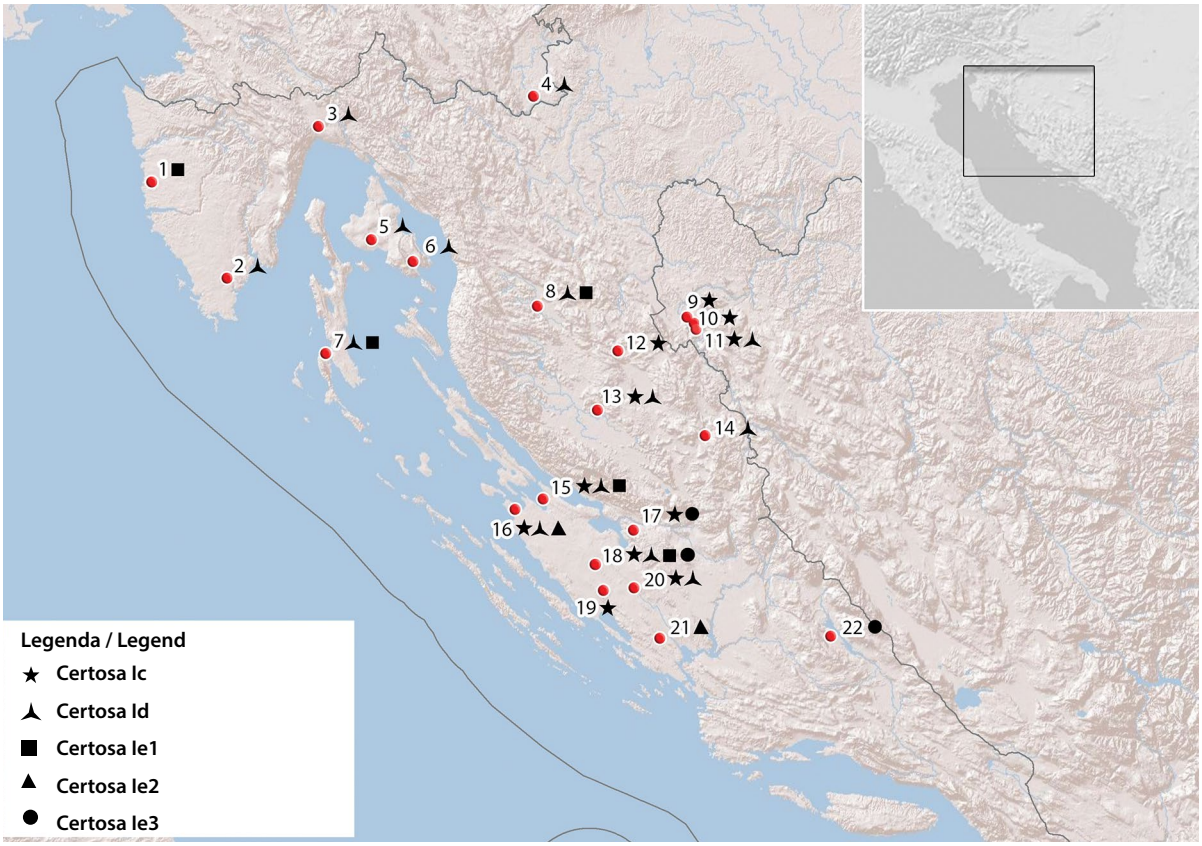
DISTRIBUTION

Over recent decades, the number of known specimens has greatly increased, primarily in the Liburnian region, reaching the respectable amount of 102 fibulae from 22 sites. Of that number, as many as 80 were found at northern Dalmatian sites (Nin, Ljubač, Cvijina Gradina, Nadin, Jagodnja Gornja, Asseria, Dragišić), five in the Kvarner area (Kastav, Krk, Baška, Osor), seven in Lika (Krbavica, Mazin, Vrebac, Prozor), four at sites in the Una valley (Jezerine, Golubić, Ribić), three in Bela Krajina (Vinica), along with individual sporadic finds at sites in Istria (Picugi and Nesactium), as well as in central Dalmatia (around Otišić) (Map 1). Although the number of sites in northern Dalmatia at which they have been

[41] Although originally the fibulae were assumed to have been made of bronze (BLEČIĆ KAVUR 2010: 512), subsequently, two fibulae from Osor were identified as silver (BLEČIĆ KAVUR 2015: 171, Fig. 61A).

[42] BATOVIĆ 1974: Fig. 2/1; 1987, Pl. XLI/3; HILLER 1991, 367, Pl. 22/240-241.

[43] GLOGOVIĆ 2014, 40, Pl. 9b/54.



Karta 1. *Distribucija fibula tipa Certosa Ic, id i Ie / Distribution of Certosa fibulae Ic, Id and Ie: 1. Picugi, 2. Nezakcij, 3. Kastav, 4. Vinica, 5. Krk, 6. Baška, 7. Osor, 8. Prozor, 9. Golubić, 10. Ribić, 11. Jezerine, 12. Krbavica, 13. Vrebac, 14. Mazin, 15. Ljubač, 16. Nin, 17. Cvijina gradina, 18. Nadin, 19. Gradina u Jagodnji Gornjoj, 20. Aserija, 21. Dragišić, 22. Otišić* (izradio: D. Vujević)

Map 1 *Distribution of Certosa Ic-, Id- and Ie-type fibulae: 1. Picugi, 2. Nesactium, 3. Kastav, 4. Vinica, 5. Krk, 6. Baška, 7. Osor, 8. Prozor, 9. Golubić, 10. Ribić, 11. Jezerine, 12. Krbavica, 13. Vrebac, 14. Mazin, 15. Ljubač, 16. Nin, 17. Cvijina Gradina, 18. Nadin, 19. Gradina u Jagodnja Gornja, 20. Asseria, 21. Dragišić, 22. Otišić* (created by D. Vujević)

pa ni kvarnerski prostor, uočljiva je znatnija učestalost njihove pojave na pojedinim lokalitetima. Naime, prema trenutačnom stanju istraživanja, na većini nalazišta izvan sjeverne Dalmacije poznati su tek pojedinačni nalazi fibula tipa Certosa Ic/d/e, uz rijetke iznimke poput Osora i Prozora gdje su zabilježene dvije, odnosno Vrepca i Vinice[44] s trima fibulama navedenih tipova. S druge strane, ni jedan lokalitet u sjevernoj Dalmaciji nema manje od triju zabilježenih primjeraka, ali je uglavnom riječ i o znatno većem broju, što jasno svjedoči o važnosti i omiljenosti navedenog funkcionalno-dekorativnog predmeta u nošnji pripadni-

documented does not stand out compared to the Iapodian or Kvarner areas, a more significant frequency of their occurrence at certain sites is noticeable. In fact, the current situation is that at most sites outside northern Dalmatia, only individual finds of the Certosa Ic-/d-/e-type fibulae have been identified, with rare exceptions – such as Osor and Prozor where two, and Vrebac and Vinica[44] where three fibulae of these types have been recorded. On the other hand, no sites in northern Dalmatia have less than three recorded specimens, while mostly their number is significantly larger, clearly testifying to the importance and popu-

[44] Vinica je prije uglavnom smatrana lokalitetom japodske kulturne grupe, no u novije je vrijeme D. Božič povezuje s Kolapijanima (vinička grupa). Više, uključujući osnovnu bibliografiju kod: BOŽIČ 2001.

[44] Vinica was previously mainly considered a site of the Iapodian cultural group, but more recently D. Božič has proposed that it should be associated with the Colapians (Vinica group). For more, including the basic bibliography see BOŽIČ 2001.

ka željeznodobnih zajednica koje su obitavale na tom prostoru.

Nema sumnje da su se ove fibule proizvodile u jednom ili više radioničkih središta na prostoru sjeverne Dalmacije o čemu osim kvantitete svjedoči i zastupljenost svih inačica izrađenih i od bronce i od srebra. Jedina je iznimka Certosa Ie3 koja je zasad poznata jedino u brončanoj varijanti, no čija je distribucija istovremeno gotovo isključivo, uz iznimku Otišića, povezana sa sjevernom Dalmacijom. Fibule iz groba 80 u Aseriji svakako predstavljaju najraskošnije ukrašenu grupu Certosa Ic i d fibula uopće pri čemu sve imaju ukrašenu nogu, a ujedno i sve Certosa Id tipa i urezima dodatno ukrašena tri zadebljanja na luku što je zabilježeno još tek na fibulama iz Nina,[45] Baške[46] i Vinice[47]. Aserija je, baš kao i Nadin, ali i druga važna naselja u sjevernoj Dalmaciji, imala kapacitet za proizvodnju ovoga specifičnog dijela nošnje, no je li uistinu riječ o više radioničkih središta, različitih serija ili majstora, nije moguće utemeljeno tvrditi.

Japodski prostor s druge strane obilježavaju isključivo brončane fibule ove vrste. Najbrojnije su zastupljene Certosa Ic fibule sa šest primjeraka koje su dominantno većih dimenzija, više od 7 do 10 cm dužine.[48] S druge strane, Certosa Id fibule su upadljivo manjih dimenzija, pri čemu sve one cjelovito očuvane imaju dužinu manju od 5 cm. Također, pojedini detalji izrade Certosa Ic i Id fibula upućuju na lokalne posebnosti. Kako je istaknula Marić, fibule s lokaliteta u dolini Une izdvaja ukrašavanje luka urezima i specifično

[45] BATOVIĆ 1981: 115, sl. 8/28. Izgledno je da je na isti način ukrašena i fibula iz groba 76 u Ninu, iako reprodukcija slabije kvalitete otežava prepoznavanje pojedinih detalja (BATOVIĆ 1976: T. XVIII).

[46] VINSKI 1956: sl. 2.

[47] Kao i u slučaju fibula s japodskog područja, riječ je o fibuli manjih dimenzija, dužine 4,9 cm (https://collections.peabody.harvard.edu/search/vinica: 40-77-40/10678; 40-77-40/10679).

[48] Jedino je fibula iz Golubića nešto manja. Iako joj nedostaju opruga i igla, ipak je većim dijelom očuvana te joj dužina neće značajno premašiti 6 cm (RAUNIG 1968: 93, T. V/1).

larity of this functional-decorative item as part of the attire of members of Iron Age communities living in the area.

There is no doubt that these fibulae were produced in one or more workshop centres in the area of northern Dalmatia, as evidenced not only by the quantity, but also by the presence of all variants, whether made from bronze or silver. The only exception is Certosa Ie3, which is currently known only in the bronze variant, but whose distribution is at the same time almost exclusively related to northern Dalmatia, with the exception of Otišić. Fibulae from Grave 80 at Asseria certainly represent the most luxuriously decorated group of Certosa Ic and Id fibulae in general. All of them have a decorated foot, while all Certosa Id fibulae also have three thickenings on the bow additionally decorated with incisions, which has only been recorded in fibulae from Nin,[45] Baška[46] and Vinica[47]. Asseria, just like Nadin (but also other important settlements in northern Dalmatia), had the capacity to produce this specific piece of apparel, but it is not possible for the possible existence of several workshop centres, different series or craftsmen to be definitely confirmed.

The Iapodian region, on the other hand, is characterised exclusively by bronze fibulae of this type. The most numerous are Certosa Ic fibulae, with six specimens that are predominantly larger in size: from over seven to ten centimetres in length.[48] On the other hand, Certosa Id fibulae are strikingly smaller in size, with all those that have been completely preserved being shorter

[45] BATOVIĆ 1981: 115, Fig. 8/28. It is likely that the fibula from Grave 76 at Nin was decorated in the same way, although reproduction of inferior quality makes it difficult to identify certain details (BATOVIĆ 1976: Pl. XVIII).

[46] VINSKI 1956: Fig. 2.

[47] As in the case of fibulae from the Iapodian area, it is of smaller size: 4.9 cm long. https://collections.peabody.harvard.edu/search/vinica.

[48] The fibula from Golubić is somewhat smaller. Although its spring and pin are absent, it has, nevertheless, been preserved to a large extent, and its length would not significantly have exceeded six centimetres (RAUNIG 1968: 93, Pl. V/1).

oblikovanje dugmeta na nozi,[49] a specifikum japodskog prostora jesu i zadebljanja na luku Certosa Id fibula izvedena u obliku rebara.[50] Tako izveden ukras luka ima jedino još jedna fibula u Vinici,[51] a njezinu pojavu, po svemu sudeći, treba pripisati intenzivnim kontaktima navedenih zajednica. Uzevši sve navedeno u obzir, izgledno je da treba računati i s najmanje jednom radionicom na japodskom području.

Kvarnerski prostor, pak, preferira fibule tipa Certosa Id, uz prisustvo tek jedne fibule Certosa Ie1. Riječ je o još uvijek relativno malobrojnom korpusu dokumentiranih fibula koje svojom izvedbom imaju pandane u primjercima iz sjeverne Dalmacije. Manja količina izoliranih nalaza u Istri i srednjoj Dalmaciji, ali i preostale dvije fibule iz Vinice upućuju ponajprije na kontakte s liburnskim prostorom.

Ako zaključno sumiramo kartu distribucije, razvidno je da Certosa Id fibule imaju najširu rasprostranjenost te se javljaju u svim regijama uz iznimku srednje Dalmacije. S druge strane, Certosa Ic fibule su upadljivo odsutne s cijeloga zapadnog areala distribucije pa ih tako ne poznaju ni Kvarner, ni Istra, ni Bela Krajina, odnosno ograničene su na prostor sjeverne Dalmacije, Like i doline Une. Fibule Certosa Ie karakteristične su za sjevernodalmatinski prostor s tek pojedinačnim nalazima podvarijante Ie1 u Istri, Kvarneru i Lici te one Ie3 u srednjoj Dalmaciji te se stoga, prema trenutačnom stanju, mogu smatrati importom upravo sa sjevernodalmatinskog prostora.

than five centimetres. Also, some details of the production of Certosa Ic and Id fibulae indicate special local traits. As Marić pointed out, the fibulae from the site in the Una valley are distinguished by their incised bow decoration and the specific design of the foot knob,[49] and a distinctive trait of the Iapodian area is also thickenings on the bows of Certosa Id fibulae, designed in the form of ribs.[50] Such a bow decoration pattern has been identified only in a fibula from Vinica,[51] and its appearance should obviously be attributed to intensive contact between these communities. Taking into account all of the above, it is likely that there existed at least one workshop in the Iapodian area.

In the Kvarner area, however, Certosa Id fibulae predominate, with only a single Certosa Ie1 fibula found. It is a still relatively small corpus of documented fibulae that, in their design, have counterparts among the specimens from northern Dalmatia. A small number of isolated finds in Istria and Central Dalmatia, as well as the remaining two fibulae from Vinica, indicate primarily contacts with the Liburnian area.

In conclusion, a summarised distribution map points out that Certosa Id fibulae are the widest-distributed, occurring in all regions except central Dalmatia. On the other hand, Certosa Ic fibulae are evidently absent from the entire western distribution area; they are unknown in Kvarner, Istria, and Bela Krajina, being limited to the areas of northern Dalmatia, Lika and the Una valley. Certosa Ie fibulae are characteristic of the northern Dalmatian region, with only individual finds of the sub-variant Ie1 in Istria, Kvarner and Lika, and Ie3 in central Dalmatia; therefore, according to the current situation, they can be considered an import from the northern Dalmatian area.

[49] MARIĆ 2017: 26.

[50] Ili zadebljanja poluloptastog oblika prema Batoviću, odnosno njegova podvarijanta „d" (BATOVIĆ 1974: 189).

[51] https://collections.peabody.harvard.edu/search/vinica: 40-77-40/10758.

[49] MARIĆ 2017: 26.

[50] Or hemispherical thickenings according to Batović (his subvariant "d") (BATOVIĆ 1974: 189).

[51] https://collections.peabody.harvard.edu/search/vinica: 40-77-40/10758.

KRONOLOGIJA

Kronologija predmetnog tipa fibula počiva na malenom broju zatvorenih i stručno istraženih arheoloških cjelina koje su na više mjesta analizirali različiti autori.[52] S obzirom na navedeno, nije potrebno na ovom mjestu ponavljati njihove zaključke osim općega kronološkog okvira njihove produkcije i uporabe koji je određen u vrijeme od 4. do 2. st. pr. Kr. Varijacije su prisutne na krajevima spomenutog spektra. Težak-Gregl vidi njihovu proizvodnju već na samom početku,[53] a Teržan, pak, na kraju 4. st. pr. Kr. pri čemu potonja autorica neznatno produžuje vrijeme njihove uporabe sve do prijelaza 2. u 1. st. pr. Kr.[54] Vrebački grob 4 koji je poslužio Težak-Gregl kao uporište za dataciju tipa u sam početak 4. stoljeća u recentnom je periodu reevaluirala Marić i zaključila da njegov inventar ipak ne pruža uporište za preciznije datiranje.[55]

Novootkriveni nadinski primjerci tek donekle mogu doprinijeti preciznijemu vremenskom okviru njihove pojave, proizvodnje i uporabe, posebno po pitanju završne granice njihove uporabe. Naime, iako su fibule tipa Certosa Ic, Id i Ie pronađene u većem broju grobnih cjelina u Nadinu, najveći je dio njih poremećen naknadnim intervencijama ili obilježen dugotrajnim sukcesivnim pokapanjem koje onemogućava precizniju asocijaciju pojedinačnih predmeta s pojedinim pokojnicima,[56] a shodno tomu i nji-

[52] BATOVIĆ 1974: 190; TERŽAN 1976: 382; TEŽAK-GREGL 1981: 32–33; BLEČIĆ 2002: 115–116; BLEČIĆ KAVUR 2010: 318; 2015: 169–171; BATOVIĆ, BATOVIĆ 2013: 51; GLOGOVIĆ 2014: 10; TONC 2014: 106–107; MARIĆ 2017: 27–28.

[53] TEŽAK-GREGL 1981: 32–33.

[54] TERŽAN 1976: 382.

[55] MARIĆ 2017: 28.

[56] U skladu s navedenim ne može se sa sigurnošću odrediti jesu li fibule tipa Certosa Ic, Id i Ie nosile žene, muškarci i/ili djeca, kao ni jesu li ipak katkad nošene u paru. Prema trenutačno poznatim kontekstima, ako se izuzmu velike grobnice s velikim brojem sukcesivno pokopanih osoba, najvećim su dijelom pronalažene pojedinačno u grobovima, ali i tu postoje rijetke iznimke kao što su grob 37 u

CHRONOLOGY

The chronology of the discussed fibula type is based on a small number of closed, archaeologically excavated units, which have been analysed on several occasions by different authors.[52] In view of the above, at this point, it is not necessary to repeat the conclusions they drew, except for a general chronological framework of fibula production and use, which was determined to be in the period from the 4th to the 2nd century BC. There are variations in datings of the ends of the spectrum. Težak-Gregl judged their production to have started at the very beginning of the 4th century BC[53], while Teržan, on the other hand, placed it at the end of the 4th century BC. The latter also slightly extended the timeframe of their use until the turn of the 2nd to the 1st century BC.[54] The Vrebac Grave 4, which Težak-Gregl used as a basis for dating the type to the very beginning of the 4th century BC, was recently reevaluated by Marić, who concluded that its inventory does not, in fact, provide grounds for more precise dating.[55]

The newly discovered specimens from Nadin can only contribute to a certain extent to the determination of a more precise time frame regarding their emergence, production and use, particularly when it comes to defining the final stage of their use. Namely, although Certosa Ic-, Id- and Ie-type fibulae have been found in a large number of Nadin grave units, most of the graves had been disturbed by subsequent interventions, or characterised by successive burials over an extended time period, as a result preventing a more precise attribution of individual objects to individual deceased persons,[56] and consequently also

[52] BATOVIĆ 1974: 190; TERŽAN 1976: 382; TEŽAK-GREGL 1981: 32-33; BLEČIĆ 2002: 115-116; BLEČIĆ KAVUR 2010: 318; 2015: 169-171; BATOVIĆ, BATOVIĆ 2013: 51; GLOGOVIĆ 2014: 10; TONC 2014: 106-107; MARIĆ 2017: 27-28.

[53] TEŽAK-GREGL 1981: 32-33.

[54] TERŽAN 1976: 382.

[55] MARIĆ 2017: 28.

[56] Accordingly, it is not possible to determine with certainty whether Certosa Ic-, Id- and Ie-type fibulae were worn by women, men and/or children, or whether they were so-



Slika 1. *Nadin, grob 105: in situ nalaz Certosa Id fibule pri dnu grobnice* (snimila: M. Čelhar)
Figure 1 *Nadin, Grave 105: in situ find of a Certosa Id fibula at the tomb bottom* (photo by M. Čelhar)

hovo preciznije datiranje. Fibule navedenog tipa nalaze se u Nadinu i unutar „klasičnih" liburnskih kamenih škrinja, ali i velikih zidanih grobnica koje su karakterističan oblik grobne arhitekture u mlađemu željeznom dobu. Potonje (grob 1, grob 105, grob 107, grob 127) korištene su u širemu vremenskom periodu i sve su, osim grobnice 105, poremećene raznim naknadnim intervencijama, te stoga na ovom mjestu ne ulaze u raspravu.

Grobnica 105 jedina je intaktna grobnica ove vrste, ne samo u Nadinu već i ostatku sjeverne Dalmacije. U njoj je i pronađena najveća količina fibula ove vrste, njih čak 27 (sl. 1, 2; T. I/5–6; II/1–6; III/3–5; IV/1–3; V/1–5; VI/1–

their more precise dating. Fibulae of the mentioned type are found in Nadin both within the "classical" Liburnian stone cists and in the large tombs that were a characteristic form of burial architecture in the Late Iron Age. The latter (Grave 1, Grave 105, Grave 107, Grave 127) were used over a broad period of time and all except Tomb 105 had been disturbed by various subsequent interventions, and are therefore not discussed in this paper.

Ninu, grob 4 u Vrepcu (s dvjema različitim inačicama) ili pak grob 76 u Vinici ako je uopće riječ o pouzdanoj grobnoj cjelini. Svi navedeni konteksti nemaju izričite podatke o broju pokojnika, iako je u Vrepcu riječ o paljevinskom grobu, pretpostavlja se, jednog pokojnika, odnosno, sudeći po prisustvu većeg broja fibula te posebno jantarne ogrlice, možda pokojnice (DRECHSLER-BIŽIĆ 1958: 44). Grob 89 u Nadinu, također sadrži dvije fibule ove vrste (Ie3 i jednu fragmentiranu od koje je očuvana samo noga), ali i minimalno četiri pokojnika pa njihova utemeljena asocijacija u sklop jedne nošnje opet nije moguća.

metimes worn in pairs. According to the currently known contexts – and if the large tombs, with a large number of successively buried individuals, are excluded – they have mostly been found individually in graves, but there are some rare exceptions, such as Grave 37 at Nin, Grave 4 at Vrebac (with two different variants) or Grave 76 at Vinica, if it can be considered a reliable grave unit. None of these contexts provide explicit data on the number of deceased individuals, although the burial in Vrebac is identified as an incineration grave, presumably of a single individual. The presence of a larger number of fibulae and, in particular, an amber necklace suggests a female individual (DRECHSLER-BIŽIĆ 1958: 44). Grave 89 at Nadin also contains two Certosa I-type fibulae Ie3 variant and another fragmented one, with only the foot preserved), but with at least four individuals interred, making a well-founded association of these fibulae as part of one individual's attire impossible.

8).[57] Unatoč iznimno velikom broju pokojnika u grobnici, njih minimalno 228, korištena je ipak u nešto užem vremenskom periodu od ostalih grobnica iste vrste koje se prema očuvanom materijalu uglavnom smještaju u period od 4./3. do u 1. st. pr. Kr.[58] Pokretna materijalna građa iz grobnice 105 odgovara vremenu 2. i 1. st. pr. Kr.[59] S obzirom na to da je u jednom trenutku u grobnici gorjela vatra, uspjelo se izdvojiti tri horizonta pokapanja: onaj najstariji, prije navedenog događaja i onaj najmlađi nakon njega. Iako sukcesivno pokapanje tako velikog broja individua neminovno uzrokuje različite poremećaje na horizontalnoj, ali i vertikalnoj ravni, ipak glavnina materijala pokazuje generalne kronološke distinkcije između triju izdvojenih slojeva pokapanja. Fibule tipa Certosa Ic, Id i Ie1 pojavljuju se u svim slojevima sve do same površine grobnice iako su upečatljivo najbrojnije, sa 16 primjeraka, u najstarijem horizontu pokapanja koji treba povezati s 2. st. pr. Kr.[60] Po šest i pet primjeraka svih varijanti[61] dokumentirano je u dva mlađa horizonta pokapanja što nesumnjivo svjedoči o tome da ostaju barem u sporadičnoj uporabi

[57] Manji ulomak luka fibule Certosa Ic s rebrom (T. II/7) iz groba 105 nije ubrojen kao zaseban primjerak jer izgledno pripada fibuli na T. II/4, no ne mogu se fizički spojiti. Također, identično vrijedi za dugme noge na T. V/6 koje po svemu sudeći pripada jednoj od necjelovito očuvanih fibula Certosa Id iz istog groba (prema dimenzijama vjerojatno fibuli na T. V/2 ili T. V/4).

[58] Npr. za grob 1 iz Nadina vidjeti: BATOVIĆ, BATOVIĆ 2013: 59.

[59] ČELHAR, UGARKOVIĆ 2021: 312–314; ČELHAR, BORZIĆ 2024.

[60] Osim Certosa fibula, u najstarijem sloju pokapanja izdvajaju se u kvantitativnom pogledu i srednjolatenske žičane fibule s vanjskom tetivom i fibule tipa Picugi. Više kod: ČELHAR, UGARKOVIĆ 2021: 313. Indikativan je i podatak da u korpusu od više od 700 fibula dokumentiranih u grobnici, nisu zabilježene one tipa Baška i Certosa VIIf koje se inače često nalaze na nadinskoj nekropoli unutar ovakvih grobnica, pa tako i u slučaju publiciranih nadinskih grobova 1 i 2 (BATOVIĆ, BATOVIĆ 2013: T. XII/2–8; XIII/9–15; XIV/23–24; XV/25–26; XLVIII/1).

[61] U najstarijem sloju pokapanja (SJ 283) dokumentirane su tri fibule Certosa Ic, osam fibula inačice Id te pet Certosa Ie1, srednji horizont pokapanja (SJ 280) ima po dvije fibule Certosa Ic, Id i Ie1, a najmlađi (SJ 274) tri fibule Certosa Ic te po jednu Id i Ie1.

Tomb 105 is the only intact tomb of this type, not only at Nadin, but also in the rest of northern Dalmatia. In it, the largest number of fibulae of this type have been found: as many as 27 (Figs. 1, 2; Pl. I/5-6; II/1-6; III/3-5; IV/1-3; V/1-5; VI/1-8)[57]. Despite the extraordinarily large total of deceased individuals in the tomb (at least 228), it was used over a somewhat shorter period than other tombs of the same type, which are mostly dated, on the basis of the preserved material, to the period from the 4th/3rd to the 1st century BC.[58] Portable objects from Tomb 105 correspond to the time of the 2nd and 1st centuries BC.[59] Given that, at one point, a fire had been lit inside the tomb, it was possible to distinguish between three burial horizons: the oldest, before the fire, and the most recent, after it. Although successive burials of such a large number of individuals inevitably caused various disturbances on both the horizontal and vertical planes, the majority of the material nevertheless shows general chronological distinctions between the three identified burial layers. Certosa Ic-, Id- and Ie1-type fibulae appear in all layers up to the very surface of the tomb, although they are most numerous (with 16 specimens) in the oldest burial horizon, which should be associated with the 2nd century BC.[60] Six and five examples of all

[57] A small bow fragment of a Certosa Ic fibula with a rib (Pl. II/7) from Tomb 105 has not been counted as a separate specimen, as it probably belongs to the fibula presented in Pl. II/4, although they cannot be physically joined. The same applies to the foot button in Pl. V/6, which would appear to belong to one of the incompletely preserved Certosa Id fibulae from the same grave (on the basis of its size, probably the fibula in Pl. V/2 or Pl. V/4).

[58] E.g., for Grave 1 at Nadin, s. BATOVIĆ, BATOVIĆ 2013: 59.

[59] ČELHAR, UGARKOVIĆ 2021: 312–314; ČELHAR, BORZIĆ 2024.

[60] In addition to the Certosa fibulae, the oldest burial layer also rendered a significant quantity of Middle La Tène wire fibulae with an external chord and Picugi-type fibulae. More in: ČELHAR, UGARKOVIĆ 2021: 313. It is also noteworthy that in the corpus of over 700 fibulae documented in the tomb, there are no records of the Baška and Certosa VIIf types, which are otherwise frequently found in the Nadin necropolis within similar tombs, including in the published Nadin graves 1 and 2 (BATOVIĆ, BATOVIĆ 2013: Pl. XII/2-8; XIII/9-15; XIV/23-24; XV/25-26;



Slika 2. *Nadin, grob 105: nalaz Certosa Ie1 fibule na vrhu zemljom ispunjene helenističke reljefne zdjelice* (snimila: M. Čelhar)
Figure 2 *Nadin, Grave 105: The find of a Certosa Ie1 fibula on top of a small earth-filled Hellenistic relief bowl* (photo by M. Čelhar)

i u ranom, ako ne i čitavom, 1. st. pr. Kr.[62] Zanimljivo je da u Nadinu ni jedna fibula inačice Id nema ukrašenu ni nogu, a ni zadebljanja na luku. S druge strane, ukrasi na nozi zabilježeni su na svim fibulama inačice Ic pronađenim izvan grobnice 105, dok ih nema na fibulama Certosa Ic iz grobnice 105. Štoviše, u velikom korpusu fibula tipa Certosa Ic/d/e1 iz grobnice 105 uopće nije zabilježeno ukrašavanje nogu što bi možda mogla biti opća odlika kasnije produkcije, s obzirom na to da je riječ o kontekstu završnog vremena uporabe navedenih fibula, ili tek preferencija jednoga, nadinskog (?) radioničkog središta u završnim fazama njihove proizvodnje.

Situacija je nezahvalnija kad se razmatra početak njihove uporabe. Tu se ponajprije treba okrenuti grobovima s arhitekturom u

[62] Najmlađi horizont pokapanja odlikuje veća količina italskih i (jugo)istočnoalpskih oblika fibula poput fibula tipa Picugi, fibula tipa Beletov vrt, Alezija fibula, fibula tipa Jezerine i Gorica, Almgren 18, Almgren 2, ranih Aucissa fibula i dr., kao i, uz najbrojniju kategoriju helenističke reljefne keramike, rana sjevernoitalska sigilata i keramika tankih stijenki. Više kod: ČELHAR, UGARKOVIĆ 2021: 313; ČELHAR, BORZIĆ 2024: 175–176, 178–179.

variants[61] have been documented respectively in the two most recent burial horizons, which undoubtedly indicates that they remained at least sporadically in use during the early, if not the entire 1st century BC.[62] It is interesting that at Nadin, none of the Id-variant fibulae have a decorated foot or a thickening on the bow. On the other hand, foot decorations were recorded in all Ic fibulae unearthed outside Tomb 105, while they were not identified in Certosa Ic fibulae from Tomb 105. Moreover, in the large corpus of Certosa Ic-/d-/e1-type fibulae from Tomb 105, no foot decorations have been recorded. This could perhaps be a general feature of later production, given that it pertains to the context of the final period of use of these fibulae, or it might simply reflect the preference of a single (possibly Nadin-based) workshop centre during the final stages of their production.

The situation becomes more difficult when the beginning of their use is considered. Here, one should primarily turn to graves with architecture in the form of stone cists; in the majority of cases at the Nadin necropolis, these are further delineated by an enclosure of vertically placed stone blocks. There are five such grave units: graves 16, 57, 89, 104 and 110. Unfortunately, most of these graves have been damaged, to varying extents. Thus, for example, Grave 16 was partially destroyed during the construction of the pedestal in the Roman Burial Plot 1,[63] while Grave 104 was cut by

XLVIII/1).

[61] In the oldest burial layer (SU 283), three Certosa Ic fibulae, eight Id-variant fibulae and five Certosa Ie1 fibulae were documented. The middle burial horizon (SU 280) contains two Certosa Ic, two Id and two Ie1 fibulae, while the most recent layer (SU 274) included three Certosa Ic fibulae and one of each of the Id and Ie1 variants.

[62] The most recent burial horizon is characterised by a large amount of Italic and (south)east-Alpine types of fibulae, such as Picugi-type fibulae, Beletov Vrt-type fibulae, Alésia fibulae, Jezerine- and Gorica-type fibulae, Almgren 18, Almgren 2, early Aucissa fibulae, and others. Additionally, alongside the (most numerous) category of Hellenistic relief ware, there is early North Italian sigillata and thin-walled pottery. More in: ČELHAR, UGARKOVIĆ 2021: 313; ČELHAR, BORZIĆ 2024: 175-176, 178-179.

[63] The architecture of Grave 16, associated with the silver Certosa Id fibula, has been significantly damaged, with both of

vidu kamene škrinje koja je u najvećem broju slučajeva na nadinskoj nekropoli dodatno omeđena ogradom od okomito postavljenih kamenih blokova. Raspolažemo s pet takvih grobnih cjelina, a riječ je o grobovima 16, 57, 89, 104 i 110. Nažalost, većina je spomenutih grobova u većoj ili manjoj mjeri devastirana. Tako je npr. grob 16 dijelom uništen pri gradnji postamenta u rimskoj grobnoj parceli 1,[63] dok je grob 104 presječen gradnjom ogradnog zida rimske parcele. Potonji ipak pokazuje zanimljivu sliku s obzirom na materijal pronađen pri dnu grobnice (sl. 3), zajedno s izmiješanim osteološkim materijalom. Osim dvodijelne brončane fibule Certosa Ic (T. I/4), dokumentirani su i nalazi protocertosa fibule, dvije brončane fibule tipa Baška masivnoga okruglog presjeka luka te Certosa fibula izduženoga čunastog presjeka luka s poprečnim rebrima iznad opruge koja je oblikovanjem i dimenzijama najbliža fibuli iz Drenova Klanca koju je Težak-Gregl uvrstila u svoju grupu 3a[64] i izjednačila s tipom VIIb kod Teržan[65] te onoj iz groba 90 u Kompolju koju je Težak-Gregl uvrstila u svoju grupu 4b,[66] a Teržan u svoju VI. vrstu.[67]

[63] Arhitektura groba 16 s kojim je povezana srebrna fibula Certosa Id znatno je uništena pri čemu u potpunosti nedostaju dvije uže stranice. Materijal koji je pronađen u zapuni nije bio *in situ* i upućuje na poremećenost konteksta, uključujući i nalaze rimske keramike i grumenje žbuke na dubini od 40 cm koja je tu dospjela vjerojatno tijekom gradnje postamenta koji je presjekao jednu stranu groba. Za Certosa Id fibulu se u terenskom dnevniku izričito navodi da je pronađena na granici s arhitekturom susjednog groba 19, na strani gdje i nedostaje jedna od ploča kamene škrinje groba 16 i da je „teško tvrditi da baš pripada grobu". U skladu s navedenim, ovaj kontekst ne može pružiti nikakvo utemeljeno uporište u raspravi.

[64] TEŽAK-GREGL 1981: 229, T. 1/7. Navedeni tip je izjednačen s tipom VIIb kod Teržan koji odlikuje luk lećastog presjeka i tri poprečna rebra iznad opruge pri čemu je srednje šire od bočnih (TERŽAN 1976: 325). Fibule iz Drenova Klanca i Nadina povezuje, pak, trakasti, čunato uvijeni luk i tri poprečna rebra od kojih se središnje ne izdvaja širinom od ostalih.

[65] TERŽAN 1976: 325.

[66] TEŽAK-GREGL 1981: 41, T. 3/8.

[67] TERŽAN 2010: 114, bilj. 13. Međutim, treba napomenuti da je karakteristika Certosa VI fibula izdužen luk zaobljeno-rombičnog presjeka s parom izraženih poprečnih rebrara iznad opruge (TERŽAN 1976: 324) od čega svojim

the construction of an enclosure wall of the Roman Burial Plot 13. The latter, however, presents an interesting picture considering the material found at the bottom of the tomb (Fig. 3), along with the mixed osteological remains. In addition to the two-piece bronze Certosa Ic fibula (Pl. I/4), finds also include a proto-Certosa fibula, two bronze fibulae of the Baška type with massive round bow cross-sections, and a Certosa fibula with an elongated conical bow cross-section featuring transverse ribs above the spring. The latter, in its design and dimensions, closely resembles a fibula from Drenov Klanac, which Težak-Gregl classified under her group 3a[64] and equated with type VIIb according to Teržan[65], as well as another from Grave 90 at Kompolje, classified by Težak-Gregl in her group 4b[66] and by Teržan in her type VI.[67] The above-mentioned mate-

its narrower sides completely missing. The material found in the fill was not *in situ* and indicates a disturbed context, including finds of Roman pottery and lumps of mortar at a depth of 40 centimetres, probably deposited there during the construction of the pedestal that cut through one side of the grave. The field journal explicitly states that the Certosa Id fibula was found at the boundary with the architecture of the adjacent Grave 19, on the side where one of the stone cist slabs of Grave 16 is missing, and that it is "difficult to assert that it truly belongs to the grave." Accordingly, this context cannot provide any substantiated basis for discussion.

[64] TEŽAK-GREGL 1981: 229, Pl. 1/7. The mentioned type is equated with type VIIb according to Teržan, characterised by a bow with a lenticular cross-section and three transverse ribs above the spring, where the middle rib is wider than the lateral ones (TERŽAN 1976: 325). Common characteristics of the fibulae from Drenov Klanac and Nadin, however, are a boat-shaped bow and three transverse ribs, with the central rib not differing in width from the others.

[65] TERŽAN 1976: 325.

[66] TEŽAK-GREGL 1981: 41, Pl. 3/8.

[67] TERŽAN 2010: 114, n. 13. However, it should be noted that a defining feature of Certosa VI fibulae is an elongated bow with a rounded-rhombic cross-section and a pair of prominent transverse ribs above the spring (TERŽAN 1976: 324). An exception to this rule is the fibulae from Kompolje and Nadin with their boat-shaped bows (the latter further distinguished by having three ribs instead of two). Thus, the exceptional diversity and numerous local adaptations of the basic Certosa fibula types often complicate their straightforward attribution to one specific type. In all Certosa variants in Lika, Težak-Gregl observed a general preference for boat-shaped bow design as a local peculiarity (TEŽAK-GREGL 1981: 30). The fibula from Nadin, according to its morphological features, shares both similarities and differences with types VI and VIIb, although it appears closer to



Slika 3. *Nadin, grob 104: metalni nalazi* (snimila: A. Jozić)
Figure 3 *Nadin, Grave 104: metal finds* (photo by A. Jozić)

Navedeni materijal sugerirao bi nešto raniju dataciju, čak u 5. ili prvu polovicu 4. st. pr. Kr.[68] Ipak, treba napomenuti da je fibula tipa Certosa nađena ispod dislociranih kostiju uz istočnu stranicu grobne škrinje, dok su ostale fibule nađene na nešto nižoj razini, većinom grupirane uz zapadnu stranicu škrinje. Uzevši u obzir da nisu pronađeni ostatci pokojnika *in situ*, da su dokumentirane dislocirane ko-

trakastim, čunasto uvijenim lukom odudaraju fibule iz Kompolja i Nadina, a potonja i prisustvom triju, a ne dvaju rebara. Iz svega navedenog još jednom se ističe iznimna raznolikost i niz lokalnih prerada osnovnih tipova Certosa fibula što često otežava njihovo jednostavno atribuiranje u određeni tip. Težak-Gregl primijećuje općenito preferiranje izvedbe luka svih Certosa vrsta u Lici u varijanti s trakastim, čunasto uvijenim lukom kao lokalnu posebnost (TEŽAK-GREGL 1981: 30). Nadinska fibula prema svojim morfološkim odlikama ima zajedničke karakteristike, ali i različitosti i s tipom VI i VIIb, iako je, po svemu sudeći, bliža ovom potonjem, ali s izvedbom luka prilagođenom lokalnom ukusu. Oba tipa u kronološkom pogledu prethode najmlađim i međusobno suvremenim inačicama VIIf i Ic i d koje se u velikoj količini javljaju i na liburnskom prostoru, pa tako i u Nadinu. O kronologiji više kod: TERŽAN 1976: 355–357, 372, 381–382, Pril. 1–2.

[68] TERŽAN 1976: 355–357, 381–382; MIGLIAVACCA 1987: 32–33, Fig. 20; BLEČIĆ KAVUR, PODRUG 2014: 51–56.

rial would suggest an earlier dating, possibly to the 5th or the first half of the 4th century BC.[68] It should be noted, however, that the Certosa-type fibula was found beneath dislocated bones along the eastern side of the grave cist, while the other fibulae were discovered at a slightly lower level, mostly clustered along the western side of the cist. Taking into account that no remains of the deceased were found *in situ*, that dislocated bones of the deceased were documented at all levels, and that the grave was intersected by the construction of a Roman wall, it is difficult to confidently associate all these fibulae with the context of a single garment. It is likely that all the fibulae were originally deposited in this grave, as they were all found near the bottom of the cist, within the last 30 centimetres of depth. However,

the latter, but with a bow design adapted to local taste. In chronological terms, both types precede the youngest and contemporaneous variants VIIf and Ic and d, which appear in large quantities across the Liburnian region, including at Nadin. More about the chronology in: TERŽAN 1976: 355-357, 372, 381-382, Pril. 1–2.

[68] TERŽAN 1976: 355-357, 381-382; MIGLIAVACCA 1987: 32-33, Fig. 20; BLEČIĆ KAVUR, PODRUG 2014: 51-56.

sti pokojnika na svim razinama i da je grob presječen gradnjom rimskog zida, teško je sa sigurnošću međusobno povezati sve ove fibule u kontekst jedne nošnje. Vjerojatno je da su sve izvorno bile pohranjene u ovaj grob jer se sve nalaze pri dnu grobne škrinje, u posljednjih 30 cm dubine, no čak i ako je tako, ne može se isključiti mogućnost da je u grobu pokopan veći broj individua[69] što je potvrđeno za mnoge druge nadinske grobove, uključujući i grobove 57 i 89 u kojima su dokumentirane fibule tipa Certosa Ic i Ie3.

U grobu 89 izdvojeni su osteološki ostatci barem četiriju pokojnika od kojih ni jedan nije pronađen *in situ*.[70] Međutim, kosti su nađene ispod razine urušene poklopnice koja se nalazila na dubini od 65 cm. S njima je pronađena i veća količina materijalne građe, uglavnom jantarnih perli i fragmenata ili cjelovitih fibula tipa Baška. Fibula tipa Certosa Ie3 (T. VI/10) pronađena je zajedno s još jednom nogom fibule tipa Certosa Ic ili Ie2[71] (T. VI/11) te dvije brončane fibule tipa Baška blizu dna groba, na dubini od oko metra ispod površine kamenih ploča grobne škrinje. Obje fibule tipa Baška imaju masivan presjek koji se približava pravokutnom obliku. Jedna je cjelovito očuvana s iskucanim jezičcem koji ne prelazi sredinu dužine noge, a ukrašena je urezanim paralelnim linijama na krajevima luka i na jezičastom završetku noge. Shodno navedenom mogu se ubrojiti u starije varijante Baška fibula, odnosno varijantu 2 i po Batovićevoj,[72] kao i po tipološkoj klasifikaciji koju je ponudila Blečić Kavur.[73] S obzirom na višekratno pokapanje, te nejasni kronološki okvir donje granice pro-

even if this is the case, the possibility cannot be excluded that multiple individuals were buried in the grave[69], as has been confirmed for many other graves at Nadin, including Graves 57 and 89, where Certosa Ic- and Ie3-type fibulae were documented.

In Grave 89, the osteological remains of at least four individuals were identified, none of which were found *in situ*.[70] However, the bones were discovered beneath the level of the collapsed lid, which was located at a depth of 65 centimetres. Along with them, a significant amount of material was found, mostly amber beads and fragments or complete fibulae of the Baška type. A Certosa Ie3-type fibula (Pl. VI/10) together with another foot of a Certosa Ic- or Ie2-type fibula[71] (Pl. VI/11) and two bronze Baška-type fibulae were unearthed near the bottom of the grave, at a depth of about one metre below the surface of the stone slabs of the grave cist. Both Baška-type fibulae have massive cross-sections approaching a rectangular shape. One has been entirely preserved, with a hammered tongue (leaf) that does not extend beyond the middle of the length of the foot. It is decorated with incised parallel lines at ends of the bow and on the tongue-shaped foot terminal. On the basis of these characteristics, they can be classified as older variants of the Baška fibulae, specifically Variant 2 according to Batović,[72] as well as the typological classification proposed by Blečić Kavur.[73] Given the repeated burials and the unclear chronological framework of the lower boundary for the production and use of Baška-type fibu-

[69] Osteološka analiza za grobove 104 i 110 još nije odrađena s obzirom na to da analize provode kolege iz Sjedinjenih Američkih Država (Kenneth C. Nystrom i Tisa N. Loewen), a uhodana dinamika njihove obrade prvo je bila usporena analizom velike količine osteološke građe iz groba 105, a zatim i u potpunosti obustavljena tijekom trajanja pandemije bolesti Covid-19.

[70] Osteološku analizu obavila je Tisa N. Loewen.

[71] Fibula ima očuvan tek manji, početni segment trakastog luka, koji je nedovoljan za precizniju determinaciju.

[72] BATOVIĆ 1974: 190, Sl. 3/2.

[73] BLEČIĆ KAVUR 2010: 191, Sl. 135.

[69] Osteological analysis for Graves 104 and 110 has not yet been completed, as the analyses are still being carried out by colleagues from the United States (Kenneth C. Nystrom and Tisa N. Loewen). The established pace of their work was initially slowed by the analysis of a large amount of osteological material from Grave 105 and was subsequently entirely halted during the COVID-19 pandemic.

[70] The osteological analysis was conducted by Tisa N. Loewen.

[71] The fibula has only a small, initial segment of the band-shaped bow preserved, which is insufficient for a more precise determination.

[72] BATOVIĆ 1974: 190, Fig. 3/2.

[73] BLEČIĆ KAVUR 2010: 191, Fig. 135.

izvodnje i uporabe fibula tipa Baška,[74] ovaj kontekst teško može biti ključan za preciznije datiranje fibula tipa Certosa Ie3 i Ic/e2 (?), no svakako se može sugerirati da je riječ o jednom od ranijih konteksta njihove pojave, po svemu sudeći, ne kasnijem od 4. st. pr. Kr.

Svakako treba napomenuti da ni u jednoj od navedenih grobnica, s isključivo nalazima fibula Certosa Ic i Ie varijanti izrađenih od bronce, nije pronađena importirana helenistička keramika koja se u impozantnoj količini javlja u velikim, tzv. helenističkim grobnicama što bi također mogao biti argument njihovoj ranijoj dataciji, možda i tijekom prve polovice 4. st. pr. Kr. U tom pogledu zanimljiv je grob 57 u Nadinu u kojem je pronađena fibula Certosa Ic (T. I/1), u ovom slučaju izrađena od srebra i popraćena i nalazima importirane crnopremazane keramike (sl. 4). Arhitektonski je ponovno riječ o pokopanju u kamenoj škrinji, no ona ipak donekle odudara od ostalih škrinja svojim oblikom i dimenzijama. Naime, kamene grobne škrinje u pravilu imaju pravokutan oblik pri čemu je dužina otprilike upola veća od širine.[75] Grob 57 ima (unutrašnje) dimenzije od 1,25 x 1,10 m čime se približava kvadratnom obliku, odnosno ima znatno veću širinu od uobičajene (sl. 5). U grobu nije bilo moguće izdvojiti pokojnika *in situ*, već su kosti većeg broja pokojnika (minimalno 7 osoba) bile raspršene po cijeloj površini. Od priloga se izdvajaju srebrna fibula Certosa Ic, četiri brončane fibule tipa Baška,[76] manji fragment

[74] BLEČIĆ KAVUR 2010: 193–194, Sl. 138. Fragmentirane fibule tipa Baška pronađene su i u grobu 110 s fibulom Certosa Ie1. Međutim, grob je pretrpio znatnije devastacije pri čemu je jedna uža ploča kamene škrinje pronađena urušena i polegnuta na dnu groba.

[75] Okvirno se vrijednosti kreću prosječno oko 1 metar dužine i 0,5 metara širine. Navedene dimenzije, naravno, ne odgovaraju malim škrinjama posebno pripremljenim za pokop djece, iako se djeca samostalno ili zajedno s odraslim pripadnicima zajednice pokapaju i u škrinjama većih dimenzija.

[76] Mogu se uvrstiti u varijantu 3 po Batoviću (BATOVIĆ 1974: 190, Sl. 3/4) i u istoimenu varijantu prema Blečić Kavur koja se javlja i u kontekstima 4. i 3. st. pr. Kr. (BLEČIĆ KAVUR 2010: 194–197, sl. 135, 137).

lae[74], this context is unlikely to be decisive for the precise dating of Certosa Ie3 and Ic/e2(?) fibulae. However, it can certainly be suggested that this represents one of the earlier contexts of their appearance, most likely not later than the 4th century BC.

It should certainly be noted that none of the mentioned graves, containing exclusively Certosa Ic- and Ie-variant fibulae made of bronze, yielded imported Hellenistic pottery. Such pottery, found in impressive quantities in the large so-called Hellenistic tombs, could also support an earlier dating for these graves, possibly even to the first half of the 4th century BC. Particularly interesting in this regard is Grave 57 at Nadin, in which a Certosa Ic fibula (Pl. I/1) was unearthed, in this case made of silver and accompanied by finds of imported black-glazed pottery (Fig. 4). Architecturally, this is again a burial within a stone cist, but it differs somewhat from other cists in its shape and dimensions. Namely, stone cists are typically rectangular, with the length approximately twice the width.[75] Grave 57, however, has (internal) dimensions of 1.25 x 1.10 metres, making it closer to a square shape, with a significantly greater width than usual (Fig. 5). It was not possible to identify an *in situ* burial in the grave, as the bones of at least seven individuals were scattered across the entire surface. Notable grave goods include a silver Certosa Ic fibula, four bronze Baška-type fibulae,[76] a small fragment of the bow of a fibula

[74] BLEČIĆ KAVUR 2010: 193-193, Fig. 138. Fragmented Baška-type fibulae were also found in Grave 110, alongside a Certosa Ie1 fibula. However, the grave had suffered significant damage, with one of the narrower slabs of the stone cist found collapsed and lying at the bottom of the grave.

[75] The dimensions typically average around one metre in length and half a metre in width. These dimensions, of course, do not correspond to the small cists specifically prepared for the burial of children, although children were buried either individually or together with adult members of the community also in larger cists.

[76] They can be classified as Variant 3 according to Batović (BATOVIĆ 1974: 190, Fig. 3/4) and the same variant according to Blečić Kavur, which also appears in contexts of the 4th and 3rd centuries BC (BLEČIĆ KAVUR 2010: 194-197, Figs. 135, 137).



Slika 4. *Nadin, grob 57: dio grobnog invenatara groba 57* (snimio: M. Parica)
Figure 4 *Nadin, Grave 57: part of the Grave 57 inventory* (photo by M. Parica)



Slika 5. *Nadin, nekropola: usporedba arhitekture groba 89, 57 i 105* (snimili: D. Vujević, M. Čelhar, M. Grgurić Srzentić; doradila: M. Čelhar)
Figure 5 *Nadin, necropolis: comparison of the architecture of Graves 89, 57 and 105* (photo by D. Vujević, M. Čelhar, M. Grgurić Srzentić; finishing by M. Čelhar)

luka fibule srednjolatenske sheme kojoj nisu očuvane noga, opruga i igla, ali je očuvan manji ulomak tetive omotane oko luka,[77] dvije

of the Middle La Tène scheme (with the foot, spring, and pin missing, but a small piece of the chord wrapped around the bow preserved),[77]

[77] Nije moguće precizno odrediti tip fibule, no izgledno je da ne bi trebala biti datirana prije 3. st. pr. Kr.

[77] It is not possible to precisely determine the type of fibula, but it should probably not be dated earlier than the 3rd century BC.

malene brončane fragmentirane dvojne igle s M-glavicom[78] te dva skifa i jedan vrčić koji pripadaju kategoriji crnopremazne keramike.[79] Dva crnopremazana skifa imaju blago izvijeni obod te gotovo cilindrični gornji dio tijela koji se nakon oštrog loma kontinuirano spušta prema kružnoj prstenastoj stopi. Takav oblik svojstven je tzv. atičkim skifosima čija se produkcija na tradiciji onih korintskih prati još od 6. st. pr. Kr., s tim da se oni ovdje prezentirani u mnogim varijantama povezuju sa sredinom i drugom polovicom 4. st. pr. Kr. proizvođeni širom helenskog svijeta.[80] Istom vremenu i kategoriji keramike pripada i lončić izvijenog oboda iz kojeg izlazi ručka, zatim kratkoga, ali širokog cilindričnog vrata, trbušastoga i urezima ukrašenog tijela te prstenaste noge. Tako oblikovani, ali i ukrašeni lončići svojstveni su mnogim radioničkim središtima, a uglavnom ih se nalazi u kontekstima druge polovice 4. st. pr. Kr., s tim da je izvjesno kako se jedna od varijanti proizvodila i u obližnjem Faru.[81] Dobar pokazatelj datacije jest i teret brodoloma kod Žirja potonulog u 4. st. pr. Kr. gdje su združeno dokumentirani identični oblici skifa i slični vrčići, no u žirjanskom slučaju svi s bifidnim ručkama ukrašenim Heraklovim čvorom.[82]

Dakle, srebrne fibule tipa Certosa Ic/d/e pronađene su u Nadinu u kamenoj škrinji groba 57 nešto većih dimenzija od uobičajenih i velikim, tzv. helenističkim grobnicama gdje su redovito popraćene prilozima importirane helenističke keramike. Takva situacija moguće upućuje na inauguraciju izrade predmeta noš-

two small fragmented bronze dual-pronged pins with M-shaped heads,[78] two skyphoi, and a small jug, all three belonging to the category of black-glazed ware.[79] Two black-glazed skyphoi have a slightly rounded rim and an almost cylindrical upper part of the body which, after a sharp transition, continuously descends toward a circular ring foot. This shape is characteristic of the Attic skyphoi, whose production, rooted in the tradition of Corinthian ones, can be traced back to the 6th century BC. However, those presented here, in their many variants, are associated with the middle and second half of the 4th century BC and were produced throughout the Hellenistic world.[80] Belonging to the same period and category of pottery is a small pot with a flared rim from which a handle extends, a short but wide cylindrical neck, a rounded body decorated with incised lines, and a ring foot. Such shaped and decorated small pots are characteristic of many workshop centres and are mostly found in contexts from the second half of the 4th century BC. It is certain that one of the variants was also produced in nearby Pharos.[81] A good indicator of the dating is the cargo of the shipwreck off Žirje, which sank in the 4th century BC, where identical forms of skyphoi and similar small jugs were documented together, although in the Žirje case all have bifid handles decorated with a Heracles knot.[82]

Thus, silver Certosa Ic-/d-/e-type fibulae were found at Nadin in the stone cist of Grave 57, which was somewhat larger than usual, as well as in large, so-called Hellenistic tombs, where they were regularly accompanied by im-

78 Riječ je o tipu IVa prema Vasiću s izrazito dugotrajnom uporabom sve do 2. st. pr. Kr. (VASIĆ 1982: 241–250, Karte 9; 2003: 123–128, T. 69; vidjeti i: PERKIĆ, DIZDAR, POTREBICA 2021: 95, s popisom recentnije bibliografije).

79 MATKOVIĆ 2015: 27–31, 41–42, 46–47.

80 SPARKES, TALCOTT 1970: 84–85, 260 (kat. br. 351-354), Pl. 17/351-354; ROTROFF 1997: 94, 257–258 (kat. br. 150-151), fig. 12/151-152. Za primjerke s prostora istočnog Jadrana, s popisom relevantne literature kod: UGARKOVIĆ 2019: 87–89.

81 MOREL 1981: 354 (tip 5335); UGARKOVIĆ 2019: 91–92.

82 RADIĆ ROSSI, GRISONIC, BATUR 2022: 21 i d.

78 It is a IVa type according to Vasić, with a remarkably long period of use extending up to the 2nd century BC (VASIĆ 1982: 241-250, Maps 9; 2003: 123-128, Pl. 69; s. also: PERKIĆ, DIZDAR, POTREBICA 2021: 95, with a list of more recent bibliography).

79 MATKOVIĆ 2015: 27-31, 41–42, 46-47.

80 SPARKES, TALCOTT 1970: 84-85, 260 (cat. No. 351-354), Pl. 17/351-354; ROTROFF 1997: 94, 257-258 (cat. No. 150-151), Fig. 12/151-152. For specimens from the eastern Adriatic, with a list of relevant literature, s. UGARKOVIĆ 2019: 87-89.

81 MOREL 1981: 354 (type 5335); UGARKOVIĆ 2019: 91-92.

82 RADIĆ ROSSI, GRISONIC, BATUR 2022: 21ff.

nje i nakita od srebra negdje u vrijeme sredine ili kasnog 4. st. pr. Kr., kada ujedno dolazi do promjene izgleda i postupnog povećanja monumentalnosti grobne arhitekture. U skladu s tim, a i ostatkom njihova grobnog inventara, izgledna je teza da su grobovi 89 i 104 nešto raniji i da potvrđuju produkciju barem Certosa Ic i Ie fibula u prvoj polovici 4. stoljeća. U svakom slučaju, trebat će pričekati otkriće nekih bolje očuvanih i preciznije datiranih konteksta koji će ovu pretpostavku potvrditi ili opovrgnuti.

ZAKLJUČAK

Fibule tipa Certosa Ic, Id i Ie predstavljaju regionalnu interpretaciju i reakciju na široko raširenu modu nošenja fibula tipa Certosa. Riječ je o najmlađim varijantama fibula tipa Certosa karakterističnim za prostor istočnog Jadrana i zaleđa, konkretno liburnsko i japodsko područje. U njihovu oblikovanju primjetan je spoj tradicije i inovacije zahvaljujući čemu nastaje jedinstven i prepoznatljiv funkcionalno-dekorativni element nošnje. Recentna arheološka istraživanja, pri čemu svakako treba posebno istaknuti ona na nadinskoj nekropoli na ravnom, znatno su unaprijedila poznavanje ove specifične materijalne građe, ne samo u kvantitativnom već i kvalitativnom pogledu. Osim u literaturi često pobliže interpretiranih varijanti Ic i Id, sada je okupljena i respektabilna količina slično oblikovanih fibula neukrašena luka koja je omogućila izdvajanje nove tipološke inačice – Certosa Ie, s trima podvarijantama. Dostupni kronološki podatci izvjesno upućuju na početak produkcije već u ranom 4. st. pr. Kr., dok je zahvaljujući inventaru nadinskog groba 105 vrijeme njihove uporabe, ako ne i proizvodnje, potvrđeno i tijekom 1. st. pr. Kr. Tipološke varijacije primjetne u izvedbi pojedinih inačica, posebno naglašene pri komparaciji fibula s liburnskog i japodskog prostora, nesumnjivo svjedoče o tome da se mora računati s njihovom proizvodnjom, bilo

ported Hellenistic pottery as grave goods. The situation possibly suggests the inauguration of crafting silver costume items and jewellery approximately to the period of the mid- or late 4th century BC, coinciding with changes in the design and a gradual increase in the monumentality of tomb architecture. Accordingly, (as well as on the basis of their remaining grave inventory), it is likely that Graves 89 and 104 were somewhat earlier, confirming the production of at least Certosa Ic and Ie fibulae throughout the first half of the 4th century. In any case, confirming or disproving this assumption will require better preserved and more accurately dated contexts to come to light.

CONCLUSION

Certosa Ic, Id and Ie fibula types represent a regional interpretation and reaction to the widespread fashion of wearing Certosa fibulae. These are the most recent variants of the Certosa-type fibula, characteristic of the Eastern Adriatic area and its hinterland, specifically the Liburnian and Iapodian areas. Their design combines tradition and innovation, creating a unique and recognisable functional-decorative element of attire. Recent archaeological excavations, particularly those at the Nadin flat necropolis, have significantly contributed to the understanding of this specific material, not only in terms of quantity, but also of quality. In addition to variants Ic and Id, which have often been precisely interpreted in the literature, a respectable amount of similarly designed fibulae with undecorated bows has been assembled, enabling the definition of a new typological variant: Certosa Ie, with its three subvariants. Available chronological data suggest production had already begun in the early 4th century BC, while the inventory of Grave 105 at Nadin confirmed the time of their use, and possibly also of their production, also in the course of the 1st cen-

u kontekstu jedne ili više radionica, u objema regijama. Izvan navedenog areala nalaze se tek sporadično, kao posljedica trgovačkih kontakata i/ili moguće i individualnih populacijskih kretanja, s krajnjim točkama distribucije u Istri (Picugi) na zapadu, Beloj Krajini (Vinica) na sjeveru te u srednjoj Dalmaciji (Otišić) na istoku.

ZAHVALE / ACKNOWLEDGEMENTS

Ovaj je rad podržan sredstvima projekata *Transformiranje jadranskog kozmosa: otočnost, povezanost i glokalni identiteti predrimske Dalmacije* (AdriaCos, UIP-2020-02-2419) Hrvatske zaklade za znanost i *Transformacije identiteta kroz prošlost* (TIPS), financiranim od Europske unije – NextGenerationEU.

tury BC. Typological variations in the design of certain fibula variants, especially noticeable when those from the Liburnian and Iapodian regions are compared, clearly suggest that they were produced locally in both regions, possibly in one or more workshops. Outside these areas, they are found only sporadically, as a result of trade contacts and/or possibly also individual population movements, with end points of distribution in Istria (Picugi) in the west, Bela Krajina (Vinica) in the north and in Central Dalmatia (Otišić) in the east.

ZAHVALE / ACKNOWLEDGEMENTS

This paper has been supported by the funds of the projects *Transforming the Adriatic Cosmos: Insularity, Connectivity, and Glocalized Identities of Pre-Roman Dalmatia* (AdriaCos, UIP-2020-02-2419) of the Croatian Science Foundation and *Transformations of Identities Through the Past* (TIPS), funded by the European Union through the NextGenerationEU initiative.

Translation and proof-reading: ETNOtrend d.o.o.

Literatura / References

ARSENIJEVIĆ, S., ĐUKIĆ, M., SIMONOVIĆ, G. 2008, *Nakit od praistorije do srednjeg vijeka. Arheološka zbirka muzeja Republike Srpske,* Banja Luka: Muzej Republike Srpske.

BATOVIĆ, A., BATOVIĆ, Š. 2013, *Helenistički grobovi iz Nadina u okviru V. (zadnje) faze liburnske kulture, Građa za povijest Liburna, IV.–I. st. pr. Kr.*, Posebna izdanja 2, Zadar: Arheološki muzej Zadar.

BATOVIĆ, Š. 1959, Predmeti osobitih oblika s područja Liburna, *Radovi Instituta JAZU u Zadru*, IV–V/1960, 425–452.

BATOVIĆ, Š. 1965, Die Eisenzeit auf dem Gebiet des illyrischen Stammnes der Liburnen, *Archaeologia Iugoslavica*, 6, 55–70.

BATOVIĆ, Š. 1968, Nin u prapovijesti, u/in: *Nin. Problemi arheoloških istraživanja*, Suić, M., (ur./ed.), Arheološki muzej Zadar, Zadar, 7–33.

BATOVIĆ, Š. 1974, Ostava iz Jagodnje gornje u okviru zadnje faze liburnske kulture, *Diadora*, 7, 159–245.

BATOVIĆ, Š. 1981, Nakit u prapovijesti sjeverne Dalmacije, u/in: *Nakit na tlu sjeverne Dalmacije od prapovijesti do danas*, Batović, Š., (ur./ed.), Zadar: Arheološki muzej Zadar, Etnografski odjel Narodnog muzeja u Zadru, 94–115.

BATOVIĆ, Š. 1987, Liburnska grupa, u/in: *Praistorija Jugoslavenskih Zemalja V. Željezno doba*, Benac, A., (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 339–390.

BATOVIĆ, Š. 1987a, Istarska kultura željeznog doba, *Radovi Filozofskog fakulteta u Zadru*, 26 (13), 5–74.

BATOVIĆ, Š. 1990, Benkovački kraj u prapovijesti, *Radovi Filozofskog fakulteta u Zadru*, 29 (16), 5–142.

BATOVIĆ, Š. 2003, Stanje istraživanja prapovijesti na kvarnerskim otocima, *Diadora*, 21, 253–348.

BATOVIĆ, Š. 2011, Predrimski novci iz južne Italije na istočnom jadranskom primorju / Le monete preromane dall'Italia meridionale sulla sponda orientale dell'Adriatico, *Diadora*, 25, 7–46.

BATOVIĆ, Š., ČONDIĆ, N. 2005, Istraživanja arheoloških nalazišta na trasi autoceste Biljane – Nadin – Raštević, *Obavijesti Hrvatskog arheološkog društva*, XXXVII(3), 74–91.

BERTOL STIPETIĆ, A. 2022, *Ostava iz Mazina / The Mazin hoard*, Katalozi i monografije Arheološkog muzeja u Zagrebu, 19, Zagreb: Arheološki muzej u Zagrebu.

BLEČIĆ, M. 2002, Kastav u posljednjem tisućljeću prije Krista, *Vjesnik Arheološkog muzeja Zagreb*, 3. s., 35, 65–146.

BLEČIĆ KAVUR, M. 2010, *Željezno doba na Kvarneru*, neobjavljena disertacija / unpublished PhD thesis, Ljubljana: Oddelek za arheologijo Filozofska fakulteta Univerze v Ljubljani.

BLEČIĆ KAVUR, M. 2015, *Povezanost perspektive. Osor u kulturnim kontaktima mlađeg željeznog doba / A coherence of perspective. Osor in cultural contacts during the Late Iron Age*, Koper: University of Primorska Press, Mali Lošinj: Lošinjski muzej.

BLEČIĆ KAVUR, M., PODRUG, E. 2014, Nekropola gradine Velika Mrdakovica – grobovi starijeg željeznog doba / Necropolis of the Velika Mrdakovica hillfort – Early Iron Age burials, *Vjesnik za arheologiju i historiju dalmatinsku*, 107, 31–112.

BOŽIČ, D. 2001, Ljudje ob Krki in Kolpi v latenski dobi / Zur latènezeitlichen Bevölkerung an Krka und Kupa, *Arheološki vestnik*, 52, 181–198.

BRUNŠMID, J. 1987, Nekoliko našašća novaca na skupu u Hrvatskoj i Slavoniji. V. Našašće ital-

skih i afrikanskih novaca u Mazinu, *Vjesnik Hrvatskog arheološkog društva*, n. s. II, 1897, 42–81.
BRUSIĆ, Z. 2002. Nekropole liburnskih naselja Nina i Kose kod Ljupča, *Histria Antiqua*, 8, 213–242.
ČELHAR, M., BORZIĆ, I. 2024, Traditions and Novelties in the Funerary Customs of the Eastern Adriatic Communities at Nadin and Kopila during the 2nd and 1st centuries BC, u/in: *Between Global and Local: Adriatic Connectivity from Protohistory to the Roman Period*, Ugarković, M., Konestra, A., Čelhar, M., Korić, M. (ur./eds.), Zbornik Instituta za arheologiju 21, Zagreb: Institut za arheologiju, 167–185.
ČELHAR, M., UGARKOVIĆ, M. 2021, Pojasne kopče tipa Nadin / Belt Buckles of the Nadin Type, *Archaeologia Adriatica*, 15, 293–339.
ČELHAR, M., ZARO, G. 2025, The birth of a city: Millennial-scale spatial organization in the Iron Age hillfort of Nadin-Gradina, northern Dalmatia (Croatia), u/in: *The Unclassical Balkans: Ancient Societies and Cultures of the Balkan Peninsula Beside the Graeco-Roman World*, Tzvetkova, Y., Sarakinski, V, Milivojević, F. (ur./eds.), Poseban broj Žive Antike / Antiquite Vivante, XI (u tisku/in press).
ČONDIĆ, I. 2014, Fotografije, u/in: *Cvijina gradina – tragom zaboravljene prošlosti / Cvijina gradina – tracing the forgotten past*, katalog izložbe, 2. dopunjeno izdanje, Čondić, N., Jurjević, M. (ur./eds.), Katalozi i monografije, 9, Zadar: Arheološki muzej Zadar, 50–57.
ĆUS-RUKONIĆ, J. 1981, Neki prapovijesni nalazi u Arheološkoj zbirci u Osoru, *Histria Archaeologica*, 11–12 (1980–1981), 5–15.
DRECHSLER-BIŽIĆ, R. 1958, Naselje i grobovi prehistorijskih Japoda u Vrpcu, *Vjesnik Arheološkog muzeja u Zagrebu*, 3. s., I, 35–60.
GABROVEC, S., MIHOVILIĆ, K. 1987, Istarska grupa, u/in: *Praistorija Jugoslavenskih Zemalja V. Željezno doba*, Benac, A., (ur./ed.), Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 293–338.
GALLI, E. 1940, Fibule argentee Liburniche nel museo di Zara, *Bulletino di Paletnologia Italiana*, 4, 185–191.
GLOGOVIĆ, D. 1989, *Prilozi poznavanju željeznog doba na Sjevernom Jadranu, Hrvatsko primorje i Kvarnerski otoci / Studies in the Iron Age of the Northern Adriatic, Hrvatsko primorje and Kvarner islands*, Monografije, 1, Zagreb: Jugoslavenska akademija znanosti i umjetnosti, Razred za društvene znanosti, Zavod za arheologiju.
GLOGOVIĆ, D. 1998, Fibule iz Ljupča, *Prilozi Instituta za arheologiju u Zagrebu*, 13–14 (1996–1997), 33–40.
GLOGOVIĆ, D., 2014, *The Fifth Phase of the Iron Age of Liburnia and the Cemetery of the Hillfort of Dragišić*, Oxford: BAR International Series 2689.
HILLER, G. 1991, *Zur japodischen und liburnischen Früheisenzeit Nordwestjugoslawiens, Teil 1, 2.*, neobjavljena disertacija / unpublished PhD thesis, Heidelberg: Fakultät für Orientalistik und Altertumswissenschaft der Ruprecht-Karls-Universität Heidelberg.
JADRIĆ-KUČAN, I., ZANINOVIĆ, J. 2015, *Fibule iz Arheološke zbirke Burnum / Fibulae from the Burnum Archaeological Collection*, Drniš: Gradski muzej Drniš; Šibenik: Javna ustanova „Nacionalni park Krka".
JURJEVIĆ, M., ČONDIĆ, N. 2013, *Cvijina gradina: tragom zaboravljene prošlosti,* Obrovac: Pučko otvoreno učilište Obrovac, Zadar: Arheološki muzej Zadar.
KUKOČ, S. 2005, Nadin – humak 13, *Hrvatski arheološki godišnjak*, 1/2004, 192–194.
KUKOČ, S. 2009, Nadin – liburnski kult mrtvih, istraživanja 2004. – 2006., 2009. god. / Nadin – Liburnian Cult of the Dead, Research Campaigns 2004–2006, 2009., *Asseria*, 7, 11–80.

KUKOČ, S., BATOVIĆ, Š. 2005, Istraživanje grobnog humka iz željeznog doba u Nadinu, *Obavijesti Hrvatskog arheološkog društva*, XXXVII(1), 58–63.

KUKOČ, S., ČELHAR, M. 2019, Nadin (Nedinum): prostorna koncepcija nekropole kod Liburna / Nadin (Nedinum): spatial concept of the Liburnian necropolis, *Vjesnik za arheologiju i historiju dalmatinsku*, 112, 9–31.

LO SCHIAVO, F. 1970, Il gruppo liburnico–japodico, per una definizione nell'ambito della protostoria balcanica, *Atti della Accademia Nazionale dei Lincei*, ser. VIII, 14, 363–524.

MARIĆ, A. 2017, *Late Certosa and La Tène fibulae from Bosnia and Herzegovina*, neobjavljena disertacija / unpublished PhD thesis, Ljubljana: Postgraduate school ZRC SAZU.

MARIĆ, Z. 1968, Japodske nekropole u dolini Une, *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu*, XXIII, 5–80.

MAROVIĆ, I. 1984, *Sinjska regija u prahistoriji*, Izdanja Hrvatskog arheološkog društva, 8, 27–63.

MATKOVIĆ, M. 2015, *Helenistička keramika iz nekropole u Nadinu*, neobjavljen diplomski rad / unpublished Master thesis, Zadar: Odjel za arheologiju, Sveučilište u Zadru.

MIGLIAVACCA, M. 1988, Fibule Certosa dalla zona prealpina tra Adige e Brenta, *Archeologia Veneta*, 10, 21–51.

MIHOVILIĆ, K. 1995, Srebrni nakit iz Nezakcija (Podaci za VI. stupanj razvoja istarske grupe), *Diadora*, 16–17 (1994–1995), 81–100.

MOREL, J. P. 1981, *Céramique campanienne: les formes*, Rome: École française de Rome.

PERKIĆ, D., DIZDAR, M., POTREBICA, H. 2021, Grob s položaja Gomile u Zakotorcu na Pelješcu / A grave at the Gomile site in Zakotorac on Pelješac, *Annales Instituti Archaeologici*, XVII (1), 82–103.

PRIMAS, M. 1967, Zur Verbreitung und Zeitstellung der Certosafibeln, *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz*, 14, 99–133.

RADIĆ ROSSI, I., GRISONIC, M., BATUR, K. 2022, Novootkriveni brodolom iz 4. st. pr. Kr. na otoku Žirju / The newly discovered 4th Century BC shipwreck at the island of Žirje, u/ in: *Kud' plovi ovaj brod? Brodolom iz 4. st. pr. K. u podmorju otoka Žirja / Where is this ship sailing to? Shipwreck from the 4th century BC on the seabed of the island of Žirje*, Miliša, M., Miše, M., Radić Rossi, I., Rogošić, F. (ur./eds.), Split: Umjetnička akademija Sveučilišta u Splitu, 11–26

RADIMSKÝ, W. 1893, Nekropola na Jezerinama u Pritoci kod Bišća, *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu*, 5, 37–92, 237–308, 369–466, 575–636.

RADIMSKÝ, W. 1895, Die Nekropole von Jezerine in Pritoka bei Bihać, *Wissenschaftliche Mitteilungen aus Bosnia und der Herzegowina*, III, 39–218.

RAUNIG, B. 1968, Japodska Nekropola na Crkvini u Golubiću, *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu*, XXIII, 81–98.

ROTROFF, S. I. 1997, *Hellenistic Pottery: Athenian and Imported Wheelmade Table Ware and Related Material*, The Atheanian Agora, XXIX, vol. 1–2, New Jersey, Princeton: American School of Classical Studies at Athens.

SPARKES, B. A., TALCOTT, L. 1970, *Black and Plain Pottery of the 6th, 5th and 4th centuries B.C.*, The Atheanian Agora, XII, vol. 1–2, New Jersey, Princeton: American School of Classical Studies at Athens.

TERŽAN, B. 1976, Certoška fibula / Die Certosafibeln, *Arheološki Vestnik*, 27, 317–536.

TERŽAN, B. 2010, Japodske tropentljaste fibule / Iapodian three-looped fibulae, *Prilozi Instituta za arheologiju u Zagrebu*, 27, 111–122.

TEŽAK–GREGL, T. 1981, Certosa fibule na centralnom japodskom području, *Vjesnik arheološ-*

kog muzeja u Zagrebu, 3. s., XIV, 25–48.
TONC, A. 2015, Protopovijesne zajednice na sjevernom dijelu istočne obale Jadrana i njezinu zaleđu, neobjavljena disertacija / unpublished PhD thesis, Zagreb: Filozofski fakultet Sveučilišta u Zagrebu.
UGARKOVIĆ, M. 2019, *Geometrija smrti: isejski pogrebni obredi, identiteti i kulturna interakcija. Antička nekropola na Vlaškoj njivi na otoku Visu*, I/1–2, Split, Zagreb: Arheološki muzej u Splitu, Institut za arheologiju.
VASIĆ, R. 1982, Ein Beitrag zu den Doppelnadeln im Balkanraum, *Praehistorische Zeitschrift*, 57, 220–257.
VINSKI, Z. 1956, Ein Liburnischer Depotfund aus Baška, *Archaeologia Iugoslavica*, 2, 27–52.

Internetski izvori / Internet sources

https://artefacts.mom.fr/ (21. 5. 2024)
https://collections.peabody.harvard.edu/search/vinica (29. 5. 2024.)

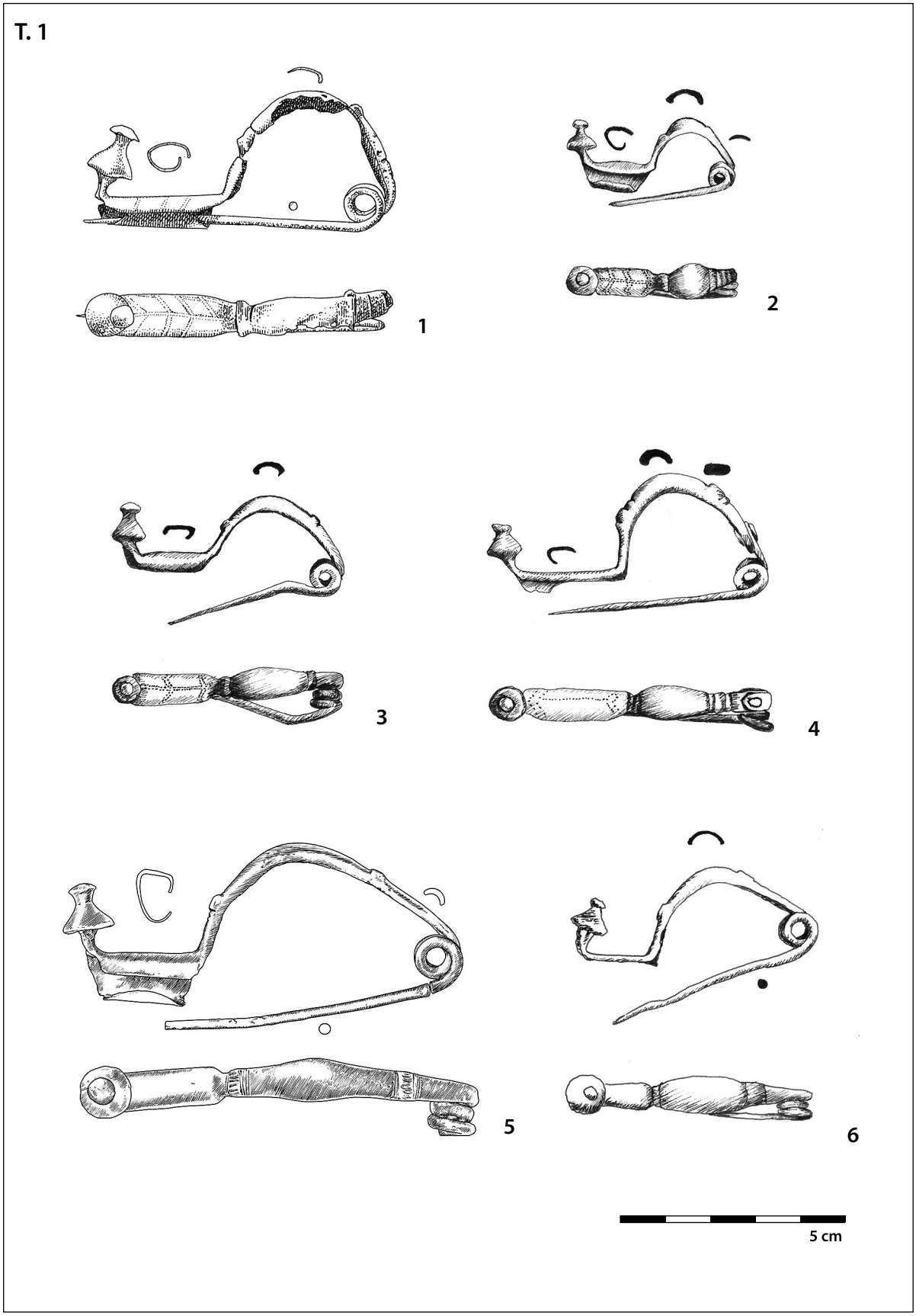


Tabla 1. *Nadin: Certosa Ic fibule* (1, 5: nacrtao: I. Čondić; 2–4, 6: nacrtala: N. Ćuk)
Plate 1 *Nadin: Certosa Ic fibulae* (1, 5: drawing: I. Čondić; 2-4, 6: drawing: N. Ćuk)

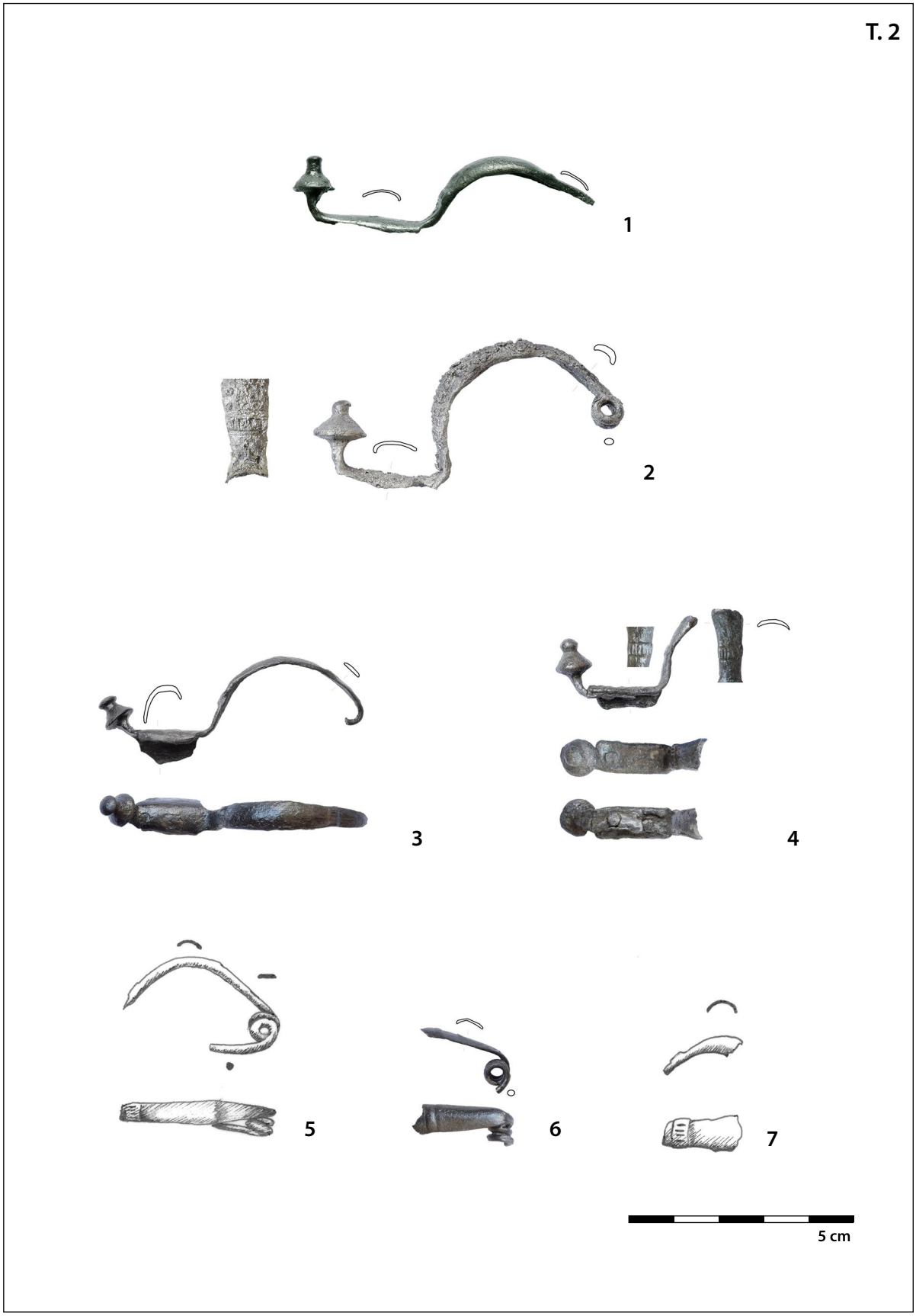


Tabla 2. *Nadin: Certosa Ic fibule* (1–4, 6: snimio: I. Čondić; 5, 7: nacrtala: N. Ćuk)
Plate 2 *Nadin: Certosa Ic fibulae* (1-4, 6: photo: I. Čondić; 5, 7: drawing: N. Ćuk)

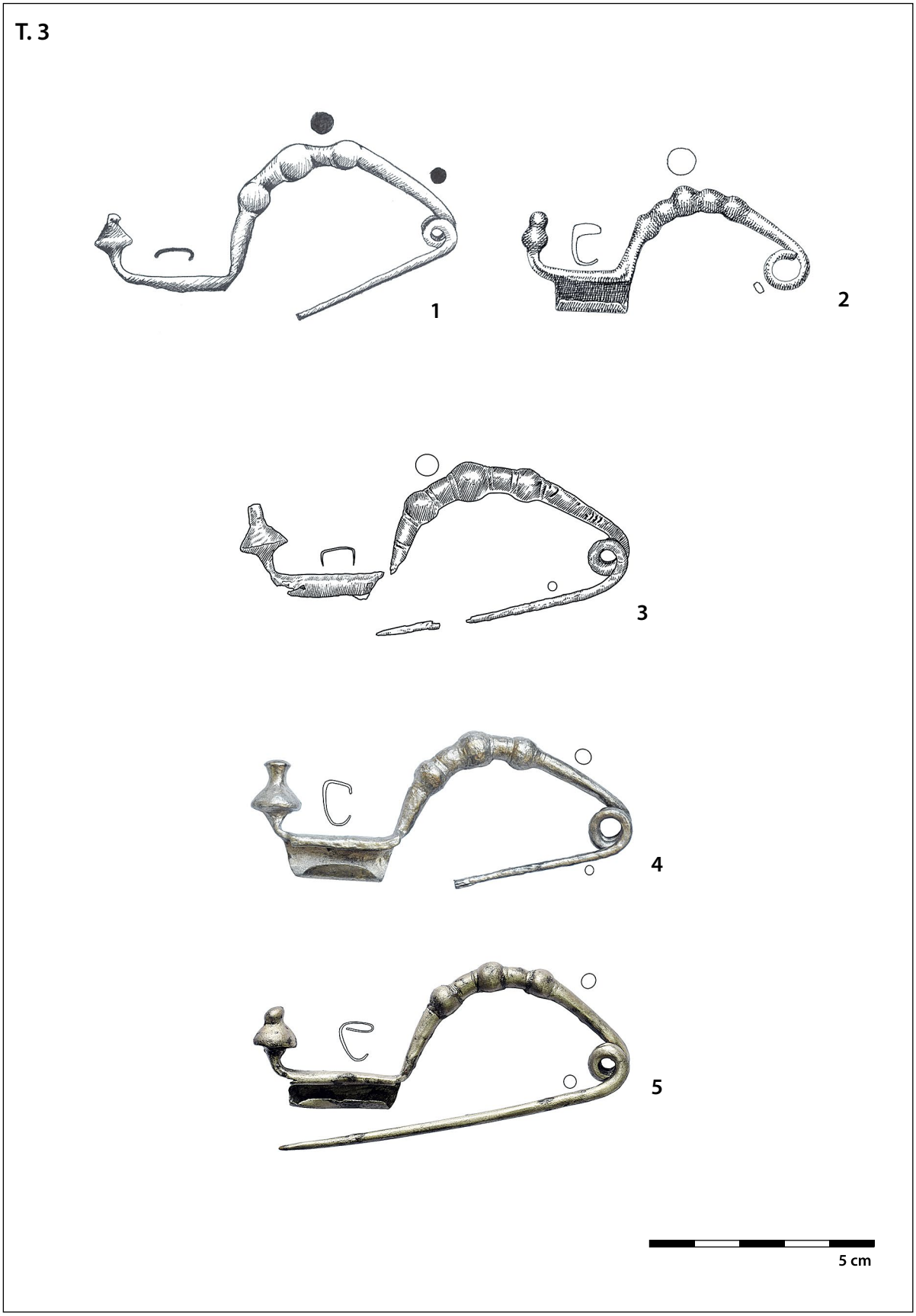


Tabla 3. *Nadin: Certosa Id fibule* (1: nacrtala: N. Ćuk; 2–5: nacrtao i snimio: I. Čondić)
Plate 3 *Nadin: Certosa Id fibulae* (1: drawing: N. Ćuk; 2-5: drawing and photo: I. Čondić)

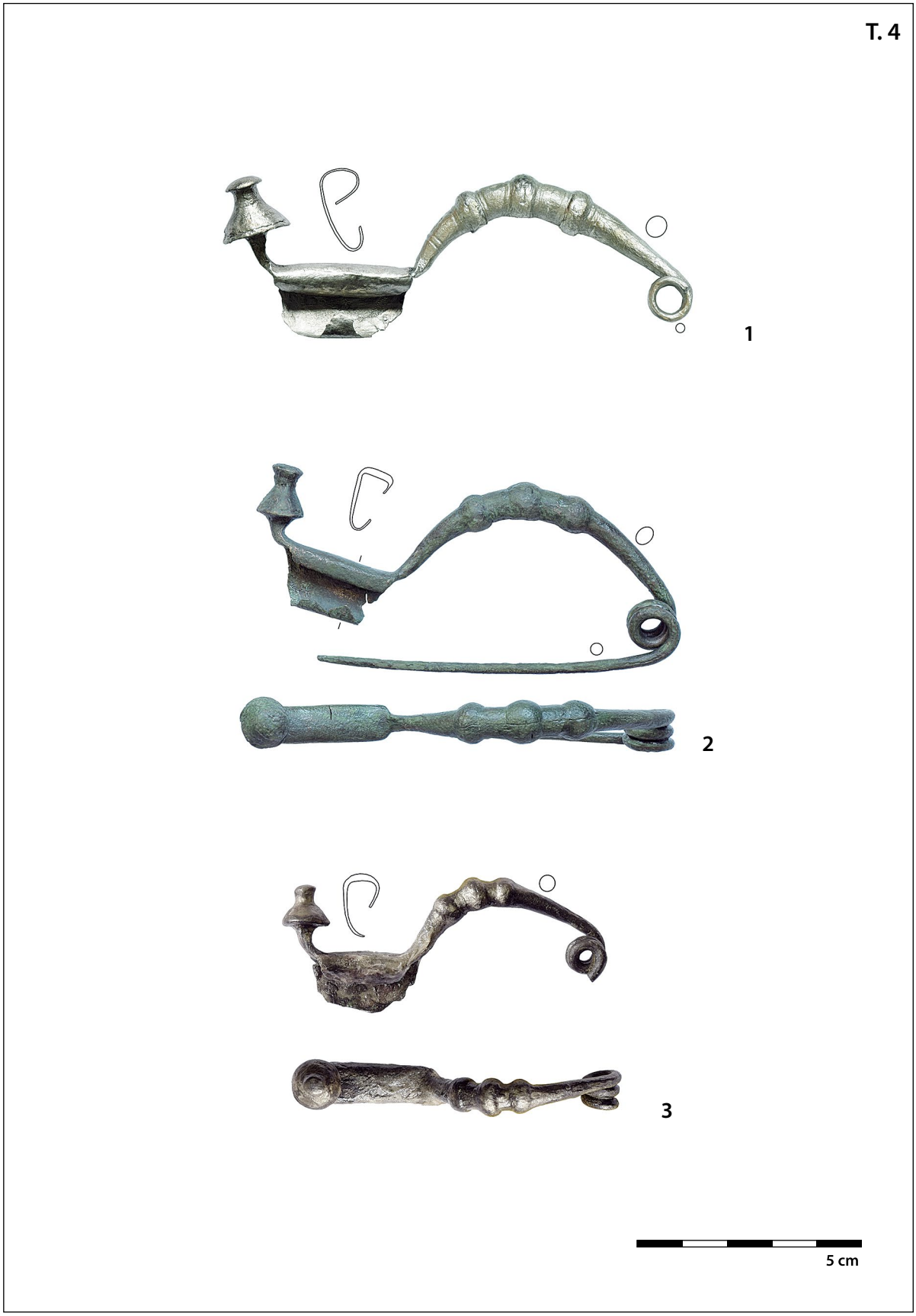


Tabla 4. *Nadin: Certosa Id fibule* (1–3: nacrtao i snimio: I. Čondić)
Plate 4 *Nadin: Certosa Id fibulae* (1-3: drawing and photo: I. Čondić)

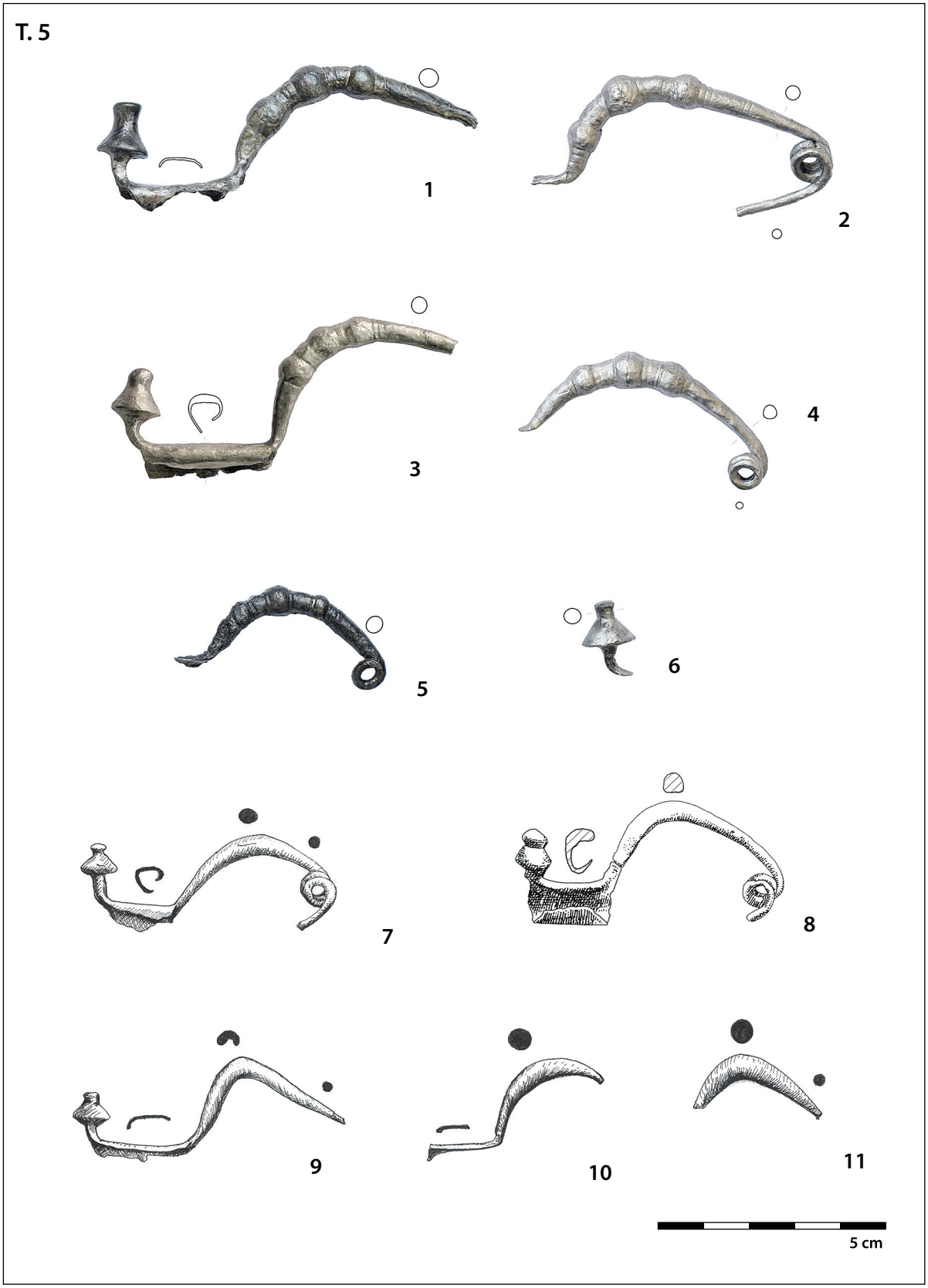


Tabla 5. *Nadin: 1–6: Certosa Id fibule, 7–11: Certosa Ie1 fibule* (1–6, 8: nacrtao i snimio: I. Čondić; 7, 9–11: nacrtala: N. Ćuk)
Plate 5 *Nadin: 1–6: Certosa Id fibulae, 7–11: Certosa Ie1 fibulae (1-6, 8: drawing and photo: I. Čondić; 7, 9-11: drawing: N. Ćuk)*

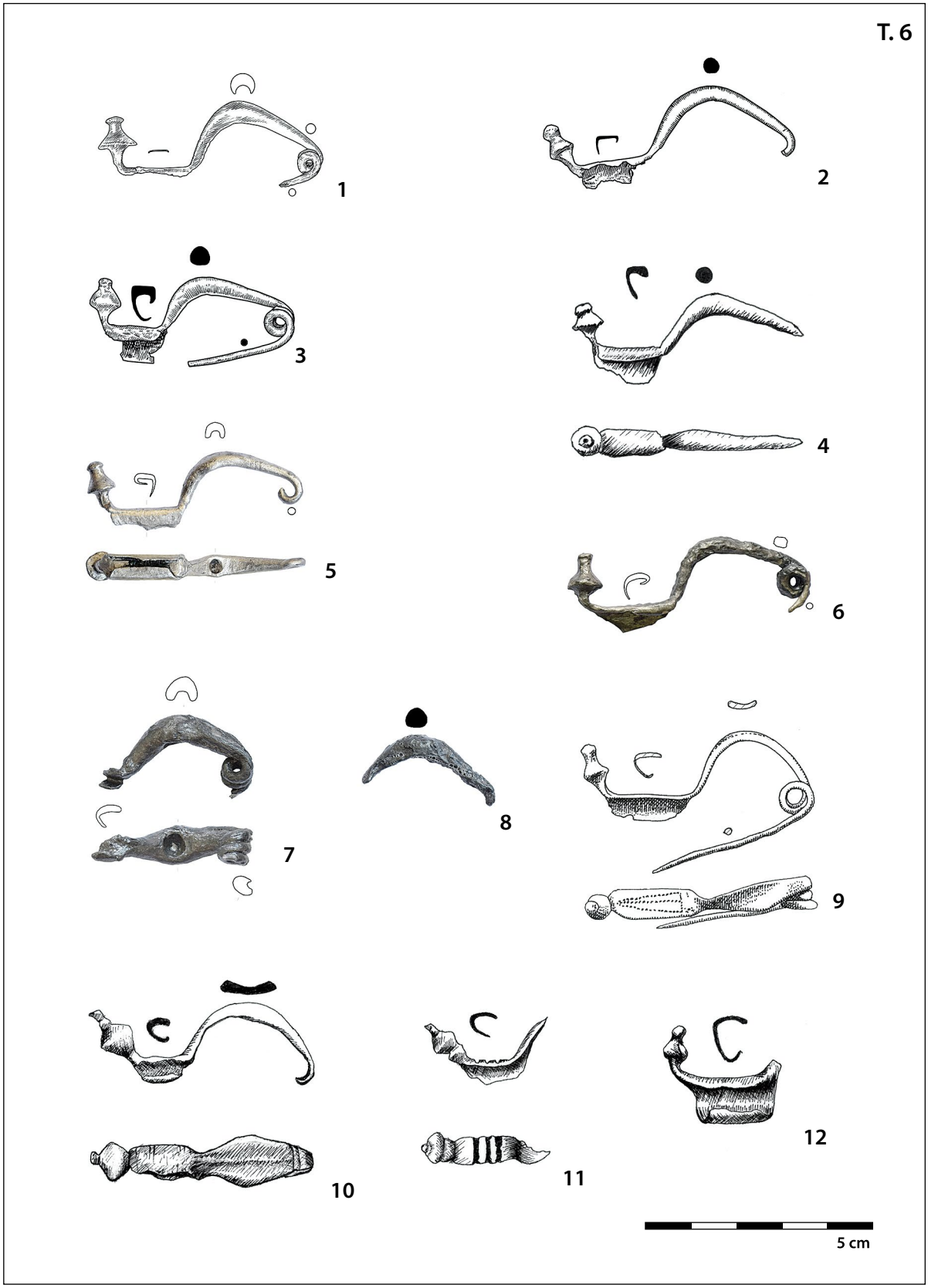


Tabla 6. *Nadin: 1–8: Certosa Ie1 fibule, 9–10: Certosa Ie3 fibule; 11–12 neodredive* (1–3, 5–9: nacrtao i snimio: I. Čondić; 4, 10–12: nacrtala: N. Ćuk)
Plate 6 *Nadin: 1-8: Certosa Ie1 fibulae, 9-10: Certosa Ie3 fibulae; 11-12 indeterminable* (1-3, 5-9: drawing and photo: I. Čondić; 4, 10-12: drawing: N. Ćuk)

TRAGOVI MASLINARSTVA U PRAPOVIJESTI ISTOČNOG JADRANA

TRACES OF OLIVE CULTIVATION IN THE PREHISTORIC EASTERN ADRIATIC

MATE PARICA

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of Archaeology
Obala kralja Petra Krešimira IV., 2
HR-23000 Zadar
mparica@unizd.hr

UDK: 903:633.852.73(262.3-11) "634/638"
DOI: 10.15291/archeo.4194
Prethodno priopćenje / Preliminary report
Primljeno / Received: 2024-6-20
Prihvaćeno / Accepted: 2024-9-15

Ključne riječi:
maslina (Olea europaea), Hrvatska, Soline – Korčula, Ričul, Vranjic, Nadin

Key words:
olive (Olea europaea), Croatia, Soline – Korčula, Ričul, Vranjic, Nadin

U radu se objavljuju primjeri ostataka ploda maslina iz prapovijesnog vremena na istočnoj obali Jadrana, počevši od neolitika pa sve do željeznog doba. Fizički ostatci koštica masline pronađeni su na četirima prapovijesnim lokalitetima, od kojih se tri danas nalaze ispod morske razine. Najranija poznata pojava masline zabilježena je u neolitiku, dok je početak kultivacije masline na našoj obali dokazan u vrijeme oko 1400 godina prije Krista na nalazištu Turanj – Ričul.

The paper presents examples of prehistoric olive fruit remains on the eastern Adriatic coast, from the Neolithic to the Iron Age. Physical remains of olive stones were unearthed at four prehistoric sites, three of which are now below sea level. The earliest known occurrence of olives is recorded in the Neolithic, while the beginning of olive cultivation on our coast has been proved to date to around 1400 BC, at the Turanj – Ričul site.

UVOD

Tradicijski se početak uzgoja masline na istočnom Jadranu povezuje s dolaskom Grka, odnosno s osnivanjem kolonija *Issa* i *Pharos* u 4. stoljeću prije Krista. U stručnoj i znanstvenoj literaturi ova teza provlači se odavno i teško je uopće pronaći izvor informacije koja se poslije uzimala kao sigurna činjenica. U novijim istraživanjima, a najčešće je riječ o podvodnim arheološkim istraživanjima, na više lokaliteta pronađeno je više fizičkih ostataka maslinova ploda koji sežu u dublju prapovijest. Cilj rada je uputiti na znatno ranije korištenje masline na istočnoj obali Jadrana nego što se do sada smatralo.

Poznavanje prapovijesnog korištenja masline na Mediteranu je znatno bolje. Najstariji primjer tragova drveta divlje masline jest pronalazak vatrišta starog 790 000 godina na lokalitetu Gesher Benot Ya'aqov u Izraelu.[1] Na obali Maroka dokazano je korištenje divlje masline prije 100 000 godina, od ranijeg *Homo sapiensa*, i to kao ogrjevnog drva, a moguće i kao hrane.[2] Ostatci divljih maslina korištenih za prehranu pronađeni su u paleolitičkim slojevima na brojnim nalazištima diljem Mediterana,[3] što potvrđuje teze o izvornoj mediteranskoj biljci, ali otvara novu problematiku različitih izvorišta najranijih maslina.[4] Početak kultivacije masline, kao i većine ostalih kultura, dogodio se u vrijeme neolitika, a posebno su važna potopljena neolitička naselja na Karmelskoj obali,[5] te u dolini rijeke Jordana u Izraelu.[6] Val neolitizacije širi se Mediteranom prema sjeveru, a time i nova dostignuća povezana s domestikacijom životinja i biljaka. Iznimno važna znanstvena istraživanja koja pokazuju vrijeme i pravce širenja kultivacije pitome masline obavila je

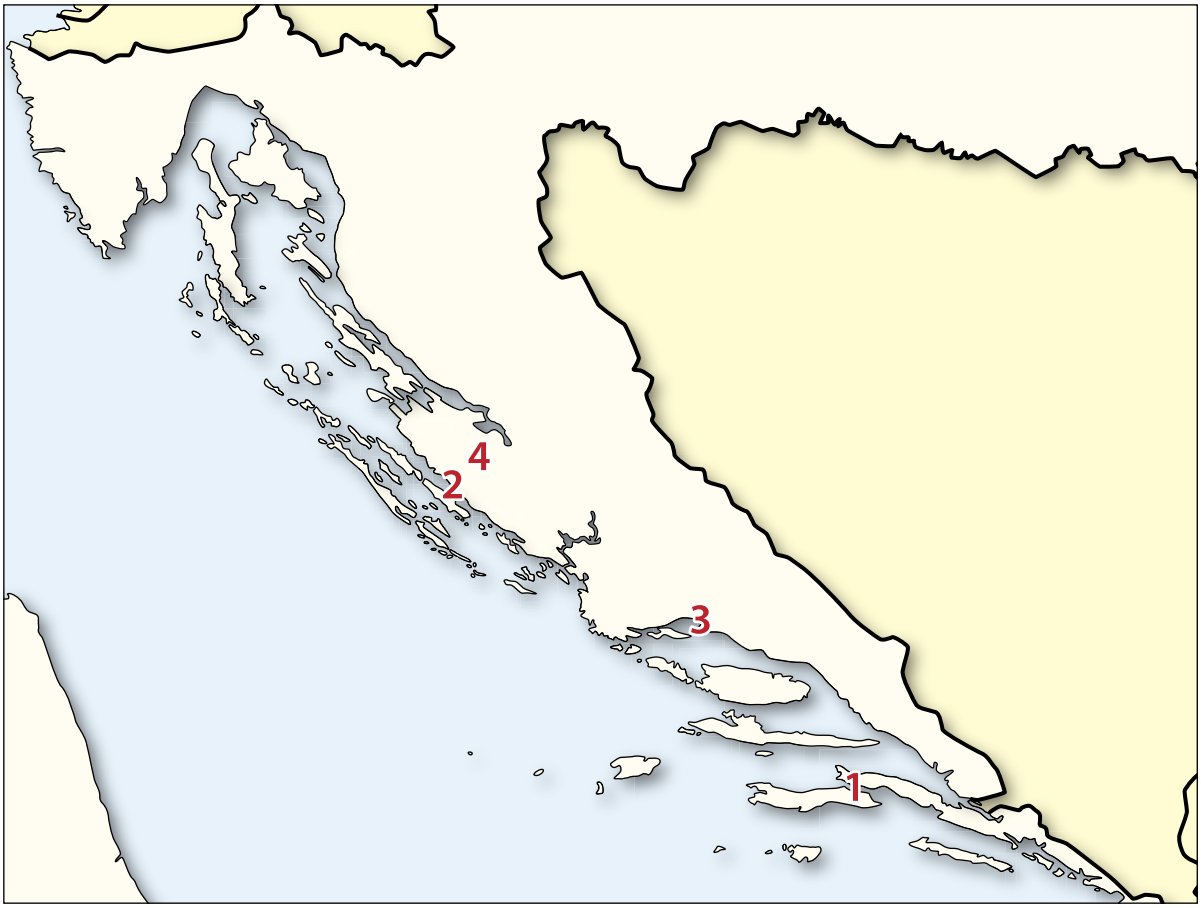
1 GOREN-INBAR et al. 2004.
2 MARQUER et al. 2022.
3 CARRIÓN, NTINOU, BADAL 2010: 955 gdje je tablično prikazan velik broj lokaliteta s datacijom i literaturom.
4 BESNARD, BERVILLÉA 2000.
5 GALILI 1997; GALILI et al. 2018.
6 LANGGUT, GARFINKEL 2022; LANGGUT 2024.

INTRODUCTION

Traditionally, the beginning of olive cultivation on the eastern Adriatic coast has been associated with the arrival of the Greeks, specifically to the establishment of the colonies *Issa* and *Pharos* in the 4th century BC. This assumption has long been present in professional and scientific literature, to the point where it is difficult to trace the original source of this information, which over time became accepted as a definitive fact. Recent research, often in the context of underwater archaeological investigations, has uncovered physical remains of olive fruits at several sites dating back to deeper prehistory. The aim of this paper is to highlight the significantly earlier use than previously believed of olives on the eastern Adriatic coast.

Our understanding of the prehistoric use of olives in the Mediterranean is considerably more developed. The earliest evidence of wild olive wood use is the discovery of a 790,000-year-old fireplace at the Gesher Benot Ya'aqov site in Israel.[1] On the coast of Morocco, the use of wild olive 100,000 years ago by early *Homo sapiens*, primarily as firewood and possibly as a source of food, has been proved.[2] Remains of wild olives used for food have been found in Palaeolithic layers at numerous sites across the Mediterranean,[3] confirming theories about it being a native Mediterranean plant but also raising new questions about the diverse origins of the earliest olives.[4] The beginnings of olive cultivation, like most crops, occurred during the Neolithic period. Of particularly importance are, in Israel, the submerged Neolithic settlements on the Carmel coast[5] and those in the Jordan River Valley.[6] The wave of Neolithisation spread across the Mediterranean northwards, bringing with it new advances related to the domestication of animals

1 GOREN-INBAR et al. 2004.
2 MARQUER et al. 2022.
3 CARRIÓN, NTINOU, BADAL 2010: 955; a large number of sites, with dates and literature, are shown in the table.
4 BESNARD, BERVILLÉA 2000.
5 GALILI 1997; GALILI et al. 2018.
6 LANGGUT, GARFINKEL 2022; LANGGUT 2024.



Karta 1. *Smještaj nalazišta na istočnom Jadranu: 1 – Rt Soline – Korčula, 2 – Turanj – Ričul, 3 –Vranjic, 4 – Nadin* (izradio: M. Parica; izvor podloge: Reference map Demis Mapper)
Map 1 *Location of sites on the eastern Adriatic: 1 – Cape Soline – Korčula, 2 – Turanj – Ričul, 3 – Vranjic, 4 – Nadin* (made by M. Parica; source of base map: Reference map Demis Mapper)

D. Langgut i suradnici.[7] Geološkim bušenjima u datiranim slojevima najčešće močvarnog okruženja, te analizom peludi, uspjeli su napraviti kartu širenja kultivacije masline.[8] Navedena rekonstrukcija širenja kultivacije masline važna je za usporedbu s nalazima ostataka maslina na istočnom Jadranu, prije svega u odnosu na brojnost pronađenih maslina tijekom arheoloških istraživanja. U ovom će radu biti spomenuti ostatci masline pronađeni u istraživanjima na istočnoj obali Jadrana koji imaju jasan kronološki kontekst, od kronološki najstarijih prema najmlađim primjercima (Karta 1).

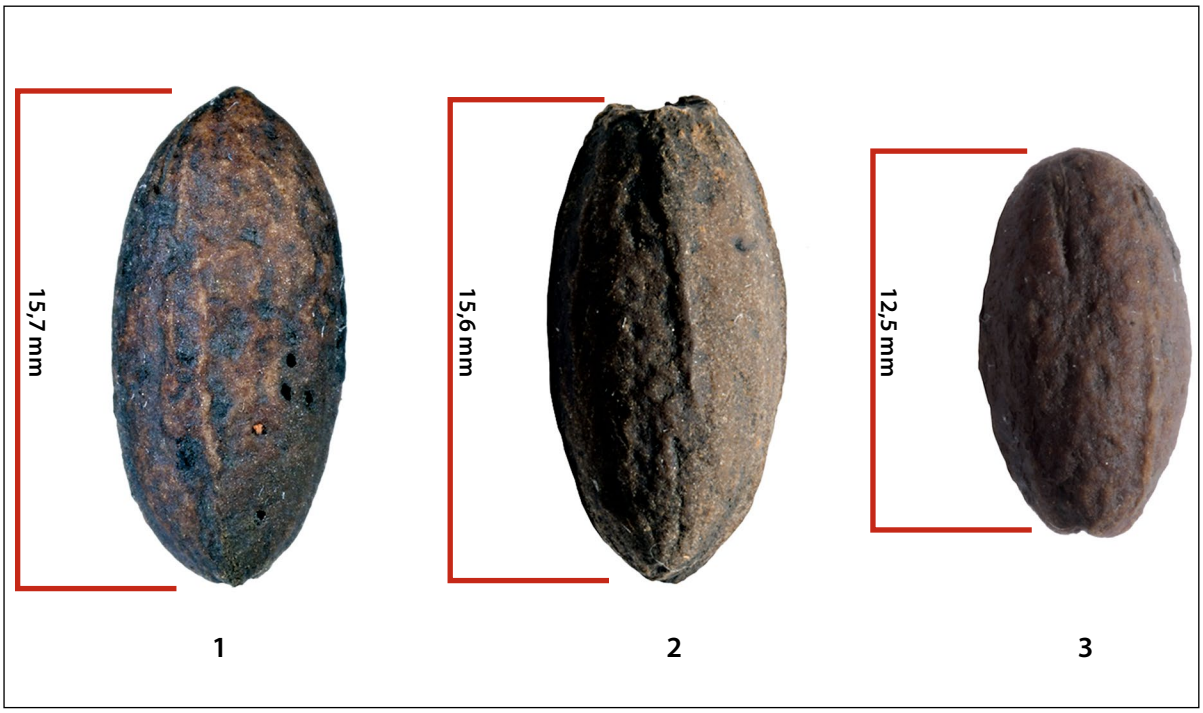
and plants. Extremely important scientific research, demonstrating the period and direction of the spread of olive cultivation, has been conducted by D. Langgut and associates.[7] Through geological drilling in dated layers (most often in marshy environments) and pollen analysis, they have been able to create a precise map of the spread of olive cultivation.[8] This reconstruction of the spread of olive cultivation is important for a comparison with eastern Adriatic finds of olive remains, particularly in relation to the abundance of olives recovered in archaeological excavations. This paper mentions olive remains, uncovered in excavations on the eastern Adriatic coast, that have a clear chronological context, from the oldest to the most recent specimens (Map 1).

7 LANGGUT et al. 2019; LANGGUT, GARFINKEL 2022.
8 LANGGUT et al. 2019; LANGGUT, GARFINKEL 2022.

7 LANGGUT et al. 2019; LANGGUT, GARFINKEL 2022.
8 LANGGUT et al. 2019; LANGGUT, GARFINKEL 2022.



Slika 1. *Podmorska istraživanja u Solinama na Korčuli* (snimio: M. Parica)
Figure 1 *Underwater investigations in Soline on Korčula* (photo by M. Parica)



Slika 2. *Ostatci maslina iz kasnoneolitičkog lokaliteta Soline* (snimio: M. Parica)
Figure 2 *Olive remains from the Late-Neolithic site of Soline* (photo by M. Parica)

Rt Soline – Korčula[9]

Za sada najstariji ostatak masline na istočnom Jadranu (*Olea europaea*) odnosi se na nalaz triju koštica masline iz potopljenoga neolitičkog naselja Solina na otoku Korčuli (sl. 2). Na ovom lokalitetu sistematska istraživanja još traju, riječ je o jednoslojnome kasnoneolitičkom naselju hvarske kulture.[10] Naselje je formirano na umjetno sagrađenoj obali oblika sedmerokuta, te je popločanom cestom spojeno s obalom otoka Korčule. Ostatci naselja nalaze se na od 4 do 5 metara dubine ispod današnje morske razine. Pri istraživanju slojeva unutar naselja (sl. 1), osim uobičajenih kasnoneolitičkih artefakata, preliminarnim pregledom pronađena je i veća količina bioarheološkog materijala. Među svim tim ostatcima izdvojene su i tri koštice masline. One su pronađene unutar slojeva nataloženih u jednom segmentu unutar obalnog zida na sjeverozapadnom dijelu naselja. Sloj je bio sastavljen većinom od organskog materijala, međutim, nad slojem su se nalazile kamene ploče, urušene s okolnih neolitičkih suhozidnih konstrukcija. Navedena situacija ide u prilog autentičnosti depozita i nemogućnosti miješanja s nekim recentnijim slojevima. Sloj s čistim organskim materijalom nalazio se dijelom ispod urušenih ploča, a količina iskopanog sedimenta stratigrafske jedinice u kojem su se nalazile koštice maslina iznosi približno 0,8 m^3. Jedna koštica (sl. 2/1) poslana je na radiokarbonsku analizu te je dobiven rezultat 90,4 % mogućnosti 4938 – 4778 cal BC.[11] Ovaj rezultat odgovara arheološkom materi-

[9] Od prosinca 2023. istraživačke aktivnosti na lokalitetu Soline financirane su iz sredstava projekta: HRZZ IP-2022-10-3893 "Potopljena neolitička nalazišta u podmorju hrvatskog dijela Jadrana / Undersea Neolithic sites in the Croatian Adriatic".

[10] PARICA 2021; PARICA, RADIĆ 2022; PARICA 2022.

[11] Beta-661015, Conventional radiocarbon age 5960 ± 30 BP 95,4 % probability 4938 – 4778 cal BC 4755 – 4728 cal BC (6887 – 6727 cal BP) (6704 – 6677 cal BP) 68,2 % probability, 4850 – 4792 cal BC4897 – 4867 cal BC (6799 – 6741 cal BP) (6846 – 6816 cal BP).

Cape Soline – Korčula[9]

So far, the oldest olive (*Olea europaea*) remains on the eastern Adriatic coast pertain to the find of three olive stones at the submerged Neolithic settlement of Soline on the island of Korčula (Fig. 2). Systematic research is still ongoing at this site, which is a single-layer Late Neolithic settlement of the Hvar culture.[10] The settlement was built on an artificially constructed, heptagonal-shaped shoreline and was connected to the coast of the island of Korčula by a paved road. The settlement remains are located at a depth of 4 to 5 metres below modern-day sea level. During the excavations of the layers within the settlement (Fig. 1), a preliminary survey revealed, in addition to the usual Late Neolithic artefacts, a significant amount of bioarchaeological material. Also identified among all these remains were three olive stones. They were found in layers deposited in one segment within the coastal wall in the northwestern part of the settlement. The layer consisted mostly of organic material; however, it was overlaid by stone slabs that had collapsed from the surrounding Neolithic dry-stone structures. This situation supports the authenticity of the deposits and the impossibility of their having been mixed with any more recent layers. The layer of pure organic material was partly located below the collapsed slabs, and the volume of excavated sediment from the stratigraphic unit containing olive stones was approximately 0.8 m^3. One olive stone (Fig. 2/1) was sent for radiocarbon analysis, yielding a result showing a 90.4% probability of 4938–4778 cal BC.[11] This result corresponds to the archaeological material, and it matches another radiocarbon date from

[9] From December 2023, research activities at the Soline site are financed from the funds of the project: HRZZ IP-2022-10-3893 „Undersea Neolithic site in the Croatian Adriatic".

[10] PARICA 2021; PARICA, RADIĆ 2022; PARICA 2022.

[11] Beta-661015, Conventional radiocarbon age 5960 ± 30 BP 95.4% probability 4938–4778 cal BC 4755–4728 cal BC (6887–6727 cal BP) (6704–6677 cal BP) 68.2% probability, 4850–4792 cal BC 4897–4867 cal BC (6799–6741 cal BP) (6846–6816 cal BP).

jalu i poklapa se s drugim radiokarbonskim datumom s lokaliteta. Iako sediment iz naselja još uvijek nije flotiran, evidentno je da su tri koštice masline iznimno rijetka pojava na lokalitetu, za razliku od brojnih ostataka badema, koje su vjerojatno dokaz kultivacije, te sitnih drvenih grana i iverja. S obzirom na veće količine ukupnoga organskog materijala, u ovom slučaju koštice maslina predstavljaju rijetku pojavu na nalazištu. Je li riječ o importu maslina kao hrane, ili pak o nekom drugom scenariju, za sada je nejasno. Međutim, jasno je da na lokalitetu nema masovnije cirkulacije maslina u vrijeme kasnoneolitičke hvarske kulture.

Turanj – Ričul

Zasad najstariji tragovi masovne pojave koštica maslina nalaze se na potopljenom lokalitetu Turanj – Ričul. Riječ je o poto-

the site. Although the sediment from the settlement has not yet been flotated, it is evident that the three olive stones are an exceptionally rare find at the site, in contrast to the numerous remains of almonds (which provide evidence of likely cultivation) as well as small wooden branches and chips. Given the larger quantities of the overall organic material, the olive stones represent an uncommon occurrence at the site. The question remains of whether they were imported as food or were part of another scenario. This remains unclear for now; however, it is evident that there was no significant circulation of olives at the site during the Late Neolithic Hvar culture.

Turanj – Ričul

The oldest known traces to date of a mass occurrence of olive stones have been found at the submerged site of Turanj – Ričul. This is a



Slika 3. *Lokalitet Ričul iz zraka* (snimio: A. Mandić)
Figure 3 *The Ričul site from the air* (photo by A. Mandić)



Slika 4. *Vidljivi slojevi s maslinama na lokalitetu Ričul* (snimio: M. Parica)
Figure 4 *Visible layers with olives at the Ričul site* (photo by M. Parica)

pljenom naselju srednjega brončanog doba, koje je izgrađeno u plitkom moru i nasipavanjem se širila zona naselja (sl. 3). Ovdje se u višegodišnjim podvodnim arheološkim istraživanjima pod vodstvom M. Ilkića pronašlo mnoštvo koštica maslina.[12] Iako su se masline povremeno pronalazile u istraživačkim sondama na prostoru cijelog lokaliteta, iznimno velika koncentracija koštica maslina, trešanja (*Prunus avium*), te drugoga organskog materijala, pronađena je s unutrašnje strane bedema koji je odvajao naselje od kopna. Vidljivo je da je sloj deponiran u plitkom moru između kopna i naselja, te je poslije sačuvan jer se preko depozita širilo naselje i izgrađene su fortifikacije (sl. 4). Stratigrafska jedinica u kojoj je veća koncentracija koštica maslina bila je debljine

[12] BRUSIĆ 1977; ČELHAR et al. 2017.

now-inundated Middle Bronze Age settlement built in shallow waters, with the settlement area expanding through an embankment (Fig. 3). In the course of several years of underwater archaeological excavations led by M. Ilkić, a large number of olive stones were discovered there.[12] Although olives were occasionally found in exploratory trenches made across the entire site, an exceptionally high concentration of olive and cherry (Prunus avium) stones and other organic material was found on the inner side of the rampart that separated the settlement from the mainland. It is evident that the layer was deposited in the shallow waters between the mainland and the settlement and was later preserved as the settlement expanded over the deposit and fortifications were constructed (Fig. 4). The stratigraphic unit with a higher concentration of olive

[12] BRUSIĆ 1977; ČELHAR et al. 2017.

oko 20 cm, a sadržavala je još i drvene grane te ostali organski materijal. Nalazila se nad zdravicom koja je u ovom slučaju kompaktni morski šljunak, a u stratigrafskoj jedinici koja je istražena na prostoru 2 m² (okvirno 0,3 m³), pronađeno je oko 300 koštica masline. Sloj je poslije prekriven kamenim urušenjem od arhitekture naselja i fortifikacija. Jedna je radiokarbonska analiza načinjena izravno na koštici masline i dobiveni rezultat obuhvaća vrijeme od 1450. do 1291., 95,4 %, kal. g. pr. Krista,[13] što odgovara i ostalim radiokarbonskim analizama na nalazištu. Koncentracija koštica masline zajedno s ostalim organskim materijalom sugerira masovniju prisutnost masline na ovom srednjobrončanodobnom lokalitetu.

Vranjic

Godine 2004. započinju građevinski radovi uređenja obalne zone Vranjica koji su rezultirali nizom zaštitnih istraživanja u Vranjicu,[14] a podmorska istraživanja vodila je I. Radić Rossi. Osim pronalazaka antičkih spomenika koji su bili uzidani u kasnije obalne konstrukcije, pronađeni su i bogati prapovijesni slojevi. Na jednom dijelu južne obale dokumentiran je cijeli stratigrafski profil, do 5 metara dubine, a na njemu se mogu vidjeti prapovijesni, antički, te slojevi do srednjeg i novog vijeka.[15] Prapovijesni slojevi sadrže mnoštvo keramičkog i organskog materijala, a serija radiokarbonskih datuma pokazuje kontinuitet od najstarijeg datuma, od 1450.-1310. prije Krista do 575.-485. godine prije Krista, što je najmlađi datum u prapovijesnim slojevima.[16]

Iako je riječ o zaštitnim istraživanjima koja

[13] Beta-519986, Conventional radiocarbon age 3120 ± 30 BP, 95, 4 % probability (95,4 %) 1450 – 1291 cal BC (3399 – 3240 cal BP), 68,2 % probability, (47,5 %) 1432 – 1385 cal BC (3381 – 3334 cal BP), (20,7 %) 1340 – 1316 cal BC (3289 – 3265 cal BP).

[14] RADIĆ ROSSI 2006; 2007; 2008; 2008a; VODIČKA MIHOLJEK 2008; SKELAC, VODIČKA MIHOLJEK 2009.

[15] RADIĆ ROSSI 2011: 302.

[16] RADIĆ ROSSI 2011: 302.

stones was about 20 cm thick and also contained branches and other organic material. It was located above natural substrate, which in this case consisted of compact marine gravel. Approximately 300 olive stones were retrieved from the stratigraphic unit, which was investigated over an area of 2 m² (approximately 0.3 m³). The layer had over time been covered by collapsed stones that were once part of the settlement's structures and fortifications. A radiocarbon analysis was conducted directly on one olive stone, and the obtained result dated it to 1450–1291 cal BC (with a 95.4% probability),[13] which corresponds with other radiocarbon data from the site. The concentration of olive stones, along with other organic material, suggests a more widespread presence of olives at this Middle Bronze Age site.

Vranjic

In 2004, construction works began on the development of the coastal zone of Vranjic, resulting in a series of protective excavations in the area,[14] with underwater investigations led by I. Radić Rossi. In addition to the discovery of ancient monuments incorporated into later coastal structures, rich prehistoric layers were also uncovered. On one part of the southern coast, the entire stratigraphic profile up to five metres deep was documented, showing layers from prehistoric and ancient times extending to the medieval and modern periods.[15] The prehistoric layers contain a wealth of ceramic and organic material, and a series of radiocarbon dates indicate continuity from the oldest to the most recent date within the prehistoric layers (1450–1310 BC to 575–485 BC).[16]

Although these were protective excavations

[13] Beta-519986, Conventional radiocarbon age 3120 ± 30 BP, 95.4% probability (95.4%) 1450–1291 cal BC (3399–3240 cal BP), 68.2% probability, (47.5%) 1432–1385 cal BC (3381–3334 cal BP), (20.7%) 1340–1316 cal BC (3289–3265 cal BP).

[14] RADIĆ ROSSI 2006; 2007; 2008; 2008a; VODIČKA MIHOLJEK 2008; SKELAC, VODIČKA MIHOLJEK 2009.

[15] RADIĆ ROSSI 2011: 302.

[16] RADIĆ ROSSI 2011: 302.



Slika 5. *Ostatci maslina iz prapovijesnih slojeva Vranjica* (snimio: Z. Brusić)
Figure 5 *Olive remains from the prehistoric layers of Vranjic* (photo by Z. Brusić)

su često obavljana istovremeno s građevinskim radovima, na više su mjesta pronađeni očuvani prapovijesni slojevi s grubljom keramikom koja ima dosta široku dataciju, a obuhvaća srednje i kasno brončano doba.[17] U navedenim prapovijesnim slojevima pronalazio se i organski materijal, najčešće koštice. Sudionik zaštitnih istraživanja u Vranjicu tada je bio i Z. Brusić. On je izdvojio ponešto koštica maslina (sl. 5), grožđa (*Vitis vinifera*), trešanja (*Prunus avium*), smokava (*Ficus carica*) i kupina (*Rubus sp.*) iz prapovijesnih slojeva Vranjica, a posebice su vrijedni primjerci koštica maslina koji su izdvojeni iz sloja datiranog radiokarbonskim analizama LTL 1654A, 2909 ± 40 ili 959. godina prije Krista te kraj profila LTL1655A,

often conducted in tandem with construction works, several locations revealed well-preserved prehistoric layers containing coarse ware with a broad dating range encompassing the Middle and Late Bronze Age.[17] Organic material, most commonly fruit stones, was also found in these prehistoric layers. Also participating in the protective excavations in Vranjic at that time was Z. Brusić. He identified several stones of olives (*Olea europaea*) (Fig. 5), grapes (*Vitis vinifera*), cherries (*Prunus avium*), figs (*Ficus carica*), and blackberries (*Rubus* sp.) in the prehistoric layers at Vranjic. Particularly valuable are olive-stone specimens recovered from a layer radiocarbon-dated to LTL 1654A, 2909 ± 40 or 959 BC, and from the end of the profile,

[17] Opširnije o keramici iz Vranjica: ARENA, BARBARIĆ, RADIĆ ROSSI 2019; ARENA et al. 2020.

[17] More extensively on pottery from Vranjic: ARENA, BARBARIĆ, RADIĆ ROSSI 2019; ARENA et al. 2020.

2845 ± 80 ili 895. god. prije Krista.[18] Iako je datiran sloj sa sigurnim nalazima koštica maslina, masline se pojavljuju i u ostalim slojevima, te je moguće da su neki od njih stariji od navedenog datuma. Zbog zahtjevnih uvjeta u kojima su se ova zaštitna istraživanja odvijala, nije moguće rekonstruirati zapremninu iskopanih stratigrafskih jedinica s bioarheološkim ostatcima, međutim, sudeći prema fotografijama Z. Brusića, riječ je o većoj koncentraciji koštica masline.

Nadin

Nadin je važno naselje s kontinuitetom naseljavanja od prapovijesti do srednjeg i novog vijeka.[19] Od 2015. započinju sustavna istraživanja unutar naselja pod vodstvom M. Čelhar (Sveučilište u Zadru) u suradnji sa Sveučilištem u Maineu, SAD (Gregory Zaro).[20] U sklopu arheoloških istraživanja, unutar naseobinskog konteksta datiranog radiokarbonskom metodom u razdoblje starijega željeznog doba, odnosno u vrijeme posljednje četvrtine 9. st. pr. Kr. do sredine 8. st. pr. Krista, pronađena je koštica masline u strukturi veće skladišne posude,[21] za koju autorice smatraju da je najvjerojatnije lokalne proizvodnje (sl. 6).[22] U ovom slučaju valja napomenuti da su uvjeti očuvanja organskog materijala na kopnenim lokalitetima znatno teži, najčešće se sačuvaju karbonizirane sjemenke ili, kao u ovom slučaju, utisnute u svježu glinu.

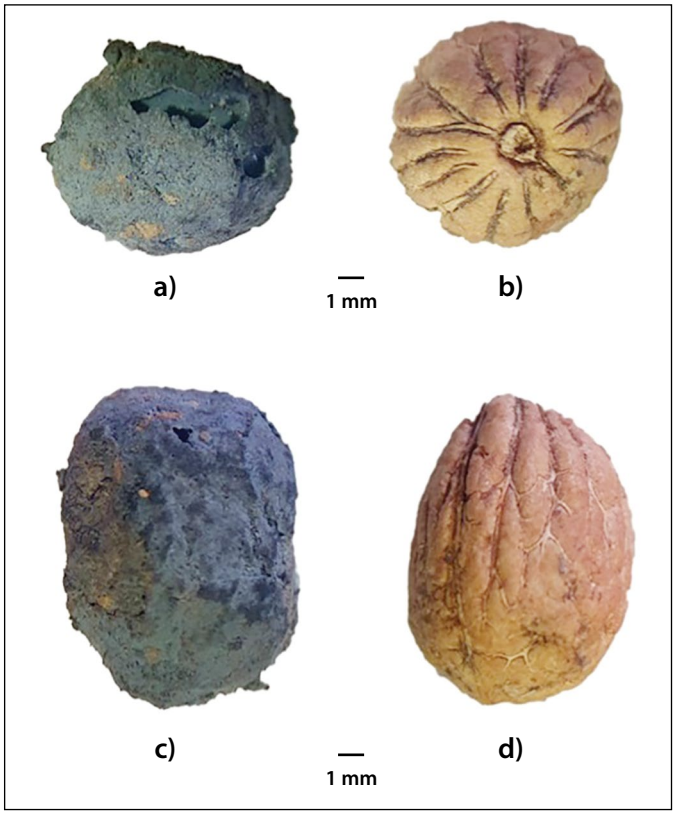
[18] BRUSIĆ 2010: 61.
[19] BATOVIĆ, CHAPMAN 1987; BATOVIĆ, BATOVIĆ 2013; KUKOČ, ČELHAR 2019; LOEWEN, NYSTROM, ČELHAR 2021; TOYNE, ČELHAR, NYSTROM 2021; ZARO, GUSAR, ČELHAR 2020; ČELHAR, ZARO 2023; KNEŽIĆ, ŠOŠTARIĆ, ČELHAR, M. 2023.
[20] ČELHAR, ZARO 2023.
[21] KNEŽIĆ, ŠOŠTARIĆ, ČELHAR 2023: 5.
[22] KNEŽIĆ, ŠOŠTARIĆ, ČELHAR 2023: 54.

LTL1655A, 2845 ± 80 or 895 BC.[18] Although the layer with confirmed finds of olive stones has been dated, olives also appear in other layers, and it is possible that some of these are older than the dates mentioned. Due to the challenging conditions under which these protective excavations were conducted, it has not been possible to reconstruct the volume of the excavated stratigraphic units containing bioarchaeological remains. However, judging by Z. Brusić's photographs, the concentration of olive stones appears to be significant.

Nadin

Nadin was an important ancient town with a continuity of settlement from prehistory to the medieval and modern periods.[19] Since 2015, systematic excavations have been conducted within the settlement under the direction of M. Čelhar (University of Zadar) in collaboration with the University of Maine, USA (Gregory Zaro).[20] As part of archaeological excavations within the context of a settlement radiocarbon-dated to the Early Iron Age (specifically to the period from the last quarter of the 9th century BC to the mid-8th century BC), an olive stone was recovered embedded in the structure of a large storage vessel,[21] which the authors believe was most likely of local production (Fig. 6).[22] In this instance, it is important to note that preservation conditions for organic material at terrestrial sites are significantly more challenging. Organic remains are typically preserved as carbonised seeds or, as in this case, imprinted into fresh clay.

[18] BRUSIĆ 2010, 61.
[19] BATOVIĆ, CHAPMAN 1987; BATOVIĆ, BATOVIĆ 2013; KUKOČ, ČELHAR, 2019; LOEWEN, NYSTROM, ČELHAR, 2021; TOYNE, ČELHAR, NYSTROM, 2021; ZARO, GUSAR, ČELHAR 2020; ČELHAR, ZARO 2023; KNEŽIĆ, ŠOŠTARIĆ, ČELHAR, M. 2023.
[20] ČELHAR, ZARO 2023.
[21] KNEŽIĆ, ŠOŠTARIĆ, ČELHAR 2023: 5.
[22] KNEŽIĆ, ŠOŠTARIĆ, ČELHAR 2023: 54.



Slika 6. *Koštica masline iz stjenke skladišne posude, uzorak 9: a) silikonski odljev otiska gornjeg dijela koštice masline (Olea europaea); b) usporedni recentni primjer gornjeg dijela koštice masline; c) silikonski odljev koštice masline s vidljivim zaravnjenim gornjim dijelom i lagano zašiljenim donjim dijelom; d) usporedni primjer recentne koštice masline s blago zašiljenim donjim dijelom* (preuzeto iz: Knežić, Šoštarić, Čelhar 2023, snimila: D. Knežić)

Figure 6 *The olive stone from the wall of the storage vessel, sample 9: a) silicone cast of the upper part of the olive (Olea europaea) stone; b) recent specimen of the upper part of an olive stone, for comparison; c) silicone cast of the olive stone showing a flattened upper part and a slightly pointed lower part; d) recent specimen of an olive stone with a slightly pointed lower part, for comparison* (taken from Knežić, Šoštarić, Čelhar 2023, photo by D. Knežić)

DIVLJE ILI KULTIVIRANE?

Nameće se pitanje jesu li masline iz prapovijesnih razdoblja na istočnoj obali Jadrana divlje ili kultivirane. U ovom radu nisam ni pokušao odrediti razliku iz više razloga. Prije svega zbog vlastitog neiskustva u obradi bioarheološkog materijala. Zatim, veliki problem predstavlja malobrojnost uzoraka, posebice maslina iz neolitičkog perioda. Sljedeći je problem očuvanost uzoraka, naime, pronađene koštice maslina mogle su proći kroz različite depozicijske procese. Prije ili poslije potapanja kompletnog lokaliteta mogle su imati različite uvjete, ponajprije količinu vlage i različit sastav mulja. Sve navedeno moglo je utjecati na poroznu drvenastu strukturu koštica na način da je moglo doći do promjene u dimenzijama same koštice, prije svega moglo je doći do određenog smanjivanja, što može predstavljati problem kod arheometrijske usporedbe. Osim toga, u znanstvenoj literaturi postoje rasprave o različitim metodama usporedbe koštica divljih i kultiviranih masli-

WILD OR CULTIVATED?

The question arises as to whether the olives from prehistoric periods on the eastern Adriatic coast were wild or cultivated. In this paper I have not attempted to determine this distinction, for several reasons. First and foremost, this is due to my lack of experience in processing bioarchaeological material. Secondly, the small sample size, particularly of olives from the Neolithic, presents a significant challenge. Another issue is the preservation of the specimens. Specifically, the olive stones found may have undergone various depositional processes. Before or after the complete inundation of the sites, the olive stones may have been subjected to varying conditions, primarily different moisture levels and sediment composition. All of these factors could have affected the porous, woody structure of the stones, potentially altering their dimensions. Most notably, they may have undergone some degree of shrinkage, which might pose a challenge for archaeometric comparisons. Moreover, while scientific literature discusses various methods for comparing the stones

na temeljenih na većem uzorku,[23] dok bi za istočnojadranske primjerke koštica genetska analiza bila najpogodnija za razrješavanje ove dvojbe.[24]

HRANA ILI ULJE?

U radovima koji se odnose na masline u prapovijesti, često se postavlja pitanje jesu li one služile kao hrana praktična za konzervaciju u slanoj vodi, ili je riječ o tragovima proizvodnje maslinova ulja.[25] Za prapovijesno vrijeme teško je dati precizan odgovor. Naime, u antici su sustavi za preradu maslina dobro poznati, obvezno uključuju mlinska kamenja koja usitnjuju plod i time melju i košticu masline. Najčešće u antičkim lukama pronalazimo cijele koštice koje su ostatci prehrane mornara na brodovima. Pitanje je može li se maslina preraditi za dobivanje ulja, a da koštice ostanu cijele? Odgovor se krije u svjedočanstvima stanovnika Dugog otoka, koji su za vrijeme Drugoga svjetskog rata bili pod okupacijom talijanskih fašista. Zbog kontrole seoskih uljara i uzimanja znatne količine ulja, ljudi su potajno prerađivali masline u svojim maslinicima. Zrele su se masline stavljale u platnene vreće, te su se nogama gnječile u većim drvenim posudama, uz konstantno dodavanje tople vode. Ulje se izdvajalo na površini i stavljalo u posebne posude gdje se izdvajalo prema vrhu posude, a talog i voda prema dnu. Proces je trajao sve dok se ulje pojavljivalo na površini, a nakon toga se sakrivao sadržaj vreće u kojem su koštice ostajale cijele.[26] Ova crtica iz nedavne prošlosti daje nam odgovor kako je mogla izgledati prapovijesna prerada maslina do pojave mlinskog kamena.

Zanimljiv je i nalaz fragmenata velikog

[23] HANNACHI et al. 2017; MUREDDU et al. 2022; TERRAL et al. 2021.
[24] BESNARD, BERVILLÉA 2000; ELBAUM et al. 2006; JULCA et al. 2020.
[25] GALILI et al. 2021; TERRAL et al. 2021.
[26] Kazivači su stanovnici Žmana na Dugom otoku, Sabina Parica i Mario Vidulić.

of wild and cultivated olives, these are based on larger sample sizes.[23] It follows that for the eastern Adriatic specimens, genetic analysis would be the most suitable approach to resolve this question.[24]

FOOD OR OIL?

In studies concerning olives in prehistory, the question often arises as to whether they were used as food (practical for preservation in salted water) or if the remains indicate olive-oil production.[25] It is difficult to provide a precise answer regarding prehistoric times. In Classical Antiquity, olive-processing systems are well-documented and necessarily include millstones that crushed the fruit, thereby grinding the olive stones as well. Whole olive stones, typically found in ancient ports, are most often remnants of sailors' food on ships. The question arises: is it possible to process olives for oil extraction while leaving the stones intact? An answer is to be found in the testimonies of residents of Dugi Otok, who were under occupation by Italian fascists during World War II. Due to the invaders' control of village oil mills and requisition of significant quantities of oil, the local population secretly processed olives in their olive groves. Ripe olives were placed in cloth bags and crushed underfoot in larger wooden containers, with warm water constantly added. The oil would separate on the surface and was transferred to special containers, where the oil rose to the top while sediment and water settled at the bottom. The process continued until all the oil had appeared on the surface, after which the contents of the bags, where the stones remained whole, were hidden.[26] This anecdote from the recent past provides an insight into how prehistoric olive processing might have looked before the advent of millstones.

[23] HANNACHI et al. 2017; MUREDDU et al. 2022; TERRAL et al. 2021.
[24] BESNARD, BERVILLÉA 2000; ELBAUM et al. 2006; JULCA et al. 2020.
[25] GALILI et al. 2021; TERRAL et al. 2021.
[26] The informants are residents of Žman on Dugi Otok, Sabina Parica and Mario Vidulić.



Slika 7. *Fragmenti četvrtaste skladišne posude na nalazištu* (snimio: M. Parica)
Figure 7 *Fragments of a rectangular storage vessel at the site* (photo by M. Parica)

spremnika od zapečene zemlje u podmorju lokaliteta Turanj – Ričul. Riječ je o četvrtastom spremniku s vrlo pravilnim stjenkama i precizno oblikovanim kutom, što sugerira smještaj u kutu prostorije. Spremnik spomenutog oblika i veličine današnjih kupaonskih kada mogao je služiti za preradu maslina i dobivanje maslinova ulja na prethodno opisani način.

Dolaskom istočnog Jadrana pod rimsku upravu standardizira se proces prerade ulja koji postaje isti kao i u ostalim dijelovima rimskog svijeta.[27]

ZAKLJUČAK

U vrijeme neolitika, na istočnom Mediteranu dolazi do kultivacije masline, zatim

An interesting find is fragments of a large container made of fired clay, discovered underwater at the site of Turanj – Ričul. It had been a rectangular container with very regular walls and a precisely shaped corner, suggesting placement in the corner of a room. A container of this shape (in size comparable to a modern bathtub) might have been used for processing olives and extracting olive oil in the previously described manner.

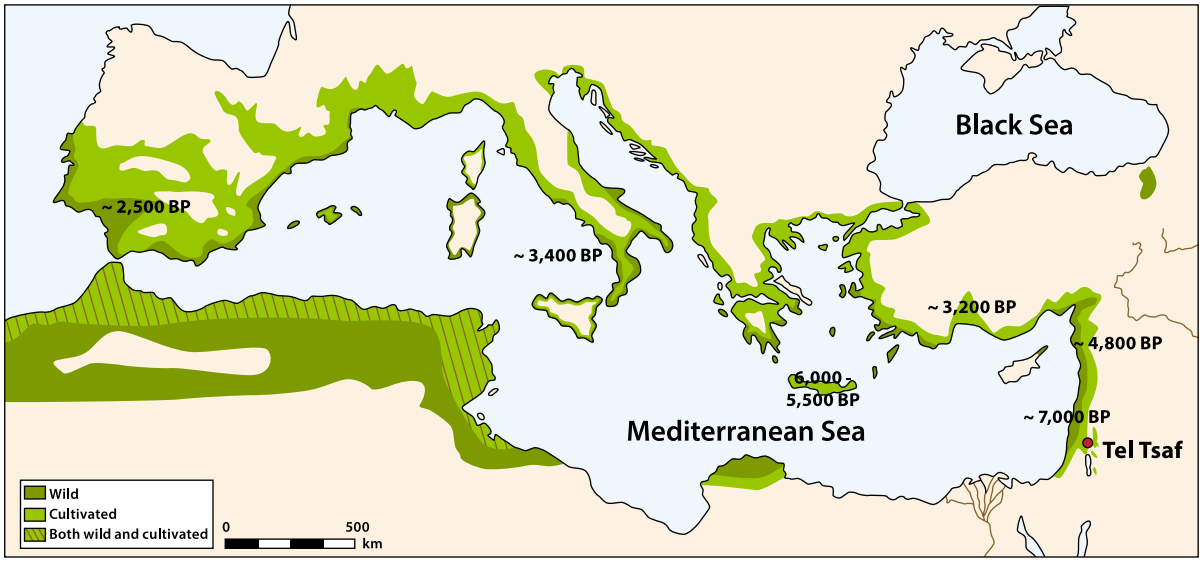
As the eastern Adriatic came under Roman rule, the oil-processing method became standardised, aligning with practices in other parts of the Roman world.[27]

CONCLUSION

During the Neolithic period, olive cultivation began in the eastern Mediterranean and grad-

[27] KOPÁČKOVÁ 2020.

[27] KOPÁČKOVÁ 2020.



Slika 8. *Karta Sredozemlja s vremenom kultivacije masline* (izrađeno po: Langgut, Garfinkel 2022.)
Figure 8 *Map of the Mediterranean with the period of olive cultivation* (made by Langgut, Garfinkel 2022.)

se postupno spomenuta kultura širi diljem Sredozemlja. Već u vrijeme neolitika stolna konzervirana maslina za prehranu postaje zanimljiva trgovačka roba, međutim, masline stare gotovo 7000 godina iz potopljenog nalazišta Soline na Korčuli možemo pripisati ili importu s istočnog Mediterana ili pak početku korištenja iz eventualnih lokalnih izvora. Dokazana brojnija pojava maslina na istočnoj obali Jadrana započinje u razdoblju brončanog doba, od 1400. do 1300. prije Krista, na nalazištu Turanj u blizini Biograda, što ide u prilog tezi D. Langgut i suradnika, koji za prostor Jadrana i južne Italije na temelju ostataka peludi u močvarnim nalazištima, određuju početak uzgoja masline okvirno oko 1400. godine prije Krista. Ostatci maslina na lokalitetima Vranjic i Nadin s prijelaza iz brončanog u željezno doba samo potvrđuju kontinuitet prisutnosti masline na istočnom Jadranu. U budućim istraživanjima važno je analizirati sve organske ostatke iz potopljenih nalazišta, odrediti vrste drva, genetsku pripadnost koštica, te analizirati močvarne sedimente, sve u cilju boljeg poznavanja prapovijesne kultivacije masline na istočnom Jadranu.

ually spread throughout the Mediterranean region. Even by the Neolithic, preserved table olives had become an attractive trade commodity. However, the nearly 7,000-year-old olives from the now-inundated site of Soline on Korčula can either be attributed to imports from the eastern Mediterranean or to the initial utilisation of potential local sources. The confirmed greater occurrence of olives on the eastern Adriatic coast dates began in the Bronze Age, between 1400 and 1300 BC, at the site of Turanj near Biograd. This supports the hypothesis of D. Langgut and associates, who estimate the beginning of olive cultivation in the Adriatic and southern Italy, on the basis of pollen remains from marshland sites, to around 1400 BC. The olive remains from the sites of Vranjic and Nadin, dating to the transition from the Bronze to the Iron Age, further confirm the continuity of olive presence in the eastern Adriatic. In future research, it will be important to analyse all organic remains from submerged sites, identify wood species, determine the genetic classification of olive stones and examine marsh sediments, all with the aim of gaining a better understanding of prehistoric olive cultivation on the eastern Adriatic.

Literatura / References

ALBERTA, A., BARBARIĆ, V., RADIĆ ROSSI, I. 2019, Vranjic (Gulf of Kaštela) between the Late Early and the Middle Bronze Age (19 th –14 th century BCE), u/in: *Okolica Kaštelanskog zaljeva u povijesti Izdanja Hrvatskog arheološkog društva 33/2019*, Kamenjarin, I., Tončinić, D. (ur/eds.), , Zagreb: Hrvatsko arheološko društvo, Muzej Grada Kaštela, 21–38.

ARENA, A., BARBARIĆ, V., CARDARELLI, A., GOVEDARICA B., RADIĆ ROSSI, I., TUNZI, A. M. 2020, The Adriatic Sea and the Interactions between Its Two Shores during the Late Early and Middle Bronze Age, *Rivista Di Scienze Preistoriche*, LXX, no. S1, 245–257.

BATOVIĆ, Š., CHAPMAN, J. 1987, Nadin/Gradina, Naselje od starijeg željeznog doba do 17. st., *Arheološki pregled*, 27 (1986), 72–74.

BATOVIĆ, A., BATOVIĆ, Š. 2013, *Helenistički grobovi iz Nadina u okviru V. (zadnje) faze liburnske kulture, Građa za povijest Liburna*, *IV.-I. st. pr. Kr.*, Posebna izdanja 2, Zadar: Arheološki muzej Zadar.

BESNARD, G., BERVILLÉA, A. 2000, Multiple origins for Mediterranean olive (Olea europaea L. ssp. europaea) based upon mitochondrial DNA polymorphisms, *Life Sciences*, 323, 173–181.

BRUSIĆ, Z., 1977. Prethistorijski podmorski nalazi na području južne Liburnije, *Radovi Centra Jugoslavenske akademije znanosti i umjetnosti*, 24, 53–60.

BRUSIĆ, Z. 2010, Nalazi plodova na podmorskim nalazištima, *Vjesnik Arheološkog muzeja u Zagrebu*, 3. s., XLIII, 59–68.

CARRIÓN, Y., NTINOU, M., BADAL, E. 2010, Olea europaea L. in the North Mediterranean Basin during the Pleniglacial and the Early-Middle Holocene, *Quaternary Science Reviews*, 29. 952-968. 10.1016/j.quascirev.2009.12.015.

ELBAUM, R., MELAMED-BESSUDO, C., BOARETTO, E., GALILI, E., LEV-YADUN, S., LEVY, A., WEINER, S. 2006, Ancient olive DNA in pits: preservation, amplification and sequence analysis, *Journal of Archaeological Science*, 33, 1, 77–88.

ČELHAR, M., PARICA, M., ILKIĆ, M., VUJEVIĆ, D. 2017, A Bronze Age underwater site near the islet of Ričul in northern Dalmatia (Croatia), *Skyllis*, 2017/1, 21–34.

ČELHAR, M., ZARO, G. 2023, Nadin – Gradina: Razvoj grada / Nadin – Gradina: The Evolution of the City, *Archaeologia Adriatica*, 17, 103–134.

GALILI, E. 1997, Evidence for Earliest Olive-Oil Production in Submerged Settlements off the Carmel Coast, *Israel Journal of Archaeological Science*, 24, 1141–1150.

GALILI, E., CVIKEL, D., BENJAMIN, J., LANGGUT, D., MCCARTHY, J., CAVANAGH, M., SAPIR, Y., WEINSTEIN-EVRON, M., CHAIM, S., ROSEN, B., KOLSKA HORWITZ, L. 2018, The archaeology and paleoenvironment of the submerged Pottery Neolithic settlement of Kfar Samir (Israel), *Paléorient*, vol. 44. 2, 113–132.

GALILI, E., LANGGUT, D., TERRAL, J. F., BARAZANI, O., DAG, A., KOLSKA HORWITZ, L., OGLOBLIN RAMIREZ, I., ROSEN, B., WEINSTEIN-EVRON, M., CHAIM, S., KREMER, E., LEV-YADUN, S., BOARETTO, E., BEN-BARAK-ZELAS, Z., FISHMAN, A. 2021, Early production of table olives at a mid-7th millennium BP submerged site of the Carmel coast (Israel), *Nature Portfolio - Scientifc Reports*, 1–14.

GOREN-INBAR, N., ALPERSON, N., KISLEV, N. M., SIMCHONI, O., MELAMED, Y., BEN-NUN, A., WERKER, E. 2004, Evidence of hominin control of fre at Gesher BenotYa'aqov, Israel, *Science*, 304, 725–727.

HANNACHI, H., MARTÍN GÓMEZ, J., EZZEDDINE, S., CERVANTES, E. 2017, Stone diversity in wild and cultivated olive trees (Olea europaea L.), *Dendrobiology*, 77, 19–32.

10.12657/denbio.077.002
JULCA, I., MARCET-HOUBEN, M., CRUZ, F., GÓMEZ-GARRIDO, J., GAUT, B., DÍEZ, M., GUT, I., ALIOTO, T., VARGAS, P., GABALDÓN, T. 2020. Genomic evidence for recurrent genetic admixture during the domestication of Mediterranean olive trees (Olea europaea L.), *BMC Biology*, 18, 148 https://doi.org/10.1186/s12915-020-00881-6
KNEŽIĆ, D., ŠOŠTARIĆ, K., ČELHAR, M. 2023, Arheobotanička analiza „liburnske" keramike s lokaliteta Nadin – Gradina / Archaeobotanical Analysis of „Liburnian" Pottery from the Nadin – Gradina site, *Prilozi instituta za arheologiju u Zagrebu*, 40/2, 5–62.
KOPÁČKOVÁ, J. 2020, Local Production of Olive Oil and Wine in Roman Dalmatia (1st–7th Century AD) – an overview of the current state of research, *Arheološki radovi i rasprave*, 19, 163–184.
KUKOČ, S., ČELHAR, M. 2019, Nadin (Nedinum): prostorna koncepcija nekropole kod Liburna / Nadin (Nedinum): spatial concept of the Liburnian necropolis, *Vjesnik za arheologiju i historiju dalmatinsku*, 112, 9–31.
LANGGUT, D., CHEDDADI, R., CARRIÓN, J. S., CAVANAGH, M., COLOMBAROLI, D., EASTWOOD, W. J., GREENBERG, R., LITT, T., MERCURI, A. M., MIEBACH, A., ROBERTS, C. N., WOLDRING, H., WOODBRIDGE, J. 2019, The origin and spread of olive cultivation in the Mediterranean Basin: The fossil pollen evidence, *The Holocene*, 29 (5), 902–922.
LANGGUT, D., GARFINKEL, Y. 2022, 7000-year-old evidence of fruit tree cultivation in the Jordan Valley, Israel, *Nature Portfolio – Scientific Reports*, 12:7463, May 6; 12 (1):7463. doi: 10.1038/s41598-022-10743-6. PMID: 35523827; PMCID: PMC9076912.
LANGGUT, D. 2024, The core area of fruit-tree cultivation: central Jordan Valley (Levant), ca. 7000 BP, *Palynology*. https://doi.org/10.1080/01916122.2024.2347905
LOEWEN, T., NYSTROM, K. C., ČELHAR, M. 2021, Bioarchaeological analysis of skeletal remains from Nadin necropolis / Bioarheološka analiza osteološkog materijala s nekropole u Nadinu, *Archaeologica Adriatica*, 15, 259–291.
MARQUER, L., OTTO, T., BEN AROUS, E., STOETZEL, E., CAMPMAS, E., ZAZZO, A., TOMBRET, O., SEIM, A., KOFLER, W., FALGUÈRES, C., ABDELJALIL EL HAJRAOUI, M., NESPOULET, R. 2022, The first use of olives in Africa around 100,000 years ago, *Nature Plants*, 8, 204–208.
MUREDDU, M., UCCHESU, M., SARIGU, M., BACCHETTA, G., DEL VAIS, C., PIRAS, F., SANNA, I. 2022, Studies on archaeological olive fruitstones from the Archaic and Punic periods (7th–3rd century BC) of Sardinia, Italy, *Vegetation History and Archaeobotany*, 31, 511–524, https://doi.org/10.1007/s00334-022-00867-0
PARICA, M. 2021, *Prapovijesne maritimne konstrukcije Dalmacije i Kvarnera*, Zadar: Sveučilište u Zadru.
PARICA, M., RADIĆ, D. 2022, Soline na Korčuli – potopljeno naselje Hvarske kulture, u/in: *Hvarski arhipelag i arheologija dalmatinskih otoka: Od dinamične prošlosti do kulturnog turizma*, Visković E., Ugarković M., Tončinić D. (ur./eds.), Izdanja Hrvatskog arheološkog društva, Vol. 34 (2019), Zagreb: Institut za arheologiju, Hrvatsko arheološko društvo, 55–66.
PARICA, M. 2022, Potopljeno neolitičko nalazište na Solinama (Korčula), *In situ – godišnjak odjela za arheologiju*, 1/2022, 108–115.
RADIĆ ROSSI, I. 2006, Vranjic – južna i zapadna obala, *Hrvatski arheološki godišnjak*, 2/2005, 417–419.
RADIĆ ROSSI, I. 2007, Vranjic – zapadna i južna obala, *Hrvatski arheološki godišnjak*, 3/2006, 451–453.

RADIĆ ROSSI, I., 2008, Rescue excavations at Vranjic near Split, Croatia, u/in: *Proceedings of the 13th annual meeting of the European Association of Archaeologists (Zadar, Croatia, 18-23 September 2007): session: Underwater archaeology*, Radić Rossi, I., Gaspari, A., Pydyn, A. (ur./eds.), Zadar: Sveučilište u Zadru, 151–166.

RADIĆ ROSSI, I. 2008a. Zaštitno arheološko istraživanje u vranjičkome podmorju 2005./2006. *Tusculum – Časopis za solinske teme*, 17–34.

RADIĆ ROSSI, I. 2011, Problematika prapovijesnih i antičkih arheoloških nalazišta u hrvatskom podmorju, doktorska disertacija, Zadar: Sveučilište u Zadru.

SKELAC, G., VODIČKA, K. 2009, Vranjic – obala, *Hrvatski arheološki godišnjak*, 5/2008, 658–660.

TERRAL, J. F., BONHOMME, V., PAGNOUX, C., IVORRA, S., NEWTON, C., PARADIS, L., ATER, M., KASSOUT, J., LIMIER, B., BOUBY, L., CORNET, F., OZ BARAZANI, O., DAG, A., GALILI, E. 2021, The Shape Diversity of Olive Stones Resulting from Domestication and Diversification Unveils Traits of theOldest Known 6500-Years-Old Table Olives from HishuleyCarmel Site (Israel), *Agronomy*, 11, 2187, 1–18.

TOYNE, J. M., ČELHAR, M., NYSTROM, K. C. 2021, Liburnian lunches: New stable isotope data for the Iron Age community of Nadin-Gradina, Croatia, *International Journal of Osteoarchaeology*, 32 (3), 241–257.

VODIČKA MIHOLJEK, K., 2008, Vranjic – južna obala, *Hrvatski arheološki godišnjak*, 4/2007, 541–543.

ZARO, G., GUSAR, K., ČELHAR, M. 2020, On the Edge of Empires: Exploring an Ottoman Legacy on the Venetian Frontier, *Journal of Field Archaeology*, 45 (3), 188–208.

NOVAC GRADOVA ARPIJA I DIRAHIJA S ISTRAŽIVANJA NA SOLINSKOJ ZAOBILAZNICI

COINS OF THE CITIES OF ARPI AND DYRRACHION FROM RESEARCH ON THE SOLIN-ZAOBILAZNICA SITE

ANA MARINOVIĆ

Arheološki muzej u Splitu
Archaeological Museum in Split
Zrinsko-Frankopanska 25
HR-21000 Split
ana.marinovic@armus.hr

UDK: 904:737(497.583)"652"
DOI: 10.15291/archeo.4678
Stručni rad / Professional paper
Primljeno / Received: 2024-4-3
Prihvaćeno / Accepted: 2024-7-15

Ključne riječi:
Salona, Zaobilaznica, novac, Arpi, Dirahij

U tekstu se objavljuju dva primjerka novca iz helenističkog razdoblja otkrivena tijekom zaštitnih arheoloških istraživanja na Zaobilaznici 1986. i 1987. godine. Na solinskom području novac iz helenističkog razdoblja nije čest nalaz. Do sada su s područja Solina dokumentirani nalazi novca Herakleje, Dirahija, Apolonije, Sifnosa, zatim brončani novac Ise te novac Aleksandra Makedonskog.

Key words:
Salona, Zaobilaznica, coins, Arpi, Dyrrachion

The text presents two examples of coins from the Hellenistic period discovered during rescue archaeological research on the Zaobilaznica in 1986 and 1987. Coins from the Hellenistic period are not a common find in the Solin area. So far, finds of coins of Heraclea, Dyrrachion, Apollonia, Sifnos, bronze coins of Issa and coins of Alexander of Macedon have been documented in the area of Solin.

Pitanje postojanja predrimske naseobine na prostoru Salone vrlo je složeno, u prvom redu zbog nedostatka arheoloških podataka, ali i jasnog spomena u antičkim pisanim ili epigrafskim izvorima. Pretpostavlja se da su na tom prostoru obitavali Delmati sve dok nije potpala pod vlast Rima, međutim, za takvu tvrdnju nema nikakvih arheoloških dokaza, niti su otkriveni ostatci naselja iz brončanog ili željeznog doba. N. Cambi smještaj ilirskog delmatskog naselja pretpostavlja na padinama Kozjaka,[1] dok je D. Rendić-Miočević pretpostavio na salonitanskom području postojanje nekoliko naselja, od kojih je jedno bilo delmatsko, s lukom koju spominje Strabon.[2] Grčka nazočnost na području Salone zasigurno je postojala, a nalazi keramike i nakita, te sve veći broj nalaza novca govore u prilog postojanju trgovačkih veza između grčkog svijeta i domaćeg ilirskog stanovništva. Najraniji grčki nalazi iz Salone su iz arhajskog perioda, a uključuju korintsku piksidu iz 6. st. pr. Kr., dio brončane posude s grifonom, te zlatnu narukvicu s lavljim glavama, dok iz klasičnog grčkog razdoblja potječe ulomak mramornog žrtvenika s prikazom procesije grčkih bogova.[3] Nalazi iz helenističkog razdoblja su nešto brojniji, a osim nadgrobnog spomenika s imenima četvorice pokojnika uključuju helenističke posude uvezene iz južne Italije kao i isejsku keramiku te novac. Nažalost, okolnosti svih tih nalaza nisu zabilježene.[4]

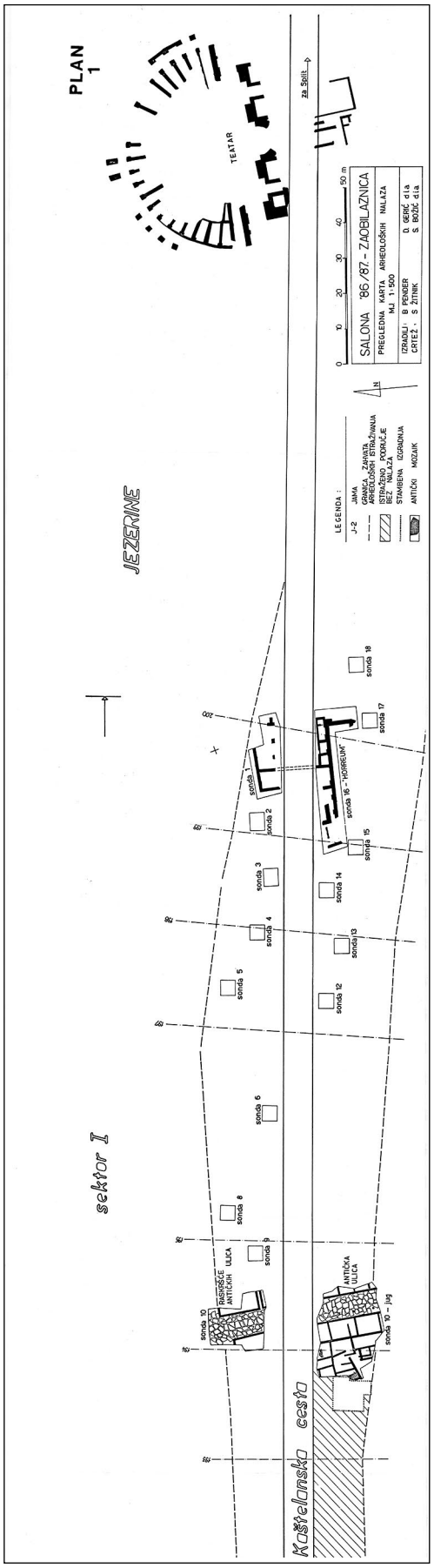
Tijekom zaštitnih arheoloških istraživanja tzv. Zaobilaznice, 1986. – 1987. godine, istraživan je, između ostalog, dio jugoistočnog kraja Salone, u blizini pretpostavljenog južnog gradskog perimetra. Taj dio nazvan je „Sektor I“ (Plan 1), a prolazio je kroz *Urbs Vetus* i većim se dijelom nastavljao kroz *Urbs Occidentalis*. Unutar Sektora I postavljeno je 18 sondi – 11 sa sjeverne i sedam s južne strane Kaštelanske ceste. Na prostoru Sektora I pro-

1 CAMBI 1991: 11–13.
2 RENDIĆ-MIOČEVIĆ 1983: 531.
3 KIRIGIN 2010: 144.
4 KIRIGIN 2010: 144–145.

The issue of the presence of a pre-Roman settlement in the area of Salona is very complex, primarily due to the lack of archaeological evidence, but also of a clear mention in ancient written or epigraphic sources. It is assumed that the Delmatae lived in that area until it came under the rule of Rome, however, there is no archaeological evidence for such a claim, nor have the remains of settlements from the Bronze or Iron Age been discovered. N. Cambi searched the location of the Illyrian Delmatian settlement on the slopes of Kozjak,[1] while D. Rendić-Miočević assumed the presence of several settlements in the Salonitan area, one of which was Delmatian, with a harbor mentioned by Strabo.[2] Greek presence in the area of Salona is certain, and the finds of pottery and jewelry, as well as an increasing number of coin finds, speak in favour of the existence of trade links between the Greek world and the native Illyrian population. The earliest Greek finds from Salona date from the archaic period, and include a Corinthian pyxis from the 6th century BC, part of a bronze vessel with a griffin, and a gold bracelet with lion heads, while the classical Greek period is represented by a fragment of a marble altar depicting a procession of Greek gods.[3] The findings from the Hellenistic period are somewhat more numerous, and in addition to the tombstone with the names of the four deceased, they include Hellenistic vessels imported from southern Italy as well as Issaean pottery and coins. Unfortunately, the circumstances of all these findings were not recorded.[4]

A part of the southeastern end of Salona, near the assumed southern city perimeter was investigated during rescue archaeological research of the so-called Zaobilaznica in 1986 - 1987. That part was called “Sector I” (Plan 1), and it passed through *Urbs Ve-*

1 CAMBI 1991: 11-13.
2 RENDIĆ-MIOČEVIĆ 1983: 531.
3 KIRIGIN 2010: 144.
4 KIRIGIN 2010: 144-145.



Plan 1. *Sektor 1* (preuzeto iz *Vjesnik za arheologiju i historiju dalmatinsku*, 80; grafička obrada: M. Vuković)
Plan 1 *Sector 1* (taken from *Vjesnik za arheologiju i historiju dalmatinsku*, 80; graphic editing M. Vuković)

tus and mostly continued through *Urbs Occidentalis*. Within Sector I, 18 trial trenches were opened - 11 on the northern and 7 on the southern side of the Kaštela road. In the area of Sector I, a total of 185 coins were found, which can mostly be dated from the 1st to the 5th century. Among them, two coins from the Hellenistic period stand out, one found in Trench 10 - south, and the other in Trench 16.

Trench 10 (Plan 2) covered an area of about 195 m^2, and it yielded the city cardo and part of its intersection, as well as the remains of buildings built along the eastern and western sides of the street. Since the cardo continued in the southern profile, trial trenching was conducted on the southern side of the Kaštela road, where about 420 m^2 were investigated and the continuation of the Roman-era street was discovered (Plan 3). The two detected segments match in characteristics and direction of spreading. It is one of the main city communication lines in the north-east - south-west direction (cardo), which is intersected at right angles by the partially exposed decumanus at the utter northern end of the explored area.[5] Three graves (G1, G5 and G6) were discovered in the western profile of trial trench 10 - south, two of which (G1 and G5) were graves in amphorae. Grave 6 was discovered in the lowest layer, i.e. immediately on the marl. From the field documentation, we learn that the type of grave is not completely clear. Namely, one part of it goes deep into the profile and that is why it has not been fully explored. The grave was lined with stones and slabs and largely devastated, and one part of it was below the water level. The finds associated with this grave undoubtedly belong to the Roman period – an alabaster vessel, several fragments of pottery and glass, a perforated stone pendant, an iron object (most likely a knife), a bronze object in the form of a roller with three spread plates

[5] KIRIGIN et al. 1987: 16.

nađeno je ukupno 185 komada novca koji se uglavnom mogu datirati od 1. do 5. stoljeća. Među njima se izdvajaju dva iz helenističkog vremena, jedan pronađen u Sondi 10 – jug, a drugi u Sondi 16.

Sonda 10 (plan 2) protezala se na površini od oko 195 m^2, a unutar nje otkriven je gradski kardo i dio njegova raskršća, te ostatci objekata podignutih uz istočnu i zapadnu stranu ulice. Budući da se kardo nastavljao u južni profil, sondiran je i teren s južne strane Kaštelanske ceste gdje je istraženo oko 420 m^2 i otkriven nastavak antičke ulice (plan 3). Dva otkrivena segmenta podudaraju se u karakteristikama i smjeru prostiranja. Riječ je o jednoj od glavnih gradskih komunikacija u smjeru sjeveroistok-jugozapad (kardo), koju na samom sjevernom kraju istraživanog prostora pod pravim kutom siječe dijelom otkriveni dekuman.[5] U zapadnom profilu sonde 10 – jug otkrivena su tri groba (G1, G5 i G6), od kojih su dva (G1 i G5) bili grobovi u amforama. U najdonjem sloju, tj. odmah na tupini otkriven je grob 6. Iz terenske dokumentacije doznajemo da tip groba nije potpuno jasan. Naime, jedan njegov dio ulazi duboko u profil i zbog toga nije istražen do kraja. Grob je bio omeđen kamenjem i pločama i uvelike devastiran, a jedan njegov dio nalazio se ispod razine vode. Nalazi koji se povezuju s ovim grobom bez sumnje pripadaju rimskom periodu – alabastrena posuda, više ulomaka keramike i stakla, perforirani kameni privjesak, željezni predmet (najvjerojatnije nož), brončani predmet u obliku valjka s trima raširenim pločicama na kraju i željezni čavli. Grob nije mogao pripadati I fazi nekropole i moguće ga je datirati najranije u 2. st. po Kr. Detaljnija datacija, međutim, nije bila moguća jer mi materijal nije bio dostupan za obradu.

Uokolo groba pronađeno je 13 komada novca za koje nije moguće sa sigurnošću reći jesu li pripadali grobu ili su tu dospjeli pri zemljanim

[5] KIRIGIN et al. 1987: 16.

at the end, and iron nails. The grave could not belong to phase I of the necropolis and it can be dated to the 2nd century AD at the earliest. More detailed dating, however, was not possible since the material was not available for analysis.

Around the grave, 13 coins were found, for which it is not possible to say with certainty whether they belonged to the grave or they got there during earthworks. The Roman Empire period is represented by the following coins: Claudius' sestertius minted in honor of Germanicus, Vespasian's as, M. Aurelius' sestertius with the name of Lucilla, Caracalla's denarius, follis of Constantine II, as of an unspecified emperor from the 1st - 2nd centuries, 5 unidentified minims from the 4th - 5th centuries and one AE4 from the 4th century. Among them, a Greek coin from southern Italy, minted in the Apulian city of Arpi, dated approximately to the 3rd century BC, stands out. It belongs to the Zeus head/running boar type (fig. 1a and 1b).

Arpi was one of the oldest and most important towns of Apulia, situated in the middle of the great northern plain on a branch of the Candelaro river which flows into the Adriatic near Sipont, about 20 miles (30 km) from Arpi. The nearest important city was Luceria (Λουκερία, Pol., Strab.), about 13 miles (20 km) to the west. Scarce remains of the city of Arpi can be seen about 5 miles (8 km) north of the modern city of Foggia. Ptolemy called it Ἄρποι, Pliny *Arpanus*, and Livy *Arpinus*.[6] Coins of Arpi, with the exception of didrachmas of the Campanian type belonging to the second half of the 4th century BC, date back to the 3rd century BC.[7]

Coins of Arpi were found at several sites on the eastern coast of the Adriatic; 11 pieces come from the area of southern Liburnia,[8] from Gradina near Prndelji, and Cviji-

[6] HANDS 1912: 103-104.
[7] HEAD 1887: 37.
[8] ILKIĆ, ČELHAR 2017: 489.



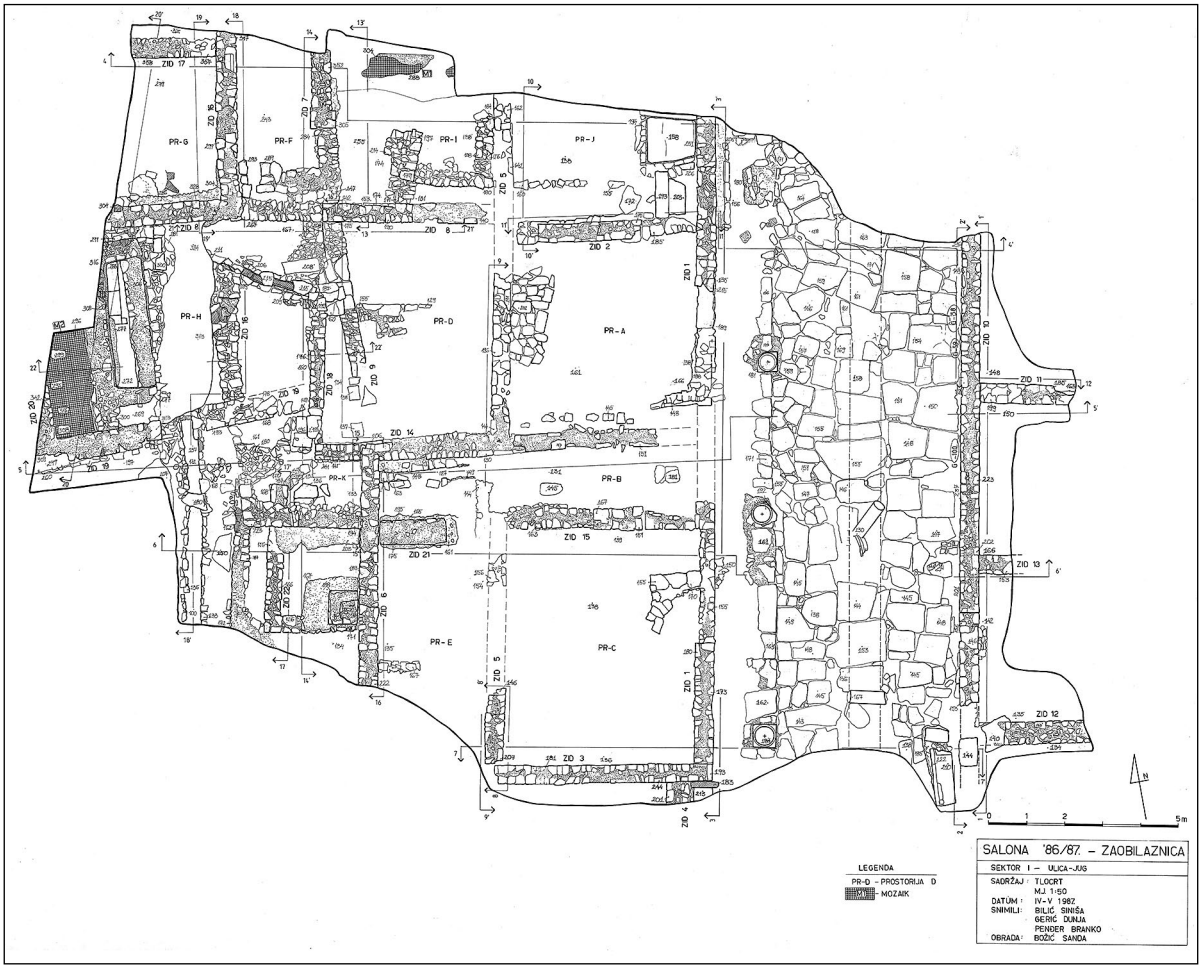
Plan 2. *Sonda 10* (preuzeto iz *Vjesnik za arheologiju i historiju dalmatinsku*, 80; grafička obrada: M. Vuković)
Plan 2 *Trench10* (taken from *Vjesnik za arheologiju i historiju dalmatinsku*, 80; graphic editing M. Vuković)

radovima. Periodu Rimskog Carstva pripadaju Klaudijev sestercij kovan u ime Germanika, Vespazijanov as, sestercij M. Aurelija s imenom Lucile, Karakalin denar, folis Konstantina II, as neodređenog cara iz 1. – 2. stoljeća, pet neidentificiranih minima iz 4. – 5. stoljeća i jedan AE4 iz 4. stoljeća. Među njima se izdvaja grčki novac iz južne Italije, iskovan u apulskom gradu Arpi, a datira se približno u 3. st. pr. Kr. i pripada tipu Zeusova glava/vepar u trku (sl. 1a i 1b).

Arpi je bio jedan od najstarijih i najvažnijih apulskih gradova, a bio je smješten usred velike sjeverne ravnice na ogranku rijeke Candelaro koja se ulijeva u Jadran u blizini Siponta, koji je oko 20 milja (30 km) udaljen od Arpija. Najbliži važan grad bila je Luceria (Λουκερία, Pol., Strab.), oko 13 milja (20 km) zapadno. Malobrojni ostatci grada Arpija koji još postoje mogu se vidjeti oko 5 milja (8 km) sjeverno na gradina in Kruševo. There are more such finds from northern Dalmatia, and these are unpublished specimens from Smokovac[9] and Budim[10] hillforts in southern Liburnia. One specimen minted in Arpi was also discovered at the Siculi site near Kaštel Štafilić,[11] and one, which is kept in the Archaeological Museum in Split, comes from the Dojmi collection in Vis[12].

Another coin from the Hellenistic period discovered during research on the route of the so-called Bypass was discovered in Trench 16, which was located on the southern side of the Kaštela road, and was placed opposite Trench 1 in order to examine whether the discovered

9 ILKIĆ, ŠEPAROVIĆ 2023: 92.
10 ILKIĆ, ŠEPAROVIĆ 2023: 159.
11 BONAČIĆ MANDINIĆ 2011: 136, inv. no. 3768; ILKIĆ 2019: 12, 27, cat. no. 2.
12 BONAČIĆ MANDINIĆ 2021: 268, 273, cat. no. 21.



Plan 3. *Sonda 10, nastavak antičke ulice* (preuzeto iz *Vjesnik za arheologiju i historiju dalmatinsku*, 80; grafička obrada: M. Vuković)
Plan 3 *Trench 10, continuation of a Roman-era street* (taken from *Vjesnik za arheologiju i historiju dalmatinsku*, 80; graphic editing M. Vuković)

od modernog grada Foggije. Ptolomej ga je zvao *Ἅρποι*, Plinije *Arpanus*, a Livije *Arpinus*.[6] Novac Arpija, s iznimkom didrahmi kampanijskog tipa koji pripada drugoj polovini 4. st. pr. Kr., datira se u 3. st. pr. Kr.[7]

Novac Arpija pronađen je na više lokaliteta na istočnoj obali Jadrana; 11 komada potječe s prostora južne Liburnije,[8] s Gradine kod Prndelja, te s Cvijine gradine u Kruševu. Ima ih još s prostora sjeverne Dalmacije, a riječ je o neobjavljenim primjercima s južnoliburnskih gradina Smokovac[9] i Budim[10]. Jedan primje-

6 HANDS 1912: 103–104.
7 HEAD 1887: 37.
8 ILKIĆ, ČELHAR 2017: 489.
9 ILKIĆ, ŠEPAROVIĆ 2023: 92.
10 ILKIĆ, ŠEPAROVIĆ 2023: 159.

architectural remains from Trench 1 extend further south (Plan 4). In Trench 16, the northern perimeter wall and part of the western perimeter wall of a large ancient building were discovered. The walls were massive, reinforced on the outside with buttresses. The building was interpreted as a horreum, but since it was not fully explored, as it was partly located below the groundwater level, its exact purpose is unknown. A total of 13 coins were found in Trench 16, of which the oldest was a silver drachma of Dyrrachion, today's Durrës in Albania, found in the western part of the trench. It belongs to the type depicting a cow with suckling calf/floral motif (fig. 2a and 2b). Other coins found in Trench 16 are: a poorly preserved antoninianus that can be

rak kovan u Arpiju otkriven je i na lokalitetu *Siculi* uz Kaštel Štafilić,[11] a jedan, koji se čuva u Arheološkom muzeju u Splitu, potječe iz više zbirke Dojmi[12].

Drugi novac iz helenističkog razdoblja otkriven tijekom istraživanja na trasi tzv. Zaobilaznice otkriven je u Sondi 16 koja se nalazila s južne strane Kaštelanske ceste, a postavljena je nasuprot Sondi 1 kako bi se ispitalo proteže li se otkrivena arhitektura iz Sonde 1 dalje na jug (plan 4). U Sondi 16 otkriven je sjeverni i dio zapadnog perimetralnog zida velike antičke građevine. Zidovi su bili izvedeni masivno i ojačani s vanjske strane kontraforima. Građevina je nazvana horeumom, ali, s obzirom na to da nije istražena u cijelosti, jer se dijelom nalazila ispod razine podzemnih voda, njezina točna namjena nije poznata. U Sondi 16 pronađeno je ukupno 13 komada novca od kojih je najstarija srebrna drahma Dirahija, današnjeg Drača u Albaniji, pronađena u zapadnom dijelu sonde. Pripada tipu krava doji tele/floralni motiv (sl. 2a i 2b). Ostali novac pronađen u Sondi 16 je: loše očuvan antoninijan koji je moguće datirati u 3. stoljeće, jedan primjerak novca AE2, jedan primjerak novca AE3 i jedan primjerak novca AE4, šest kasnoantičkih minima, jedan brončani bizantski novac i jedan potpuno istrošen, vjerojatno suvremeni novac. Svi su dosta loše očuvani te ih nije bilo moguće preciznije identificirati.

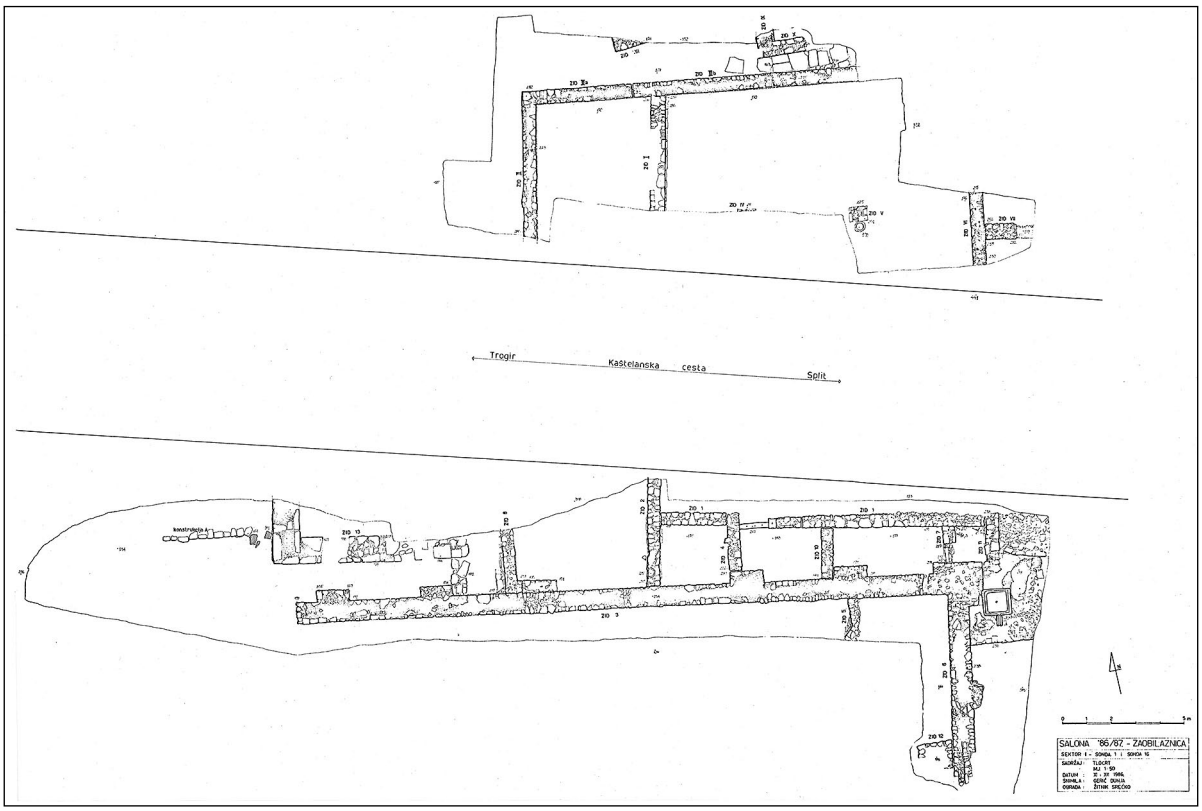
Helenistički novac iz grčkih kolonija s područja današnje Albanije u 3. i 2. st. pr. Kr. na prostoru jadranske obale nije rijedak. Upotrebljavao se kao sredstvo plaćanja u trgovini, a vjerojatno i za plaćanje vojske.[13] Ističe se novac Apolonije i Dirahija koji predstavlja uobičajen nalaz na istočnojadranskim lokalitetima južno od prostora Liburna. Kovnice u Apoloniji i Dirahiju, kolonijama grčkih doseljenika s otoka Krfa (Korkira), imale su dugu tradiciju kovanja novca, a kratka dominacija Ilira s njihovim

[11] BONAČIĆ MANDINIĆ 2011: 136, Inv. broj 3768; ILKIĆ 2019: 12, 27, kat. br. 2.
[12] BONAČIĆ MANDINIĆ 2021: 268, 273, kat. br. 21.
[13] BONAČIĆ MANDINIĆ 2004: 10.

dated to the 3rd century, one AE2 coin, one AE3 coin and one AE4 coin, six late antique minims, one bronze Byzantine coin and one completely worn, probably contemporary coin. All of them are quite poorly preserved and it was not possible to identify them more precisely.

Hellenistic coins from Greek colonies from the area of today's Albania in the 3rd and 2nd centuries BC are not uncommon on the Adriatic coast. They were used as a means of payment in trade, and probably also to pay the army.[13] The coins of Apollonia and Dyrrachion are particularly interesting, as common finds at the eastern Adriatic sites south of the area of the Liburni. The mints in Apollonia and Dyrrachion, colonies of Greek settlers from the island of Corfu (Korkyra), had a long tradition of minting coins, and the short dominance of the Illyrians with their king Monunius over Dyrrachion, and according to the interpretation of ancient sources also over Apollonia,[14] created favorable conditions for the expansion of trade, and thus money from the aforementioned mints. Judging by the coin issues with the names of the Illyrian rulers Monunius and his successor Mytilus, Dyrrachion was probably under the rule of the Illyrian kings for some time, which supports the assumptions about Greek-Illyrian contacts and mutual connections. The beginning of the activity of the mint in Dyrrachion dates back to the time between 420 and 350 BC when silver staters with depictions taken from the Korkyra coins (the image of a cow with a calf on the obverse and a floral motif on the reverse) were abundantly minted. Around 250-240 BC in Dyrrachion, similar to neighboring Apollonia, drachmas with the motif of a cow with a calf and the name of a magistrate on the obverse, and a floral motif with the legend ΔΥΡ and the name of another magistrate on the reverse, began to be mint-

[13] BONAČIĆ MANDINIĆ 2004: 10.
[14] CEKA 1972: 27.



Plan 4. *Sonde 1 i 16* (preuzeto iz *Vjesnik za arheologiju i historiju dalmatinsku*, 80; grafička obrada: M. Vuković)
Plan 4 *Trenches 1 and 16* (taken from *Vjesnik za arheologiju i historiju dalmatinsku*, 80; graphic editing M. Vuković)

kraljem Monunijem nad Dirahijem, a prema tumačenju antičkih izvora i nad Apolonijom,[14] stvorila je povoljne uvjete za širenje trgovine, a time i novca iz spomenutih kovnica. Sudeći po emisijama novca s imenima ilirskih vladara Monunija i njegova nasljednika Mitila, Dirahij je vjerojatno neko vrijeme bio pod vlašću ilirskih kraljeva, što govori u prilog pretpostavkama o grčko-ilirskim kontaktima i međusobnoj povezanosti. Početak djelovanja kovnice u Dirahiju datira u vrijeme između 420. i 350. god. pr. Kr. kada se intenzivno kuju srebrni stateri s osnovnim likovima preuzetim s novca Korkire – likom krave s teletom na aversu i floralnim motivom na reversu. Oko 250. – 240. god. pr. Kr. u Dirahiju se, slično kao i u susjednoj Apoloniji, pod utjecajem rimskih republikanskih denara počinju kovati drahme s motivom krave s teletom i imenom magistrata na aversu, i floralnim motivom s legendom ΔΥΡ i imenom drugog magistrata na reversu.

[14] CEKA 1972: 27.

ed under the influence of Roman republican denarii. These drachmas were minted in large quantities until the middle of the 1st century BC, and were in circulation throughout the Balkans.[15]

In the Solin area, coins from the 4th - 2nd centuries BC are not a common finding. Until now, finds from the area of Solin have been documented with coins of Heraclea, Dyrrachion, Apollonia, Sifnos, then bronze coins of Issa and coins of Alexander of Macedon, as well as finds of Roman republican coins, including two hoards found in the Salonitan ager, in Kaštel Sućurac,[16] one from the marl quarry in Sv. Kajo and one from an unknown site in Solin.[17]

Due to insufficient research, it is not possible to speak with certainty about the area of Salona in the context of pre-Roman settlement.

[15] DRAGIĆEVIĆ 2022: 41.
[16] BONAČIĆ MANDINIĆ 2000a: 262-263.
[17] BONAČIĆ MANDINIĆ 2002: 563-565.

Te drahme kovale su se u velikim količinama sve do sredine 1. st. pr. Kr., a bile su u optjecaju širom Balkana.[15]

Na solinskom području novac 4. – 2. st. pr. Kr. nije čest nalaz. Do sada su s područja Solina dokumentirani nalazi novca Herakleje, Dirahija, Apolonije, Sifnosa, zatim brončani novac Ise te novac Aleksandra Makedonskog, kao i nalazi rimskog republikanskog novca među kojima treba izdvojiti dvije ostave nađene u salonitanskom ageru, u Kaštel Sućurcu,[16] jednu iz tupinoloma u Sv. Kaju i jednu s nepoznatog nalazišta u Solinu.[17]

Zbog nedovoljne istraženosti za sada nije moguće sa sigurnošću govoriti o prostoru Salone u kontekstu predrimskog naselja. Mali broj nalaza, često bez arheološkog konteksta, i raznovrsnost materijala u kronološkom smislu nisu dovoljni za donošenje zaključaka, ali daljnjim istraživanjima i obradom materijala s već provedenih istraživanja dobit će se bolji uvid u trgovačke i kulturne veze između ovog dijela Dalmacije i Grčke, kao i grčkih kolonija na južnom dijelu istočnog Jadrana i u Italiji. Pojedinačni nalazi helenističkog novca dokaz su tih veza jer je taj novac bio široko prihvaćen kao platežno sredstvo u predrimskom periodu, pa je u tom smislu važan i pronalazak novca Arpija i Dirahija s istraživanja na solinskoj Zaobilaznici.

Small number of finds, often without archaeological context, and chronologically diverse material are not sufficient to draw conclusions, but further research and the processing of material from already conducted research will provide a better insight into trade and cultural links between this part of Dalmatia and Greece, as well as the Greek colonies in the southern part of the eastern Adriatic and in Italy. Individual finds of Hellenistic coins stand as evidence of these connections, since these coins were widely accepted as a means of payment in the pre-Roman period, and in this sense, the finding of coins of Arpi and Dyrrachion from research on the Solin Zaobilaznica is also significant.

Translation and proof-reading:
Marija Kostić

[15] DRAGIĆEVIĆ 2022: 41.
[16] BONAČIĆ MANDINIĆ 2000a: 262–263.
[17] BONAČIĆ MANDINIĆ 2002: 563–565.

KATALOG

1. ARPI, Apulija

Inv. br. AMS-75481
Brončani novac, 3. st. pr. Kr.
av/[---], glava Zeusa l.
rv/vepar u trku d.
Bronca, 20,72 x 21,69 mm, 7,66 g, pol. kal. 4h
SNG Cop 603 – 605, SNG Budapest 519 – 521

2. DIRAHIJ

Inv. br. AMS 75641
Drahma, 200. – 80. god. pr. Kr.
av/krava doji tele, ΞΕΝΩ[N], iznad ptica (orao) d.
rv/floralni motiv, [ΦΙ]ΛΟ[ΔΑ]ΜΟΥ
Srebro, 18,16 x 18,38 mm, 2,30 g, pol. kal. 3h
SNG Cop 495, Ceka 362, Petrányi (5-11)

CATALOGUE

1. ARPI, Apulia

Inv. no. AMS-75481
Bronze coin, 3rd c. BC
obv/[---], head of Zeus l.
rv/running boar r.
Bronze, 20.72x21.69 mm, 7.66 g, die axis 4h
SNG Cop 603 – 605, SNG Budapest 519 – 521

2. DYRRACHION

Inv. no. AMS 75641
Drachma, 200 – 80 BC
obv/cow with suckling calf, ΞΕΝΩ[N], bird (eagle) above r.
rv/floral motif, [ΦΙ]ΛΟ[ΔΑ]ΜΟΥ
Silver, 18,16x18.38 mm, 2.30 g, die axis 3h
SNG Cop 495, Ceka 362, Petrányi (5-11)





Slika 1a i 1b. *Novac Arpija* (foto: V. Vidan)
Figure 1a and 1b *Arpi coin* (photo: V. Vidan)





Slika 2a i 2b. *Novac Dirahija* (foto: V. Vidan)
Figure 2a and 2b *Dyracchium coin* (photo: V. Vidan)

Literatura / References

BONAČIĆ MANDINIĆ, M. 2000a, Novac Isse i Farosa u zbirci Magyar Nemzeti Múzeum u Budimpešti, *Vjesnik za arheologiju i historiju dalmatinsku*, 92, 255–267.

BONAČIĆ MANDINIĆ, M. 2000b, Numizmatika, u/in: *Salona III, Manastirine*, Duval, N., Marin, E. (ur./eds.), Split: Arheološki muzej u Splitu, École française de Rome, 183–190.

BONAČIĆ MANDINIĆ, M. 2002, Ostave rimskog republikanskog novca, u/in: *Longae Salonae*, Marin, E. (ur./ed.), Split: Arheološki muzej u Splitu, 561–596.

BONAČIĆ MANDINIĆ, M. 2004, *Grčki novac u stalnom postavu Arheološkog muzeja u Splitu*, Split: Arheološki muzej u Splitu.

BONAČIĆ MANDINIĆ, M. 2011, Antički novac / Ancient Coins, u/in: *Antički Sikuli, Katalog izložbe*, Grad Kaštela: Muzej grada Kaštela, 133–143.

BONAČIĆ MANDINIĆ, M. 2021, *Novac*, u/in: *Vis-à-Vis 200, Arheološka baština grada Visa, Katalog izložbe u povodu 200. obljetnice Arheološkog muzeja u Splitu*, Ivčević, S. (ur./ed.), Split: Arheološki muzej u Splitu, 264–304.

CAMBI, N. 1986, Salona i njene nekropole, *Radovi Filozofskog fakulteta u Zadru, Razdio povijesnih znanosti*, 25(12), 61–108.

CAMBI, N. 1991, *Antička Salona*, Split: Književni krug Split.

CEKA, H. 1972, *Questions de numismatique illyrienne*, Tirana: Universite d'etat de Tirana, Institut d'histoire.

ČAČE, S. 1999, Manijski zaljev, Jadastini i Salona, *Vjesnik za arheologiju i historiju dalmatinsku*, 90-91, 75–87.

DRAGIĆEVIĆ, I. 2022, Nove spoznaje o grčkom i grčko-ilirskom novcu u Hercegovini, *Vjesnik za arheologiju i historiju dalmatinsku*, 114, 29–68.

HANDS, A. W. 1912, *Italo – Greek Coins of Southern Italy*, London: Spink & Son Ltd.

HEAD, B. V. 1887, *Historia Numorum, A Manual of Greek Numismatics*, Oxford: Clarendon Press.

ILKIĆ, M. 2019, *Antički novac iz Sikula / Ancient coins from Siculi*, Kaštela: Muzej grada Kaštela.

ILKIĆ, M., ČELHAR, M. 2017, South-Liburnian pre-imperial numismatic finds from Southern Italy and Sicily, u/in: *XV International Numismatic Congress. Proceedings, Taormina 2015, Volume 1*, Caccamo Caltabiano, M. (ur./ed.), Roma - Messina Universita degli Studi di Messina, 489–492.

ILKIĆ, M., ŠEPAROVIĆ, T. 2023, *Numizmatička topografija zadarskog područja. Antika i rani srednji vijek / Numismatic topography of the Zadar area, Antiquity and the Early Middle Ages*, Split: Muzej hrvatskih arheoloških spomenika - Split.

ILKIĆ, M., ŠEŠELJ, L. 2017, Noviji nalazi grčko-ilirskog novca s područja sjeverne Dalmacije / Recent finds of Graeco-Illyrian coins from northern Dalmatia, *Vjesnik za arheologiju i historiju dalmatinsku*, 110(1), 281–302.

KIRIGIN, B. 2008, *Grčko – Helenistička zbirka u stalnom postavu Arheološkog muzeja u Splitu / The Greek and Hellenistic Collection on Exhibit in the Archaeological Museum in Split*, Split: Arheološki muzej u Splitu.

KIRIGIN, B., LOKOŠEK, I., MARDEŠIĆ, J., BILIĆ, S. 1987, Salona 86/87, Preliminarni izvještaj sa zaštitnih arheoloških istraživanja na trasi zaobilaznice u Solinu, *Vjesnik za arheologiju i historiju dalmatinsku*, 80, 7–56.

KIRIGIN, B. 2010, *Salona*, u/in: *Antički Grci na tlu Hrvatske*, katalog izložbe, Zagreb: Galerija Klovićevi dvori, 144–145.

PETRÁNYI, G. 1996, Relative chronology of the drachms of Apollonia and Dyrrhachium in the final period of minting, *Numizmatikai Közlöny*, XCIV-XCV, 3–18.

RENDIĆ-MIOČEVIĆ, D. 1983, Salona „Quadrata". Salonitanski oppidum (Caes. B. C. III 9) u svjetlu novih istraživanja, *Zbornik za narodni život i običaje Južnih Slavena*, knj. 49, Marković, M. (ur./ed.), Zagreb: Jugoslavenska akademija znanosti i umjetnosti, 529–545.

SNG Cop, Italy – Sicily 1981, *Sylloge Nummorum Graecorum, The Royal Collection of Coins and Medals, Danish National Museum*, Vol. 1. Italy – Sicily, New Jersey: Sunrise Publications, Inc.

SNG Cop, Greece: Thessaly to Aegean Islands 1982, *Sylloge Nummorum Graecorum, The Royal Collection of Coins and Medals, Danish National Museum*, Vol. 3. Greece: Thessaly to Aegean Islands, Thessaly - Illyricum, New Jersey: Sunrise Publications, Inc.

SNG Budapest, Hispania – Apulia 1992. – M. Torbágy (ed.) *Sylloge Nummorum Graecorum Hungary, Budapest, Magyar Nemzeti Múzeum*, Vol. I Hispania – Sicilia, Part 1 Hispania – Apulia, Milano: Edizioni ennerre.

STUBCI S PROTOMAMA JUPITRA-AMONA I GORGONE IZ ZADRA I PROBLEM NJIHOVA ARHITEKTONSKOG KONTEKSTA*

*THE PILLARS WITH PROTOMES OF JUPITER AMMON AND GORGON FROM ZADAR AND THEIR ARCHITECTURAL CONTEXT**

DRAŽEN MARŠIĆ

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
dmarsic@unizd.hr
drazen.marsic66@gmail.com

UDK: 72(497.581.1)"652"
DOI: 10.15291/archeo.4681
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-4-14
Prihvaćeno / Accepted: 2024-7-15

Ključne riječi:
stubci, ograda, Kapitolij, trijem, atika, bazilika, Sv. Donat

S ikonografske i funkcionalne točke gledišta stubci s protomama Jupitra-Amona i Gorgone (Meduze) najinteresantniji su, ali i najkontroverzniji elementi skulpturalne dekoracije Foruma antičkog Jadera. Njihov arhitektonski kontekst ni do danas nije nedvojbeno razjašnjen. Zaslužni istraživač Foruma M. Suić isprva je smatrao da su stajali unutar čeone balustrade kapitolijskog hrama. Iako su danas upravo tako prezentirani, tu pretpostavku demantira nekoliko detalja izrade. S vremenom ih je očito postao svjestan i Suić, koji je stubce naknadno pripisao „gornjoj balustradi" severske bazilike. Tu mogućnost, međutim, negiraju stilske, tehnološke i ikonografske pojedinosti, koje pokazuju da su stubci znatno stariji. Suićevu atribuciju bazilici u nekim tekstovima prati crtaća dokumentacija koja stubce igrom slučaja prikazuje unutar galerije forumskog trijema, a upravo je to položaj u koji se stavljaju formom i dekoracijom slični stubci iz Pule. Nedavno otkriće dobro očuvanog pluteja u funkciji ograde između zadarskih stubaca omogućilo je točniju projekciju duljine tih elemenata, a time i udaljenosti na kojoj su stubci izvorno stajali. U radu se na temelju novih spoznaja i recentne literature preispituju mogućnosti arhitektonske kontekstualizacije zadarskih

* Ovaj rad proširena je verzija istoimenog izlaganja održanog na međunarodnom znanstvenom skupu „Antiquitatis sollemnia antidoron Mate Suić", Zagreb – Zadar, 3. – 6. studenoga 2015. i bio je na vrijeme (2017. god.) predan uredničkom odboru te predviđen za objavu. Kako do toga nikad nije došlo, autor ga je odlučio bez preinaka objaviti u časopisu matičnog Odjela za arheologiju Sveučilišta u Zadru.

* This work is an expanded version of the presentation of the same name given at the international scientific conference "Antiquitatis sollemnia antidoron Mate Suić", Zagreb - Zadar, 3-6 November 2015, and was submitted to the editorial board on time (2017) and scheduled for publication. Since that never happened, the author decided to publish it without changes in the journal of the Department of Archaeology of the University of Zadar.

stubaca, ali i druga važna pitanja u vezi s rekonstrukcijom trijema zadarskog Foruma kao najizglednijeg kandidata za njihov smještaj: dimenzije stupova, visina trijema, pripadnost stupova iz prizemlja i matroneja Sv. Donata.

Key words:
pillars, railing, Capitolium, portico, attic, basilica, St. Donatus

From the iconographic and functional point of view, pillars with protomes of Jupiter Ammon and Gorgon (Medusa) are the most interesting elements of sculptural decoration of the Forum of Roman-era Iader. Their architectural context has not been unambiguously clarified. Mate Suić, a distinguished researcher of the Forum in Zadar, at first thought that they were standing inside of the front balustrade of the Capitoline temple. Although that is exactly how they are presented today, several details of their modelling refute this theory. It is possible that Suić eventually became aware of them, since later he changed his mind, attributing the pillars to "the upper balustrade" of the Severan basilica. Stylistic, technological and iconographic details, however, do not support such a possibility, as they indicate that the pillars are significantly older. In some texts, Suić's attribution to the basilica is accompanied by drawing documentation that coincidentally shows the pillars inside the gallery of the forum portico, and this is exactly the position in which the pillars from Pula, similar in form and decoration, are placed. The recent discovery of a well-preserved pluteus functioning as railing between the Zadar pillars enabled a more accurate projection of the length of these elements, and thus the distance at which the pillars originally stood. Based on new findings and recent literature, the paper examines the possibilities of architectural contextualization of the Zadar pillars, as well as other important issues related to the reconstruction of the portico of the Zadar's Forum as the most likely candidate for their placement: the dimensions of the pillars, the height of the portico, the affiliation of the pillars from the ground floor and the matroneum of St. Donatus.

U Arheološkom muzeju Zadar i na uređenom dijelu zadarskog Foruma čuvaju se primjerci triju skupina stubaca, tj. pilastara izduženog četvrtastog tijela s pročeljem ukrašenim protomama različitih božanstava i mitoloških bića. Da je riječ o elementima različitih arhitektonskih sklopova, pokazuju njihove dimenzije, izvedba i stilske pojedinosti. U radovima M. Suića i drugih istraživača pridavao im se različiti kontekst, pa ta pitanja ni do danas nisu na zadovoljavajući način razjašnjena.[1]

Skupina stubaca kojoj je posvećen ovaj rad uključuje tri primjerka desetljećima izložena na pročelju zadarskog Kapitolija (sl. 1).[2] Na njihovu pripadnost istom sklopu upućuju podudarne dimenzije, specifična izrada vršnih profila i tijela pravilnih gotovo okomitih rubova, te napose činjenica da im iz tijela sa strana izlaze istaci kojima su se spajali s pripadajućim plutejima. Dva su stubca ukrašena protomama Jupitra-Amona, a jedan protomom Gorgone, dok im je stanje sačuvanosti manje-više podudarno.[3] Budući da su dobro poznati i višekratno objavljivani, u njihov se opis u ovoj prigodi neće ulaziti, a neće se ponavljati ni dobro poznate okolnosti otkrića.[4]

U svojem prvom konkretnijem osvrtu na njih – u radu „Orijentalni kultovi u antičkom Za-

Examples of three groups of pillars, i.e. pilasters with an elongated square body and a front decorated with protomes of various deities and mythological creatures, are preserved in the Archaeological Museum in Zadar and in the landscaped part of the Zadar's Forum. Their dimensions, execution and stylistic details indicate that these are elements of different architectural compositions. In the works of M. Suić and other researchers, they were given different contexts, so these questions have still not been clarified in a satisfying way.[1]

The group of pillars presented in this work includes three examples exhibited for decades on the front of the Capitolium in Zadar (Fig. 1).[2] Their belonging to the same group is indicated by the matching dimensions, the specific design of the top profiles and the bodies with regular, almost vertical edges, and especially the fact that the protrusions come out of their bodies from the sides with which they were connected to the associated plutei. Two pillars are decorated with the protomes of Jupiter-Ammon, and one with the protome of Gorgon, in a similar state of preservation.[3] Since they are well known and have been published many times, their description will be omitted on this occasion, and the well-known circumstances of the discovery will not be repeated. [4]

In his first more specific review of these pil-

1 U ovom radu bit će ostavljeno po strani pitanje stubca inv. br. A22038, koji se dimenzijama, sužavanjem središnjeg dijela od dna prema vrhu i izvedbom protoma na dvjema nasuprotnim stranama jasno razlikuje od ostalih dviju skupina.

2 O stubcima su u proteklih šezdesetak godina raspravljali brojni domaći i strani autori: M. Gorenc (1952.), M. Suić (1965., 1976., 1981., 2003.), M. Ch. Budischovsky (1973., 1977.), P. Selem (1980., 1997., 2008., 2013.), A. Bugarski-Mesdjian (1999.), K. A. Giunio (1999., 2002., 2005.), N. Cambi (2002., 2003., 2005.), M. Tomorad (2003., 2005.), P. Casari (2004.), V. Goldbeck (2015.). Zbog ograničenog prostora, u nastavku će se referirati uglavnom na one radove koji se bave pitanjima od krucijalne važnosti za ovu raspravu: stilskom analizom u funkciji kronologije i arhitektonskim kontekstom stubaca.

3 Pregledno o dimenzijama i inv. brojevima stubaca: CASARI 2004a: 123 i d., Z1-Z3, tab. 56a-c; GOLDBECK 2015: 136–137, bilj. 1050-1051 i 1053, sl. 236-239 i 241. Visina stubaca je 1,30-1,33 m, širina 0,99-1,03 m, debljina 0,91-1,00 m.

4 O tome usp. SUIĆ 1965: 107 i d., bilj. 29; BUDISCHOVSKY 1973: 202–203; A. GIUNIO 1999: 60, bilj. 19.

1 In this paper, we will leave aside the question of the pillar inv. no. A22038, which is clearly different from the other two groups in its dimensions, the narrowing of the central part from the bottom to the top and the design of the protomes on the two opposite sides.

2 Over the past sixty years, numerous domestic and foreign authors have discussed the pillars: M. Gorenc (1952), M. Suić (1965, 1976, 1981, 2003), M. Ch. Budischovsky (1973, 1977), P. Selem (1980, 1997, 2008, 2013), A. Bugarski-Mesdjian (1999.), K. A. Giunio (1999, 2002, 2005), N. Cambi (2002, 2003, 2005), M. Tomorad (2003, 2005), P. Casari (2004), V. Goldbeck (2015). Due to limited space, we will refer mostly to those works that deal with issues of crucial importance for this discussion: stylistic analysis in the function of chronology and the architectural context of the pillars.

3 Overview of dimensions and inv. numbers of pillars: CASARI 2004a: 123 ff., Z1-Z3, tab. 56a-c; GOLDBECK 2015: 136-137, notes. 1050-1051 and 1053, fig. 236-239 and 241. Height of the pilars is 1.30-1.33 m, width 0.99-1.03 m, depth 0.91-1.00 m.

4 About this cf. SUIĆ 1965: 107 ff., note 29; BUDISCHOVSKY 1973: 202-203; A. GIUNIO 1999: 60, note 19.



Slika 1. *Stubci s dijelovima pluteja izloženi na pročelju Kapitolija* (foto: D. Maršić)
Figure 1 *Pillars with parts of plutei displayed on the front of the Capitolium* (photo: D. Maršić)

dru" – M. Suić iznio je mišljenje da su tri stubca stajala unutar ograde (balustrade) postavljene na pročelju Kapitolija, koje je tako moglo služiti kao neka vrsta rostre.[5] U prilog takvoj tezi govorilo je više argumenata: masivnost, činjenica da se sa stubcima spojilo više komada profilacija podnožja, za koje se ispostavilo da pripadaju ogradi (plutejima) postavljenoj između stubaca, te napose otkriće dijelova profilacije, izvedbom slične onoj sa stubaca i ograde, za koju je pretpostavljeno da je mogla pripadati vrhu zidanog pročelja Kapitolija. Sve navedeno učvrstilo je Suića u uvjerenju da izvoran položaj stubaca potraži na pročelju Kapitolija, a izgled dijela ograde pokuša i grafički rekonstruirati.[6] Rekonstrukciju je posebno motivirala Suićeva želja da prikaže pretpostavljenu dekoraciju ploča ograde (girlande obješene o bukranije) te način njihova spoja sa stubcima.

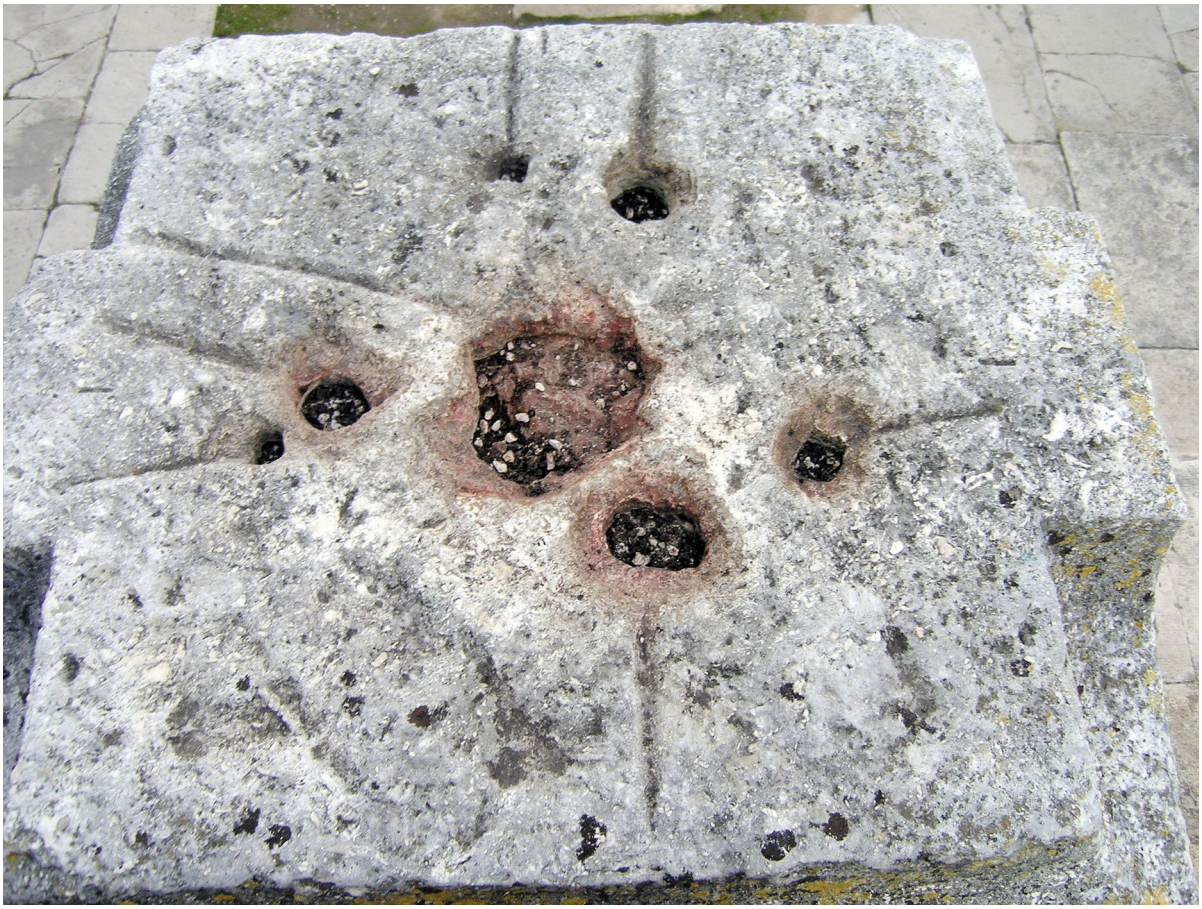
lars - in the paper "Oriental Cults in Ancient Zadar" - M. Suić expressed the opinion that the three pillars stood inside the railing (balustrade) placed on the front of the Capitolium, which could thus serve as a kind of rostra.[5] There were several arguments in support of such a thesis: the massiveness, the fact that the pillars were connected to several pieces of base molding, which turned out to belong to the railing (plutei) placed between the pillars, and especially the discovery of parts of the molding, rendered similarly as that of the pillars and the railing, which assumedly could have belonged to the top of the stone-built front of the Capitolium. All of the above strengthened Suić's belief that he should look for the original position of the pillars on the front of the Capitolium, and try to graphically reconstruct the appearance of part of the railing.[6] The reconstruction was especially moti-

5 SUIĆ 1965: 108–109, sl. 12-14. To mišljenje prihvaćaju: BUDISCHOVSKY 1973: isto mj., sl. 1; 1977: 178, br. IV, 3-4, tab. XCI, sl. a-c; STARAC 1996: 81. Mišljenju se kao „prihvatljivom" priklanja i CAMBI 2003a: 53, bilj. 12; 2003b: 102. Usp. i CAMBI 2005: 24 i d., sl. 25-27.

6 SUIĆ 1965: 110, sl. 14. Istu rekonstrukciju prenosi CAMBI 2003a: 61, sl. 8.

5 SUIĆ 1965: 108-109, fig. 12-14. This opinion is accepted by: BUDISCHOVSKY 1973: ibid., fig. 1; 1977: 178, no. IV, 3-4, tab. XCI, fig. a-c; STARAC 1996: 81. Cambi finds his standpoint „acceptable": CAMBI 2003a: 53, note 12; 2003b: 102. Cf. also CAMBI 2005: 24 ff., fig. 25-27.

6 SUIĆ 1965: 110, fig. 14. The same reconstruction can be found in: CAMBI 2003a: 61, fig. 8.



Slika 2. *Instalacije na gornjoj plohi krajnjeg južnog stubca* (foto: D. Maršić)
Figure 2 *Installations on the upper surface of the southernmost pillar* (photo: D. Maršić)

Desetak godina poslije Suić je u monografiji *Antički grad na istočnom Jadranu* iznio novo mišljenje, po kojem je ipak vjerojatnije da je cijeli sklop stajao unutar galerije severske bazilike, a to je ponovio i u knjizi *Zadar u starom vijeku* i drugom izdanju *Antičkoga grada*.[7] Na to su ga očito ponukala neka opažanja do kojih je u međuvremenu došao, koja, međutim, ne navodi ni u tom ni u kasnijim publiciranim tekstovima, ali ih naziremo u neobjavljenom rukopisu, o čemu ćemo govoriti nešto poslije. Jedno od njih je ono da su na gornjoj plohi triju stubaca instalacije protivne prvotnoj interpretaciji (sl. 2).[8] U sre-

[7] SUIĆ 1976: 162; 1981, 304, tab. XVII; 2003: 252. Suićev prijedlog „aktivno" prenose A. GIUNIO 1999: 59 i d., sl. 11-13; 2005: 172, sl. 10-12; SELEM 2013: 123, sl. 8-9.

[8] O njima se gotovo i nije raspravljalo. Od novijih radova, P. Casari ih ne spominje, dok su V. Goldbeck poznate. Usp. bilj. 3.

vated by Suić's desire to show the supposed decoration of the railing panels (garlands hung on the bucrania) and the way they were connected to the pillars.

Some ten years later, Suić expressed a new opinion in the monograph "Ancient City on the Eastern Adriatic",[7] according to which it is more likely that the entire complex stood inside the gallery of the Severan basilica, and he repeated this in the book "Zadar in Antiquity" and the second edition of the "Ancient City". He was apparently prompted to do so by some insights he gained in the meantime, which, however, he does not mention in either that or later texts, but we get a glimpse of them in an unpublished manuscript, to which we will re-

[7] SUIĆ 1976: 162; 1981, 304, pl. XVII; 2003: 252. Suić's proposal is "actively" conveyed by A. GIUNIO 1999: 59 ff., fig. 11-13; 2005: 172, fig. 10-12; SELEM 2013: 123, fig. 8-9.

dini im je plohe veći, približno kružni utor, a oko njega do šest manje ili više pravilnih udubljenja postavljenih u paru ili samostalno (nisu svugdje sačuvani), do kojih vode kanali za olovo (kanal vodi i do središnjeg utora). Pomoću njih su se na stubce sidrile četvrtaste baze (plinte) koje su nešto morale nositi. Na njihovo postojanje navodi činjenica da su kanali za lijevanje olova protegnuti sve do rubova stranica, uz koje su se nalazila četiri jedva vidljiva manja utora (na sl. 2 vidljiva su dva na lijevoj strani, ali slična postoje i na suprotnoj strani). Broj i karakter instalacija uvjetovani su, po svemu sudeći, time što je nepoznati sadržaj nad bazom stajao u okomitom položaju; da je bio posrijedi neki vodoravno položeni element, sigurno ih ne bi bilo u tom broju i bili bi drukčije izrade. Izvedba i raspored utora donekle podsjećaju na instalacije s jednog seta stubaca s protomama Jupitra-Amona i Gorgone iz Pule, za koje G. Fischer – kako ćemo vidjeti – drži da su služili kao plinte za baze i stupove galerije trijema.[9] „Arhitektonsku kulisu" formiranu od stubaca (ograde) i stupova (ili drugih okomito postavljenih elemenata) teško je zamisliti na pročelju Kapitolija jer bi direktno zakrivala pogled na hram i druge sadržaje, posebice pri pogledu sa znatno nižeg pločnika Foruma! To ne bi odgovaralo ni funkciji rostre, koja je uobičajeno imala samo nisku (perforiranu) ogradu, a i one najpoznatije u Rimu, na zapadnoj i istočnoj strani glavnog gradskog trga (*Forum Romanum*), stupove su dobile tek kao instalacije za postavljanje kipova neovisne od čeonih ograda.[10]

Na stražnjoj strani svih stubaca i pripadajućih pluteja, na točno određenoj udaljenosti (35-40 cm), prisutna je još jedna vrsta instalacija – četvrtasti postranični utori, koji se ne

[9] Usp. FISCHER 1996: 88, sl. 17.

[10] Navedene rostre, istina, nisu sačuvane u stanju koje bi to nedvojbeno potvrđivalo, ali tomu u prilog govore stilizirani prikazi na novcu i suvremene rekonstrukcije: GORSKI, PACKER 2015: 147 i d., sl. 8.1-8.2, 8.9, 8.14, 8.16; KALAS 2015: 23 i d., sl. 1.1, 1.2. Da balustrada Kapitolija nije izgledno rješenje, smatra i GOLDBECK 2015: 137.

turn later. One of them is that on the upper surface of the three pillars, the installations are contrary to the original interpretation (Fig. 2).[8] In the middle of their surface is a larger, approximately circular groove, and around it up to six more or less regular depressions placed in pairs or individually (they are not preserved in all places), reached by lead channels (the channel also leads to the central groove). They were used to anchor square bases (plinths) to the pillars. These plinths had to support something. Their existence is indicated by the fact that the channels for casting lead extended all the way to the edges of the sides, next to which there were four barely visible smaller grooves (in fig. 2, two are visible on the left side, but similar ones also exist on the opposite side). The number and character of the installations are apparently determined by the fact that the unknown content above the base stood in a vertical position; if there was some horizontally placed element in the middle, there would certainly not have been that many installations and they would have been made differently. The execution and arrangement of the grooves somewhat resemble the installations from one set of pillars with the protomes of Jupiter-Ammon and Gorgon from Pula, which G. Fischer - as we shall see - believes served as plinths for the bases and columns of the portico gallery.[9] It is difficult to imagine an "architectural scenery" formed by pillars (railing) and columns (or other vertically placed elements) on the front of the Capitolium because it would directly obscure the view of the temple and other structures, especially when viewed from the much lower sidewalk of the forum! This would not correspond to the function of the rostra, which usually only had a low (perforated) railing, and even those most famous in Rome, on the west and east sides of the main city square (*Forum Romanum*), had columns only as installations for placing statues

[8] They were hardly discussed. Of the more recent works, P. Casari does not mention them, while V. Goldbeck knows about them. Cf. note 3.

[9] Cf. FISCHER 1996: 88, fig. 17.



Slika 3. *Utori za drvene grede na poleđini stubaca i pluteja* (foto: D. Maršić)
Figure 3 *Grooves for wooden beams on the back of the pillars and plutei* (photo: D. Maršić)

mogu drukčije objasniti negoli kao utori za drvene grede (sl. 3).[11] Balustrada Kapitolija – koja je zasigurno postojala – takve utore nije trebala, pa njihova prisutnost automatski upućuje na drukčiji kontekst i stubaca i ograde. Ako rješenje pokušamo iznaći u pretpostavci da je riječ o tragovima reutilizacije – za što bi naznake mogao dati podatak da se dva slična (manja) utora pojavljuju i na pročelju stubca s punačkijim Jupitrom-Amonom, ali su oni danas zapunjeni komadima kamena[12] – još uvijek opstaje problem vršnih instalacija. One su izvorno rimske i o tome ne može biti rasprave! Nadalje, izrada utora za umetanje drvenih greda slična onoj u Zadru

[11] Dimenzije utora su: širina 20-20,5 cm, dubina 25-28 cm i duljina 14-16 cm. U svojim studijama ne spominju ih ni Casari ni Goldbeck, usp. bilj. 3.

[12] SUIĆ 1965: 107, sl. 12 (gdje se jasno vide dva manja utora ispod plohe s protomom).

without any association with the front railings.[10]

On the back side of all the pillars and associated plutei, at a precisely determined distance (35-40 cm), there is another type of installation - square lateral grooves, which can only be explained as grooves for wooden beams (Fig. 3).[11] The balustrade of the Capitolium - which certainly existed - did not need such grooves, so their presence automatically suggests a different context for both the pillars and the railing. If we try to find a solution assuming that it is a question of traces of

[10] The aforementioned rostrae are not preserved in a condition that would undoubtedly confirm this, but the stylized depictions on the coins and contemporary reconstructions support this thesis. GORSKI, PACKER 2015: 147 ff., fig. 8.1-8.2, 8.9, 8.14, 8.16; KALAS 2015: 23 ff., fig. 1.1, 1.2. The Capitolium balustrade as an unlikely solution is considered also by GOLDBECK 2015: 137.

[11] The dimensions of the grooves are: width 20-20.5 cm, depth 25-28 cm and length 14-16 cm. Neither Casari nor Goldbeck mention them in their studies, cf. note 3.



Slika 4. *Rekonstrukcija dijela forumskog trijema u Pompejima* (foto: D. Maršić)
Figure 4 *Reconstruction of part of the forum portico in Pompeii* (photo: D. Maršić)

registrirana je na nekim drugim elementima arhitekture za koje je sigurna ili pretpostavljena pripadnost trijemu. Susrećemo je npr. na dvostrukoj kolonadi zapadnog trijema foruma u Pompejima (sl. 4), iako tamo utori nisu izrađeni na elementima ograde već na vrhu trapezastih monolita u funkciji grede i friza.[13] Utori slični onima u Zadru, ali još većih gabarita, uočavaju se i na već spomenutom starijem setu pulskih stubaca, ali o tome u literaturi nije bilo spomena. Na stubcu s protomom Gorgone npr. dva se utora nalaze na spoju (vanjskim uglovima) donje i stražnje strane i sigurno je da ne mogu imati veze sa sidrenjem, već vjerojatno strukturom šetnice (galerije) ili stropa trijema (sl. 5).[14] Utori na

[13] Tu usporedbu ne treba uzeti doslovno, posebice ne na kronološkoj razini.

[14] Ovom prigodom zahvaljujem kolegici K. Džin, koja mi je prva prenijela informacije o zanimljivoj izradi poleđine,

re-use - which could be indicated by the fact that two similar (smaller) grooves appear on the front of the pillar with a somewhat plumper Jupiter Ammon, but today they are filled with pieces of stone[12] – there is still the problem of top installations. They are originally Roman and there can be no discussion about that! Furthermore, making grooves for inserting wooden beams similar to those in Zadar is recorded on some other architectural elements for which it is certain or presumed that they belong to the portico. We can find it, for example, on the double colonnade of the western portico of the Forum in Pompeii (Fig. 4), although the grooves are not made on the elements of the railing but on the top of the trapezoidal monoliths functioning as a beam and

[12] SUIĆ 1965: 107, fig. 12 (where one can clearly see two smaller grooves under the surface with the protome).



Slika 5. *Stražnja strana stubca s Gorgonom iz Pule* (foto: D. Maršić)
Figure 5 *Back side of the pillar bearing the depiction of Gorgon from Pula* (photo: D. Maršić)

zadarskim stubcima i plutejima uglavnom nemaju donju stranicu (kao i na pulskom primjerku), iz čega je vidljivo da su služili samo za uglavljivanje greda, koje su se upirale na elemente na kojima je počivala cijela konstrukcija (korniž?).

U jednom neobjavljenom rukopisu Suić se po pitanju atribucije stubaca također koleba.[15] Najprije ih pripisuje balustradi Kapitolija i datira u drugu građevnu fazu (flavijsko doba), da bi se malo poslije ogradio od njihove današnje prezentacije i ustvrdio da je ne treba uzeti kao rekonstrukciju jer su mogli pripadati nekoj drugoj ogradi, npr. onoj s galerije bazilike.[16] Svjestan je da su stubci nešto nosili, no smatra da se ne može kazati „jesu li nosili stupove, kipove ili nešto drugo".[17] Da

kao i kolegi Ž. Ujčiću, koji je to dodatno potkrijepio usmenom informacijom i fotografijama.

15 Naslov paginiranog rukopisa je „Kompleks Foruma u Zadru – prilog urbanističkom rješenju središnjeg prostora grada".

16 SUIĆ, p. 40 i d.

17 SUIĆ, p. 42.

frieze.[13] Grooves similar to those in Zadar, but of even larger dimensions, can also be seen on the already mentioned older set of pillars from Pula, but there was no mention of this in the literature. On the pillar with the Gorgon protome, for example, there are two grooves at the junction (outer corners) of the lower and back sides, and it is certain that they cannot be related to the anchoring, but probably to the structure of the walkway (gallery) or the ceiling of the portico (Fig. 5).[14] The grooves on the Zadar pillars and plutei generally do not have lower side (as well as on the Pula example), which shows that they were only used to wedge the beams, which were supported by the elements on which the entire structure rested (cornice?).

In an unpublished manuscript, Suić also hesitated regarding the attribution of the pillars.[15] First, he attributes them to the balustrade of the Capitolium and dates them to the second construction phase (Flavian era), only to distance himself a little later from their present-day presentation and assert that it should not be taken as a reconstruction because they could have belonged to some other railing, e.g. the one from the gallery of the basilica.[16] He is aware that the pillars supported something, but he believes that it is impossible to say "whether they supported columns, statues or something else".[17] His inclination towards the solution with columns is suggested by two drawings that show the pillars as their supports on the front of the Capitolium, but he later rightly gave up on that idea. For this reason, it is not advisable to reproduce the drawings. It is also interesting that only from this manuscript we learn how he recognized and understood the im-

13 This comparison should not be taken literally, especially regarding chronology.

14 I would like to thank my colleague K. Džin, who was the first to give me information about the interesting rendering of the back. I also owe a debt of gratitude to my colleague Ž. Ujčić, who further substantiated this with oral information and photographs.

15 The title of the paginated manuscript is "The Forum Complex in Zadar - contribution to the urban solution of the central area of the city".

16 SUIĆ, p. 40 ff.

17 SUIĆ, p. 42.

je jedno vrijeme naginjao rješenju sa stupovima, pokazuju dva crteža koji stubce prikazuju kao njihove nosače, i to na pročelju Kapitolija, ali je od te ideje poslije s pravom odustao. Iz tog razloga crteže nije uputno prenositi. Zanimljivo je i to da samo iz ovog rukopisa doznajemo kako je prepoznao i shvatio važnost utora na stražnjoj strani, ali nije bio siguran jesu li izvorni ili sekundarni i kako ih protumačiti.[18]

Iako atribucija forumskoj bazilici na prvi pogled sretno razrješuje sve probleme – smještajući stubce na mjesto gdje utori podržavaju grede šetnice galerije – i ta interpretacija nailazi na poteškoće. Datiranje zadarske bazilike u severskо doba relativno je pouzdano na temelju osebujnog oblika građevine s dvjema nasuprot postavljenim apsidama i analogija koje potvrđuju popularnost takvog tipa na prijelazu 2. i 3. stoljeća (kao stanovitog nasljeđa Trajanove bazilike), međutim, dva od tri naša stubca stilski sigurno ne odgovaraju tom vremenu i znatno su starija (o problemu datacije raspravlja se na kraju priloga).[19] Postoji drugi set sličnih elemenata koji je moguće dosta pouzdano dovesti u vezu s bazilikom i eventualno trijemom do nje. Riječ je o trima stubcima dekoriranim maskama Satira, mladog Dioniza i Gorgone, koji izradom podsjećaju na one iz naslova, jer npr. također imaju istake za pluteje i slične instalacije na gornjim plohama, ali su elegantnije forme i nižih vršnih profila,[20] a način izrade očiju s bušenim zjenicama na dvama prvospomenutim primjercima odgovara modi kraja 2. i ranog 3. stoljeća, pa su ih Suić i kasnijih autori povezivali s galerijom (južnog) trijema Foru-

[18] Isto.

[19] Usp. npr. CREMA 1959: 515 i d., sl. 674 (Leptis Magna), 517 i d., sl. 678 (Kempten).

[20] O dimenzijama, morfologiji i inv. brojevima stubaca najpreglednije: GOLDBECK 2015: 138, bilj. 1061, sl. 243-245. Autorica, međutim, Suićeva mladog Dioniza tumači kao Menadu (sl. 245), a glavu s trećeg stupca (Satir nije upitan) kao Dioniza (sl. 243). Smatram da je Suićevo prepoznavanje Dioniza (Bakha) ispravno, a da treća protoma prikazuje Gorgonu, eventualno Menadu. Važno je napomenuti da su još dva stubca uzidana u temelje Sv. Donata.

portance of the grooves on the back, but he was not sure whether they were original or secondary and how to interpret them.[18]

Although at first sight the attribution to the forum basilica fortunately resolves all the problems – by placing the pillars where the grooves support the beams of the gallery walkway – this interpretation also has weak points. The dating of the Zadar basilica to the Severan period is relatively reliable based on the peculiar shape of the building with two opposite apses and analogies that confirm the popularity of this type at the turn of 3rd century (as a certain legacy of Trajan's basilica), however, two of our three pillars stylistically certainly do not correspond to that time and are significantly older (the problem of dating is discussed at the end of the paper).[19] There is another set of similar elements that can be quite reliably linked to the basilica and possibly the portico next to it. We are referring to three pillars decorated with masks of Satyr, young Dionysus and Gorgon, which in their construction resemble those from the title, because for example they also have protrusions for plutei and similar installations on the upper surfaces, but they are more elegant in form and have lower top profiles,[20] and modelling of the eyes with pierced pupils on the two first-mentioned examples corresponds to the fashion of the late 2nd and early 3rd centuries, so they were associated by Suić and later authors with the gallery of the (southern) portico of the forum.[21]

[18] Ibid.

[19] Cf. e.g. REMA 1959: 515 ff., fig. 674 (Leptis Magna), 517 ff., fig. 678. (Kempten).

[20] About dimensions, morphology and inv. numbers of the pillars, most concisely: GOLDBECK 2015: 138, note 1061, fig. 243-245. However, the author interprets Suić's young Dionysus as a Maenad (Fig. 245), and the head from the third pillar (definitely Satyr) as Dionysus (Fig. 243). In my opinion, Suić's identification of Dionysus (Bacchus) is correct, and the third protome depicts Gorgon, possibly a Maenad. It is important to note that two more pillars were embedded into the foundations of St. Donatus.

[21] SUIĆ 1965: 106, fig. 10-11 (Severan period; Forum gallery portico); 1981: 208-209, Pl. XVI-XVII with reconstruction on p. 207 (Flavian period, Forum gallery portico); A. GIUNIO 1999: 57 ff., fig. 6-7 (ibid); CAMBI 2003a: 57, fig. 6 and 7; 2005: 120 ff., Fig. 173-174 (Severan period, annex of the gallery of the Forum southern portico).

ma.[21] Na toj skupini stubaca nema utora za grede, što upućuje na drukčija tehnička rješenja konstrukcije kojoj su pripadali. Napadna formativna sličnost dvaju setova stubaca – iz koje proizlaze sve poteškoće njihove funkcionalne i kronološke distinkcije – uvjetovana je vjerojatno činjenicom da je mlađi set izrađen prema starijem s namjerom uklapanja u postojeći arhitektonski i skulpturalni program Foruma.[22] Takav pristup forsiran je, izgleda, i kod podizanja unutarnjih trijemova bazilike i pripadajuće trabeacije.

Da bi cijela priča o historijatu izučavanja zadarskih stubaca s prikazima Jupitra-Amona i Gorgone i pitanju njihove funkcije dobila na zamršenosti, pobrinulo se drugo izdanje *Antičkoga grada*, gdje se u raspravi o anastilozi trijema Foruma u Zadru stubci odjednom grafički pojavljuju unutar balustrade njegove galerije (lođe), kao nosači stupova koji su nad njima stajali (sl. 6).[23] Pažljivo iščitavanje, međutim, pokazuje da Suić u tekstu ne odstupa od ranijeg stava da oni pripadaju bazilici. Kako je do toga došlo, razriješeno je na skupu u komentaru na ovaj referat, a pokazalo se da je sve rezultat greške u označavanju dokumentacije (crtež je trebao biti označen kao anastiloza trijema bazilike!).[24] Razlog zbog kojeg sam se o svečarskoj 100. obljetnici rođenja M. Suića i skupa njemu u čast prihvatio upravo ove teme jest taj što me je spomenuti prikaz još odavno zaintrigirao, a nakon toga motivirao na istraživanje čije ću

[21] SUIĆ 1965: 106, sl. 10-11 (seversko doba; galerija trijema Foruma); 1981: 208–209, tab. XVI-XVII s rekonstrukcijom na str. 207 (flavijsko doba, galerija trijema Foruma); A. GIUNIO 1999: 57 i d., sl. 6-7 (isto); CAMBI 2003a: 57, sl. 6 i 7; 2005: 120 i d., sl. 173-174 (seversko doba, dogradnja galerije južnog trijema Foruma).

[22] Tu mogućnost s pravom naslućuje CAMBI 2002: 89–90; 2005: 121 (gdje autor govori o stanovitoj morfološkoj i ikonografskoj vezi). Vezu prepoznaje i VERZÁR BASS 2006: 113 i d., sl. 7-8, koja govori o „arhitektonskom programu od kojega poznajemo dvije faze": julijsko-klaudijsku (nakon velikog ilirskog ustanka) i onu s kraja 2. i početka 3. st. (nakon markomanskog rata).

[23] SUIĆ 2003: 293, sl. 145b na str. 296.

[24] O tome je na skupu okupljenima govorila B. Kuntić-Makvić.

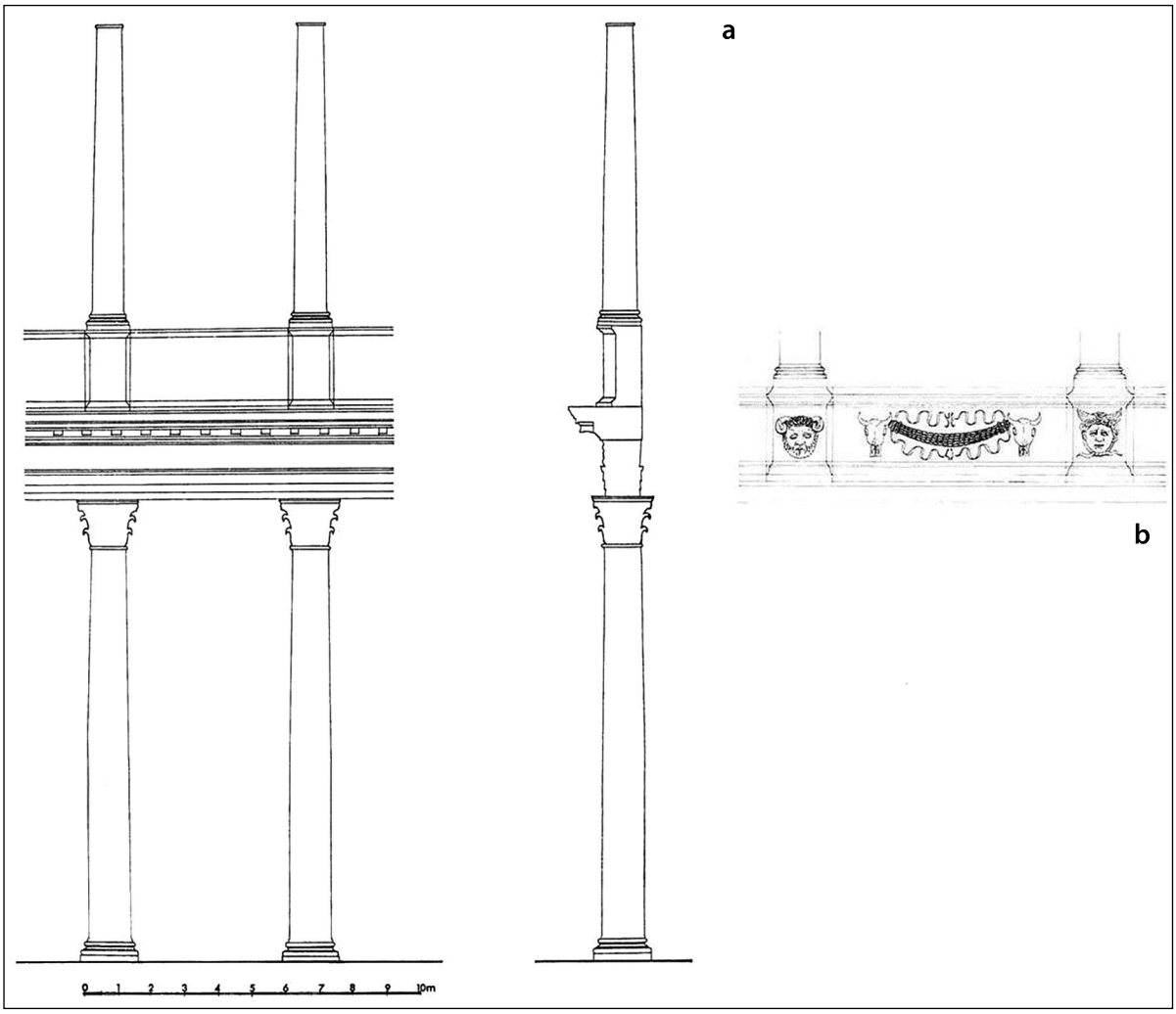
There are no grooves for beams on that group of pillars, which indicates different technical solutions of the construction they belonged to. The striking formative similarity of the two sets of pillars - from which arise all the difficulties of their functional and chronological distinction - is probably conditioned by the fact that the younger set was modelled after the older one with the intention of fitting into the existing architectural and sculptural program of the forum.[22] Such an approach seems to have been applied when building the internal porticoes of the basilica and the associated entablature.

The second edition of the "Ancient City" further complicated the whole story about the history of the study of the Zadar pillars with depictions of Jupiter Ammon and Gorgon, where in the discussion about the anastylosis of the forum portico in Zadar, the pillars suddenly appear graphically inside the balustrade of its gallery (loggia), as supports of columns that stood above them (Fig. 6).[23] A careful reading, however, shows that Suić in the text does not deviate from the earlier position that they belong to the basilica. How this happened was resolved at the conference in the comments to this report, and it turned out that everything was the result of a mistake in marking the documentation (the drawing should have been marked as an anastylosis of the basilica portico!).[24] The reason why I chose this topic for the celebration of the 100th anniversary of the birth of M. Suić and the conference in his honor is that the aforementioned display started intriguing me a long time ago, and then motivated me to investigate the matter more thoroughly. The results of this research will be briefly presented below.

[22] This possibility is rightly foreseen by CAMBI 2002: 89-90; 2005: 121 (where the author mentions a certain morphological and iconographic connection). The connection is also recognized by VERZÁR BASS 2006: 113 ff., fig. 7-8, who speaks of an "architectural program of which we know two phases": Julio-Claudian (after the Great Illyrian Revolt) and that of the end of the 2nd and beginning of the 3rd century (after the Marcomannic Wars).

[23] SUIĆ 2003: 293, fig. 145b on p. 296.

[24] B. Kuntić-Makvić spoke about this at the conference.



Slika 6. *Stubci s plutejima slučajno prikazani unutar galerije forumskog trijema* (prema: Suić 2003)
Figure 6 *Pillars with plutei accidentally displayed inside the gallery of the forum portico* (according to Suić 2003)

rezultate u nastavku ukratko izložiti.

Dobro je poznato da su zadarski stubci samo jedan od blizu desetak manje-više sigurno potvrđenih primjera uporabe takvih elemenata na području sjevernog Jadrana i njegova bližeg zaleđa. Stubci identične ikonografije otkriveni su u Oderzu (*Opitergium*), Konkordiji Sagitariji (*Iulia Concordia*), Akvileji, Trstu (*Tergeste*), Puli (*Pola*), Celju (*Celeia*), a postoje indicije da su postojali i u Aseriji i Saloni, ali su zagubljeni.[25] Za potrebe

[25] Pregledno: CASARI 2004a: 45 i d., tab. 12 i d. (*Aquileia*), 78 i d., tab. 36b (*Opitergium*), 83 i d., tab. 37b-c (*Iulia Concordia*), 87 i d., tab. 38b-40b (*Tergeste*), 110 i d., tab. 49-53b (*Pola*), 129 i d., bilj. 522 (*Asseria*), 131, bilj. 528 (*Salona*), 132 i d., tab. 60a-62b (*Celeia*). Jednako dobar pregled daje i GOLDBECK 2015: *passim*, koja donosi i primjere iz zapadnog dijela Carstva, gdje se predmetne protome češće

It is well known that the pillars from Zadar are only one of nearly a dozen more or less certainly confirmed examples of the use of such elements in the area of the northern Adriatic and its immediate hinterland. Pillars with identical iconography were discovered in Oderz (*Opitergium*), Concordia Sagitaria (*Iulia Concordia*), Aquileia, Trieste (*Tergeste*), Pula (*Pola*), Celje (*Celeia*), and there are indications that they also existed in Asseria and Salona, but they were lost.[25] For the purposes of this paper, due to lim-

[25] Overview: CASARI 2004a: 45 ff., pl. 12 ff. (*Aquileia*), 78 ff., pl. 36b (*Opitergium*), 83 ff., pl. 37b-c (*Iulia Concordia*), 87 ff., pl. 38b-40b (*Tergeste*), 110 ff., pl. 49-53b (*Pola*), 129 ff., note 522 (*Asseria*), 131, note 528 (*Salona*), 132 ff., pl. 60a-62b (*Celeia*). Equally good overview is provided by GOLDBECK 2015: *passim*, who also presents examples from the western part of the Empire, where mentioned

ovog rada, zbog ograničenog prostora, osvrnut ću se samo na potencijalno usporedive primjerke iz Akvileje i Pule.

S Foruma Akvileje potječe čak 14 stubaca sličnih morfoloških obilježja, sedam s glavama Jupitra-Amona i sedam s glavama Gorgone, od kojih je njih šest otkriveno unutar istočnog trijema na približno istoj udaljenosti, vjerojatno na mjestu pada, sugerirajući time da su položajem podudarni stupovima, da bi naknadno tri bila otkrivena i na zapadnoj strani.[26] Ikonografijom, tehnikom izrade i stilskim pojedinostima upućuju na različita razdoblja i rad većeg broja majstora. Viši su od zadarskih stubaca (ukupna im je vis. 1,46-1,49 m), ali su širinom i debljinom za 10-ak cm kraći. Susjedni nalazi elemenata korniža te friza i arhitrava iz jednog komada odredili su anastilozu u kojoj im je (s pripadajućim plutejima) mjesto određeno u sklopu atike trijema, a sve zbog činjenice da nisu otkriveni ostatci „gornjeg" reda te da nema tragova za sidrenje takvih elemenata.[27] Isprva datirani od kraja 2. do početka 3. stoljeća, ili u prvu polovicu 2. stoljeća, stubce je u novije vrijeme kronološki znatno resistematizirao Paolo Casari, koji smatra da najstariji stubci datiraju iz sredine 1. stoljeća (iz otprilike Klaudijeva doba) i pripadaju zapadnom trijemu (kakav je možda bio izgrađen i na ostalim dvjema stranama), dok su mlađi iz faze obnove istočnog trijema s kraja antoninskog razdoblja.[28] Stariji su stubci oni bez izrađenih detalja očiju, a mlađi s njima, u više izvedbi. Dvije faze potvrđuje po Casariju i različita izvedba kompozitnih kapitela te drugih dijelova arhitektonske plastike.

ited space, I will refer only to potentially comparable specimens from Aquileia and Pula.

As many as fourteen pillars with similar morphological features originate from the Forum in Aquileia, seven with the heads of Jupiter-Ammon and seven with the heads of Gorgon, of which six were discovered inside the eastern portico at approximately the same distance, probably exactly where they fell, thus suggesting that their position coincides with the columns. Subsequently three more were also discovered on the western side.[26] Their iconography, production technique and stylistic details suggest different periods and work of a large number of stonemasons. They are higher than the Zadar pillars (their total height is 1.46-1.49 m), but they are about 10 cm shorter in width and depth. Adjacent finds of elements of the cornice and the frieze and architrave from one piece determined the anastylosis in which their place (with the associated plutei) was determined within the attic of the portico, all due to the fact that no remains of the "upper" row were discovered and that there are no traces of anchoring of such elements.[27] Originally dated from the late 2nd to the early 3rd century, or the first half of the 2nd century, the pillars have recently been significantly resystematized in terms of chronology by Paolo Casari, who believes that the oldest pillars date to the middle of the 1st century (roughly Claudius' era) and belong to the western portico (as it may have been built on the other two sides), while the younger ones are from the reconstruction phase of the eastern portico from the end of the Antonine period.[28] The older pillars are the ones without eye details, and the younger ones with them, in several designs. According to Casari, the two phases are also con-

pojavljuju u formi *imagines clipeatae*.

26 Usp. BERTACCHI 1989: 59 i d., sl. 8-13 (otkriće šest stubaca istočnog trijema); CASARI 2004a: 45 i d., A1-14, tab. 12-22; 2004b: 236 i d., sl. 15-27 (ažurirani popis stubaca).

27 BERTACCHI 1989: 70, tab. III; CASARI 2004b: 219, sl. 1. Prva autorica ipak zaključuje da su stubci s plutejima bili dovoljno visoki da eventualno formiraju jedan parapet (balustradu).

28 CASARI 2004a: 51 i d., osobito 67 i d., 77; 2004b: 219 i d., osobito 236 i d., 249.

protomes often occur in the form of *imagines clipeatae*.

26 Cf. BERTACCHI 1989: 59 ff., fig. 8-13 (discovery of six pillars of the eastern portico); CASARI 2004a: 45 ff., A1-14, pl. 12-22; 2004b: 236 ff., fig. 15-27 (updated list of pillars).

27 BERTACCHI 1989: 70, pl. III; CASARI 2004b: 219, fig. 1. The first author nevertheless concludes that the pillars with plutei were high enough to possibly form a parapet (balustrade).

28 CASARI 2004a: 51 ff., particularly 67 ff., 77; 2004b: 219 ff., particularly 236 ff., 249.

U Puli su otkrivena dva seta od po tri stubca, od kojih se prvi datira možda već u kasnije Augustovo ili Tiberijevo doba, a svakako julijsko-klaudijsko razdoblje (pripada mu prije spomenuti stubac s Gorgonom; sl. 5) i povezuje s dvama plutejima na kojima su orlovi koji u kljunovima drže girlande odnosno Tritoni, dok je drugi prema modelaciji i stilskim pojedinostima očito nešto kasniji (antoninsko ili severs ko doba) i bez pripadajućih pluteja.[29] Zanimljivo je da stariji stubci općom morfologijom, nepostojanjem okomite profilacije na bočnim istacima, utorima na poleđini te ukupnim gabaritima jako podsjećaju na zadarske, ali su nešto manji (visina im je 1,17 m, širina 0,80 m, a debljina 0,85 m) i stražnja im je strana nedorađena. Fischer ih je nakon iscrpne analize prepoznao kao plinte stupova i nosače ograde gornje etaže forumskog trijema (sl. 7), ostavivši otvorenom mogućnost da su pripadali i nekoj drugoj Forumu susjednoj zgradi.[30] U tome su ga razmišljanju slijedili Casari i Goldbeck.[31] V. Girardi-Jurkić sa suradnicima protumačila ih je naprotiv kao dijelove ograde nekog žrtvenika podignutog Jupitru-Amonu.[32] Iz izrade stražnje strane stubaca – primjerice onoga s Gorgonom (sl. 5) – proizlazi da s te strane nisu bili izloženi pogledu (!), zbog čega je Goldbeck opravdano postavila tezu da je gornji kat trijema možda

[29] Pregledno s datacijom: FISCHER 1996: 88 i d., br. 3a-d, tab. 27 (stariji stubci), 3e-f, tab. 28a-b (pripadajući pluteji), tab. 28c-e (mlađi stubci). Usp. i STARAC 1996: 81 i d., br. 1-4 i 8 (stariji stubci i pluteji), br. 5-7, 9 i d. (mlađi stubci), koja također pretpostavlja znatnu kronološku distanciju; GIRARDI-JURKIĆ, DŽIN, URANIĆ 2001: 8 i d., sa sl. (dva stubca starijeg seta), 9 i d. sa sl. (tri stubca mlađeg seta); A. GIUNIO 2002: 62, tab. 15, sl. 4, tab. 16, sl. 1-4.

[30] FISCHER 1996: 88 i d., sl. 18. Visinu pripadajućih stupova autor procjenjuje na 3,5 m, promjer im je oko 0,60 m (sl. 17), što zajedno s vis. stubaca od 1,17 m i trabeacijom rezultira ukupnom visinom 5,5-6 m. Dužina pluteja između stubaca iznosi oko 2,20 m. Plinta stupova prizemne etaže mjeri 0,90 x 0,90 m, stablo je u dnu promjera 0,65 m, a visina je procijenjena na 6-7 m. Ukupna visina trijema penje se po Fischeru na više od 10 m.

[31] CASARI 2004a: 115 i d.; GOLDBECK 2015: 131, sl. 216.

[32] GIRARDI-JURKIĆ, DŽIN, URANIĆ 2001: 8 i d., sl. na str. 8.

firmed by different rendering of the composite capitals and other parts of architectural sculpture.

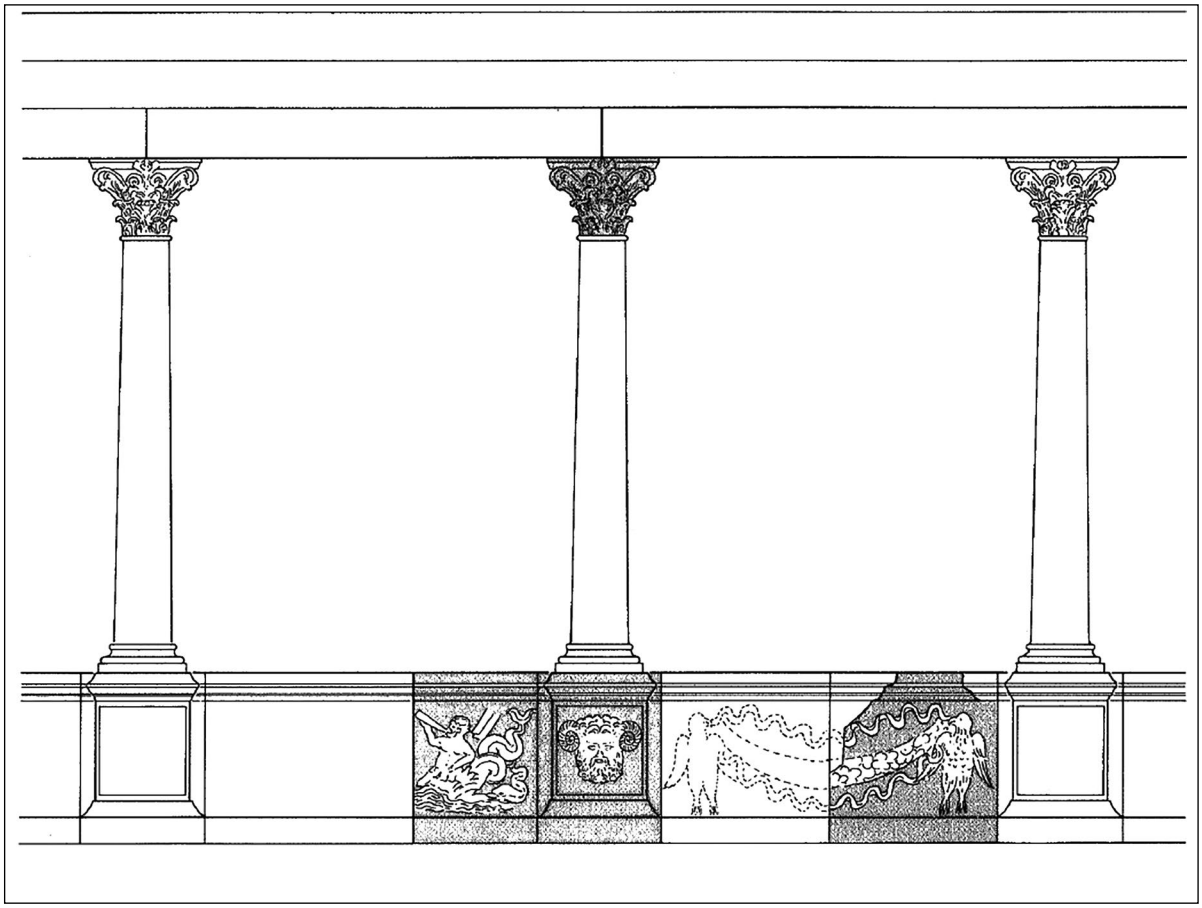
Two sets of three pillars each were found in Pula, the first of which dates back perhaps to the later era of Augustus or Tiberius, and certainly to the Julio-Claudian period (the previously mentioned pillar with Gorgon belongs to it; Fig. 5) and it connects to two plutei with eagles holding garlands in their beaks, or Tritons, while the other, according to the modelling and stylistic details, is obviously somewhat later (Antonine or Severan era) and without the associated plutei.[29] It is interesting that the general morphology of the older pillars, the absence of vertical molding on the side protrusions, the grooves on the back and the overall dimensions strongly resemble the pillars from Zadar, but they are slightly smaller (their height is 1.17 m, width 0.80 m, and depth 0.85 m) and their back side is unfinished. After an exhaustive analysis, Fischer recognized them as column plinths and railing supports of the upper floor of the forum portico (Fig. 7), leaving open the possibility that they belonged to another building adjacent to the forum.[30] Casari and Goldbeck supported this line of reasoning.[31] On the contrary, V. Girardi-Jurkić and her colleagues interpreted them as parts of the railing of an altar erected to Jupiter Ammon.[32] The modelling of the back side of the

[29] Overview with dating: FISCHER 1996: 88 ff., no. 3a-d, pl. 27 (older pillars), 3e-f, tab. 28a-b (associated plutei), pl. 28c-e (younger pillars). Cf. and STARAC 1996: 81 ff., no. 1-4 and 8 (older pillars and plutei), no. 5-7, 9 ff. (younger pillars), who also assumes a significant chronological gap; GIRARDI-JURKIĆ, DŽIN, URANIĆ 2001: 8 ff., with fig. (two pillars from the older set), 9 ff. with fig. (three pillars from the younger set); A. GIUNIO 2002: 62, tab. 15, fig. 4, tab. 16, fig. 1-4.

[30] FISCHER 1996: 88 ff., fig. 18. The author estimates the height of the corresponding columns to be 3.5 m, their diameter is about 0.60 m (fig. 17), which together with the height of pillars of 1.17 m and entablature results in a total height of 5.5-6 m. The length of the pluteus between the columns is about 2.20 m. The plinth of the columns of the ground floor measures 0.90 x 0.90 m, the shaft at the bottom has a diameter of 0.65 m, and the height is estimated at 6-7 m. The total height of the portico rises to over 10 m according to Fischer.

[31] CASARI 2004a: 115 ff.; GOLDBECK 2015: 131, fig. 216.

[32] GIRARDI-JURKIĆ, DŽIN, URANIĆ 2001: 8 ff., fig. on p. 8.



Slika 7. *Rekonstrukcija galerije forumskog trijema u Puli* (prema Fischer 1996)
Figure 7 *Reconstruction of the forum portico gallery in Pula* (after Fischer 1996)

od početka bio zamišljen kao neprohodan.[33] U prilog postojanju gornjeg kata idu i ovdje prepoznati utori za grede, iako nije moguće precizirati jesu li nosili grede šetnice ili stropa.

Iz ovih dvaju izdvojenih primjera vidljivo je da interpretacija izvornog konteksta stubaca usporedivih zadarskima počiva na formativno-tehnološkim razlozima, prije svega prisutnosti instalacija na gornjoj strani, načinu izrade poleđine, ali i drugim pojedinostima. Odatle i proizlazi različito smještanje stubaca u Akvileji i Puli. Potvrda da su neki stubci bez sumnje stajali unutar galerije forumskog trijema dva su krnje očuvana primjerka iz Julije Konkordije, kojima je na gornjoj plohi (u jednom komadu sa stubcem) izrađen *torus* stabla stupa (promjera 0,51 m) koji je tu sta-

[33] GOLDBECK 2015: 131.

pillars - for example, the one with the Gorgon (Fig. 5) - suggests that they were not exposed to view from that side (!), which is why Goldbeck proposed the thesis that the upper floor of the portico may have been intended as impassable from the beginning.[33] The existence of the upper floor is supported by the grooves for the beams recognized here, although it is not possible to specify whether they carried the beams of the walkway or the ceiling.

From these two isolated examples, it is evident that the interpretation of the original context of pillars comparable to the ones in Zadar rests on formative-technological reasons, primarily the presence of installations on the upper side, the way the back side was made, but also other details. This is the reason for the different placement of the pillars in Aquileia and Pula. Con-

[33] GOLDBECK 2015: 131.

jao.[34] Zadarski se stubci morfološkim obilježjima jasno dadu usporediti i s akvilejskima i s pulskima. Od prvih su nešto niži, ali širi i dublji, od drugih nešto veći po svim parametrima. S pulskima ih povezuje i prisutnost stražnjih utora. Stoga je logično pomišljati da su mogli i stajati u sličnom kontekstu. Međutim, jedino je njima stražnja strana potpuno izrađena, kao i prednjica, što bi sugeriralo da je bila vidljiva. Znajući za taj detalj, Casari ih je uvjetno pripisao parapetu ograde ili atici, a Goldbeck galeriji trijema foruma ili bazilike.[35]

Osnovni razlog zbog kojeg Suić stubce nije nikada povezao s balustradom galerije forumskog trijema zasigurno je njihova masivnost. Širinom od oko 1 m *ad hoc* upućuju na nemogućnost takvog smještaja, a posebno je problematična tek nešto manja debljina. Ipak, kada im se od ukupne širine pročelja oduzmu istaci za spajanje s plutejima, širina im se svede na 0,70 do 0,77 m (to odatle što postoje odstupanja između primjeraka) ili gotovo za jednu trećinu. Zašto je taj detalj od iznimne važnosti? Jer je sačuvano i dokumentirano najmanje devet baza (postolja) stupova forumskog trijema izrađenih od bijelog vapnenca, te da bi stubci eventualno mogli stajati u osi stupova i kapitela, a povrh trabeacije, po logici stvari ne smiju ih prelaziti širinom tog dijela. Od posebne je važnosti činjenica da je Suić u jugoistočnom uglu trijema pronašao dva izvorna ležišta za baze, tj. neku vrstu njihovih negativa.[36] Spomenutih devet baza dimenzijama besprijekorno odgovaraju tim ležištima. Dva izvorna ležišta danas su prezentirana nepokrivena (sl. 8), a ostala su rekonstruirana i nad njima je mjestimice napravljena rekompozicija nekoliko baza i stupova (sl. 9). Stranice izvornih leži-

[34] Pregledno: CASARI 2004a: 83 i d., IC.1-2, tab. 37b-c (gdje autor iznosi dosadašnje prijedloge datacije od Augustova doba do 2. st. i donosi argumente za dataciju u sredinu 1. st.); GOLDBECK 2015: 126 i d., sl. 203-206 (s prijedlogom datacije u 2. st.).

[35] CASARI 2004a: 127; GOLDBECK 2015: 137. Usp. i bilj. 10.

[36] SUIĆ 1981: sl. na str. 215.

firmation that some pillars undoubtedly stood inside the gallery of the forum portico are two partially preserved specimens from Julia Concordia, on whose upper surface was a *torus* of the column shaft (diameter 0.51 m) that stood there, made in one piece with the pillar.[34] Morphological features of the pillars from Zadar can clearly be compared with those from Aquileia and Pula. They are slightly lower than the former, but wider and deeper, and slightly larger than the latter in all parameters. The presence of rear grooves also connects them with the Pula specimens. Therefore, it is logical to think that they could have stood in a similar context. However, they are the only ones whose back side is completely finished, as well as the front, which would suggest that it was visible. Knowing about this detail, Casari tentatively attributed them to the parapet of the railing or the attic, and Goldbeck to the gallery of the portico of the forum or basilica.[35]

The main reason why Suić never connected the pillars with the gallery balustrade of the forum portico is surely their massiveness. With a width of about 1 m, they *ad hoc* point to the impossibility of such placement, and only slightly smaller depth is particularly confusing. Nevertheless, when the protrusions for connecting to the plutei are subtracted from the total width of the facade, their width is reduced to 0.70 - 0.77 m (since there are deviations between the examples) or almost by one third. Why is this detail so important? Because at least nine bases of columns of the forum portico made of white limestone have been preserved and documented, and if the pillars could possibly stand in the axis of the columns and capitals, and on top of the entablature, logically they should not exceed the width of that part. Of particular importance is the fact that Suić found two original beds for

[34] Overview: CASARI 2004a: 83 ff., IC.1-2, pl. 37b-c (where the author presents previous dating proposals from the age of Augustus to the 2nd century and provides arguments for dating to the middle of the 1st century); GOLDBECK 2015: 126 ff., Fig. 203-206 (with proposed dating to the 2nd century).

[35] CASARI 2004a: 127; GOLDBECK 2015: 137. Cf. Also note 10.



Slika 8. *Ležišta baza stupova na jugoistočnoj strani forumskog trijema* (foto: D. Maršić)
Figure 8 *Beds of column bases on the southeastern side of the forum portico* (photo: D. Maršić)



Slika 9. *Baze i stupovi rekonstruirane jugoistočne strane forumskog trijema* (foto: D. Maršić)
Figure 9 *Bases and columns of the reconstructed southeastern side of the forum portico* (photo: D. Maršić)

bases, i.e. some kind of negatives, in the southeastern corner of the portico.[36] The dimensions of the mentioned nine bases correspond perfectly to these beds. Today, two of the original beds are presented uncovered (Fig. 8), while the others have been reconstructed and several bases and columns have been recomposed over them in places (Fig. 9). The sides of the original beds and bases are 0.82-0.84 m long, and the reconstructions were made in this size. Therefore, the pillars in question are more than ten centimeters narrower than the bases in the width of their central part. The size of the lower surface of the pillars does not match the beds.

It has already been discussed how Suić offered the reconstruction of the motifs shown on the plutei, but he only had a modest fragment of the central field at his disposal for this attempt.[37] He reconstructed it as a hanging garland hung on ox heads (bucrania), in such a way that the horns of the skulls passed to the protrusions of the pillars. However, in the research led by K. A. Giunio at the Zadar's Forum in 2006 and 2007, a new, largest piece of pluteus discovered so far was found, which clearly belongs to a structure with pillars.[38] In terms of iconography and style, it is clearly different from the pluteus bearing a depiction of putti holding a hanging garland,[39] and which is clearly related by dimensions (height) to the second (younger) set of pillars.[40] The newly discovered piece of pluteus has a preserved length of 1.18 m, while its thickness and height are complete and measure 0.195 and 0.74 m. The upper and right sides are finely smoothed and in their original state. On the upper surface, there are two depressions for secur-

36 SUIĆ 1981: fig. on p. 215.
37 Cf. note. 6. Suić also believed that plutei could possibly be made in two parts, with a length twice the height of the railing (i.e. about 2.60 m).
38 Oral communication with my colleague Kornelija A. Giunio, whom I thank for the opportunity to publish the fragment.
39 SUIĆ 1981: 208-209, fig. on p. 207 (drawing); CAMBI 2003a: 57, fig. 9 (original fragment); GOLDBECK 2015: 138, Fig. 242 (pluteus after the discovery of the left edge in 2006).
40 Cf. note 20-21.

šta i baza duljine su 0,82-0,84 m, a u toj su veličini napravljene i rekonstrukcije. Dakle, predmetni stubci širinom svojeg središnjeg dijela za više su od desetak centimetara uži od baza. Veličinom donje plohe stubci inače nikako ne odgovaraju ležištima.

Već je bilo riječi o tome kako je Suić ponudio rekonstrukciju motiva prikazanog na plutejima, ali je za taj pokušaj raspolagao samo skromnim fragmentom središnjeg polja.[37] Rekonstruirao ga je kao lučnu girlandu obješenu o volovske glave (bukranije), i to na način da su rogovi lubanja prelazili na istake stubaca. Međutim, u istraživanju koje je na zadarskom Forumu 2006. i 2007. godine vodila K. A. Giunio pronađen je novi, najveći do sada otkriveni komad pluteja, za koji je sasvim jasno da pripada konstrukciji sa stubcima.[38] On se ikonografski i stilski jasno razlikuje od pluteja na kojem su prikazani eroti kao nosači lučno obješene girlande,[39] a koji se dimenzijama (visinom) jasno povezuje s drugim (mlađim) setom stubaca.[40] Novootkriveni komad pluteja sačuvane je duljine 1,18 m, dok su mu debljina i visina potpuni i iznose 0,195 i 0,74 m. Gornja i desna bočna strana fino su zaravnjene i u izvornom stanju. Na gornjoj su plohi dva udubljenja za učvršćivanje nešto nižeg nastavka (oblika gredice) na kojem su bili izrađeni profili identični onima na vrhu stubaca. Prednju stranu zauzima prikaz obješene (lučne) girlande s voćnim plodovima, šišarkama, te manžetnom na desnom kraju, iz koje se gore i dolje izvijaju ukrasne vrpce. Kraj girlande naglo se prekida na desnom rubu, a pomni pogled na stubce otkriva koji je tomu razlog. On se krije u činjenici da na istacima stubaca nisu prisutni

[37] Usp. bilj. 6. Suić je smatrao i da bi pluteji eventualno mogli biti dvodijelne izrade, duljine dvostruko veće od visine ograde (tj. oko 2,60 m).

[38] Usmeno priopćenje kolegice Kornelije A. Giunio kojoj zahvaljujem na mogućnosti da objavim fragment.

[39] SUIĆ 1981: 208–209, sl. na str. 207 (crtež); CAMBI 2003a: 57, sl. 9 (izvoran fragment); GOLDBECK 2015: 138, sl. 242 (plutej nakon otkrića lijevog ruba 2006. god.).

[40] Usp. bilj. 20-21.

ing a slightly lower extension on which profiles identical to those on the top of the pillars were made. The front side is occupied by a hanging (arched) garland with fruits, pine cones, and a cuff at the right end, from which decorative ribbons twist up and down. The end of the garland breaks off abruptly at the right edge, and a close look at the pillars reveals the reason therein: there are no skull horns on the protrusions of the pillars (which are not even pointed) but garland ends.[41] In other words, the entire railing was designed so that the protomes of Jupiter-Ammon and Gorgon depicted on the pillars were conceived as carriers of garlands strung on plutei (Fig. 10). Such a solution refutes the possibility that two plutei stood between the pillars.

Since the center of the garland is clearly visible on the new pluteus, and even more importantly, its slope is visible, it is relatively easy to determine the approximate length of the pluteus. Assuming that the two arms of the garland were symmetrical, which is unlikely, the projected length of the pluteus would be at least 1.65 m. Although the position of the upper *taenia*, whose outer arm significantly exceeds the middle of the garland, at first glance suggests that the length could have been significantly greater, by mirror determination of the angular slope of the left side of the garland, the length of the pluteus is even slightly shorter and comes to about 1.60 m. Of course, there is the possibility of deflection, but it should not be greater than about 10 cm. The accuracy of the calculation is also confirmed by previously known fragment, which Suić incorporated into the reconstruction of the railing. Putting it in the same scale and overlapping it with the newly discovered pluteus, it shows the length of the right half of 0.81-0.82 m, i.e. 1.60-1.65 m for the entire pluteus. The length of the pluteus is important because by hypothetical connecting with the pillars, we are able to calculate at what distance the latter stood.

According to Suić, the width of the inter-

[41] Garland ends as a possible solution were mentioned by GOLDBECK 2015: 137.

rogovi lubanja (koji uzgred nisu ni zašiljeni) već krajevi girlandi.[41] Drugim riječima, čitava je ograda koncipirana tako da su na stubcima prikazane protome Jupitra-Amona i Gorgone zamišljene kao nosači girlandi raspetih na plutejima (sl. 10). Takvo rješenje negira mogućnost da su između stubaca stajala po dva pluteja.

Budući da se na novom pluteju jasno raspoznaje sredina girlande, a još je važnije da je vidljiv njezin nagib, relativno je lako odrediti okvirnu duljinu pluteja. Pod pretpostavkom da su dva kraka girlande bila simetrična, što je ipak malo vjerojatno, projicirana duljina pluteja iznosila bi minimalno 1,65 m. Iako položaj gornje tenije, čiji vanjski krak znatno prelazi sredinu girlande u prvi mah upućuje na to da je duljina mogla biti znatno veća, zrcalnim određivanjem kutnog nagiba lijeve strane girlande duljina pluteja pokazuje se čak i nešto kraća te iznosi oko 1,60 m. Dakako da valja ostaviti mogućnost otklona, no on ne bi trebao biti veći od 10-ak cm. Točnost izračuna potvrđuje i otprije poznati fragment, koji je Suić ugradio u rekonstrukciju ograde. Stavivši ga u isto mjerilo i preklopivši s novootkrivenim plutejom, on pokazuje duljinu desne polovice 0,81-0,82 m, odnosno čitavog pluteja 1,60-1,65 m. Duljina je pluteja bitna jer smo fiktivnim spajanjem sa stubcima u mogućnosti izračunati na kojoj su udaljenosti potonji stajali.

Prema Suiću širina interkolumni forumskog trijema iznosila je nešto više od 3 m,[42] no uzimanje dimenzija *in situ* na već spomenutom jugoistočnom uglu Foruma pokazuje da udaljenost dviju originalnih baza iznosi 2,13 m, a one koje su rekonstruirane udaljene su do 2,15 m.[43] Ako stubce s protomama

columniation of the forum portico was slightly over 3 m,[42] but measuring the dimensions *in situ* at the already mentioned southeastern corner of the forum shows that the distance between the two original bases is 2.13 m, and those that have been reconstructed are up to 2.15 m apart.[43] If we imagine pillars with protomes exactly in the axis of the bases (e.g. inside the gallery), they cross the sides of the bases into the intercolumnar spaces by 16 to 20 cm, i.e. half of that length on each side, out of their total width of 1.0-1.02 m. It is not possible to obtain a more precise measure with any method, because neither the bases nor the pillars (and protrusions) have matching dimensions. If we add to this the assumed length of the plutei, we get a total length of maximum of 1.85 m, which means that we still lack 0.30 m. From the calculation, it is possible to conclude that the pillars and the railing could not have stood inside the southeastern portico of the forum, neither inside the gallery nor in the attic. After all, the finishing of the back side speaks against placement inside the attic! However, we cannot automatically apply the obtained result to the northern or southern portico because there are no unambiguous indicators.[44] We have no information about the

41 Da je riječ o krajevima girlandi, naslutila je već GOLDBECK 2015: 137.

42 SUIĆ 1981: 208 (3,10 m). Drugdje Suić donosi da je to 3,15 m, odnosno 3,20 m.

43 Usp. bilj. 36. Kada se udaljenost baza usporedi s promjerom stupovlja trijema, dolazi se do zaključka da je interkolumnij bio izveden u standardu između dijastila i areostila (oko 3,40 promjera stupa), koji je po Vitruviju još

42 SUIĆ 1981: 208 (3,10 m). Elsewhere, Suić states that it is 3.15 m or 3.20 m.

43 Cf. note 36. When the distance of the bases is compared with the diameter of the columns of the portico, the conclusion is reached that the intercolumniation was made in a standard between diastyle and araeostyle (about 3.40 of the column diameter), which according to Vitruvius still allowed the use of stone architraves. The length of the architrave that stood on top of the capitals is easy to calculate because it corresponds to the sum of the distance of the beds and their two halves (2.13 + 2 x 0.415 m), i.e. it is about 2.95 m. An architrave with a frieze (monolith) of this length was embedded in one of the pylons of St. Donatus, which is another proof of its association with the portico: MARŠIĆ, DUBOLNIĆ-GLAVAN 2015: 56 ff., note. 36, 61, fig. 22.

44 On the order of construction of the tabernae (Augustan era, i.e. the beginning of the 1st century AD) and the portico (Flavian era), see SUIĆ 1976: 156-157; 1981: 206, 208. As Suić mentions two earlier buildings on the longitudinal edges of the forum (halls supposedly about 6 m wide), roughly from the end of the Republic or from the Augustan era, which according to him were removed due to the construction of the portico, it is possible to assume that the southeastern portico is the oldest, i.e. that the construction started on that side.

zamislimo točno u osi baza (npr. unutar galerije), oni od svoje ukupne širine 1,0-1,02 m prelaze stranice baza u prostore interkolumni za 16 do 20 cm, odnosno polovicu te duljine na svakoj strani. Precizniju mjeru nije moguće dobiti ni jednom metodom jer niti su baze niti su stubci (i istaci) međusobno podudarnih dimenzija. Pribrojimo li tomu pretpostavljenu duljinu pluteja, dobivamo ukupnu duljinu od maksimalno 1,85 m, što znači da nam još uvijek nedostaje 0,30 m. Iz izračuna je moguće zaključiti da stubci i ograda nisu mogli stajati unutar jugoistočnog trijema Foruma, bilo unutar galerije ili atike. Protiv smještaja unutar atike govori uostalom dorađenost stražnje strane! Dobiveni rezultat, međutim, ne smijemo automatski aplicirati i na sjeverni ili južni trijem jer za tako nešto ne postoje sigurni pokazatelji.[44] O sjevernom trijemu nemamo nikakvih spoznaja, otisci baza tamo nisu otkriveni, a čak i ako je bio iste elevacije i istih dimenzija taberni – što Suić drži vjerojatnim[45] – stupovi u prizemlju mogli su imati deblja stabla i/ili drukčiji ritam s nešto užim interkolumnama. Ništa bolje nije nam poznat ni južni trijem.

U nastavku na problematiku izvornog smještaja stubaca i njihova eventualnog povezivanja s trijemom Foruma – koje se u ovom trenutku usprkos svemu čini najlogičnijim izborom – moramo se dotaknuti Suićevih prijedloga anastiloze tog dijela arhitekture i

uvijek omogućavao uporabu kamenih arhitrava. Duljinu arhitrava koji su stajali povrh kapitela lako je izračunati jer odgovara zbroju udaljenosti ležišta i njihovih dviju polovica (2,13 + 2 x 0,415 m), tj. iznosi oko 2,95 m. Arhitrav s frizom (monolit) takve duljine uzidan je danas u jedan od pilona Sv. Donata, što je još jedan od dokaza njegove pripadnosti trijemu: MARŠIĆ, DUBOLNIĆ-GLAVAN 2015: 56 i d., bilj. 36, 61, sl. 22.

44 O redoslijedu izgradnje taberni (Augustovo doba, tj. početak 1. st. po Kr.) i trijema (flavijsko doba) v. kod SUIĆ 1976: 156–157; 1981: 206, 208. Kako Suić na uzdužnim rubovima Foruma spominje dvije ranije građevine (dvorane navodno široke oko 6 m), otprilike s kraja Republike ili iz Augustova doba, koje su po njemu uklonjene zbog izgradnje trijema, moguće je pretpostaviti da je jugoistočni trijem najstariji, tj. da je gradnja započela s te strane.

45 SUIĆ 1981: 206.

northern portico, the imprints of the bases were not discovered there, and even if it was of the same elevation and the same dimensions as tabernae - which is considered to be likely by Suić[45] - the columns on the ground floor could have had thicker shafts and/or different spacing with slightly narrower intercolumniation. The southern portico is just as poorly known.

Regarding the original placement of the pillars and their possible connection with the forum portico - which at this moment, despite everything, seems to be the most logical choice - we must touch upon Suić's proposals for the anastylosis of that part of the forum and the role he attributed to the two monolithic smooth-bodied columns embedded in the ground floor of St. Donatus.

In the chapter of the "Ancient City" dedicated to the anastylosis of the temple and the forum portico in Zadar, Suić talks about the modules for making the portico columns and the assumed dimensions. According to these data, the height of the monolithic columns (logs) was 4.66 m, the height of the capital 0.56 m. He claims that the diameter at the bottom of the column is 0.52 m, only to state later that the radius of the column's base is 0.28 m![46] In the book "Zadar in Antiquity" he does not go into details (due to the nature of the publication) and only states that the two columns from the portico are completely preserved because they were embedded in front of the central apse of St. Donatus.[47] The unpublished manuscript again brings a certain "synthesis" of both statements, with partially changed dimensions; the diameter of the base is 0.52 m, the diameter of the top is 0.43 m, the height is rounded to 4.70, but it is stated once more that the entire examples of columns are those from St. Donatus whose capitals are 1.10 m high.[48] The problem with the mentioned anastyloses is that the columns from St. Donatus, according to P. Vežić, are 5.80 m high,

45 SUIĆ 1981: 206.

46 SUIĆ 1976: 196; 2003: 293-294.

47 SUIĆ 1981: 208.

48 SUIĆ, p. 30-31, 52.

uloge koju je pridavao dvama monolitnim stupovima glatkog tijela ugrađenima u prizemlje Sv. Donata.

U poglavlju *Antičkoga grada* posvećenom anastilozi hrama i forumskog trijema u Zadru Suić progovara o modulima izrade stupova trijema i pretpostavljenim dimenzijama. Prema tim podatcima visina monolitnih stupova (trupaca) iznosila je 4,66 m, visina kapitela 0,56 m, za promjer stupa pri dnu kaže da je iznosio 0,52 m, da bi malo poslije ustvrdio da je polumjer osnovice stupa 0,28 m![46] U djelu *Zadar u starom vijeku* nije toliko detaljan (zbog karaktera publikacije) i samo konstatira da su dva stupa iz trijema potpuno sačuvana jer su uzidana ispred središnje apside Sv. Donata.[47] Neobjavljeni rukopis ponovno donosi stanovitu „sintezu" obaju navoda, uz djelomice izmijenjene dimenzije; promjer osnovice je 0,52 m, promjer vrha određen na 0,43 m, visina zaokružena na 4,70, ali se opet konstatira da su čitavi primjerci stupova oni iz Sv. Donata čiji su kapiteli visine 1,10 m.[48] Problem s navedenim anastilozama je u tome što su stupovi iz Sv. Donata prema P. Vežiću visoki 5,80 m, visine kompozitnih kapitela od 0,90 m i promjera osnovice stupa oko 0,70 m.[49] Drugim riječima, mjere su u očitom nesuglasju.

Premjeravanje dvaju stupova za potrebe ovog rada pokazalo je da se Vežićevi podatci trebaju tek neznatno korigirati.[50] Visina stabla sjevernog stupa iznosi 5,82 m, a južnoga 5,87 m. Visina kapitela sjevernog stupa je 0,91 m, a južnoga znatno manja – 0,79 m. Sjeverni stup stoji na izvornoj bazi (ali koja ne odgovara ležištima trijema), a južni na palimpsest bazi. Kako su baze stupovlja trijema prepoznate i dijelom izložene – makar na jugoistočnoj strani, o čemu je prethodno

[46] SUIĆ 1976: 196; 2003: 293–294.
[47] SUIĆ 1981: 208.
[48] SUIĆ, p. 30-31, 52.
[49] VEŽIĆ 2002: 70.
[50] Mjerenje je obavio fotograf i dokumentarist Arheološkog muzeja Zadar, R. Maršić, kojem ovom prigodom srdačno zahvaljujem.

the height of their composite capitals is 0.90 m, and the diameter of the column base is about 0.70 m.[49] In other words, the measurements are in obvious disagreement.

The measuring of the two columns for the purposes of this paper showed that Vežić's data should be corrected only slightly.[50] The height of the shaft of the northern column is 5.82 m, and the southern column is 5.87 m high. The height of the capital of the northern column is 0.91 m, and that of the southern column is significantly smaller - 0.79 m. The northern column stands on the original base (but which does not correspond to the portico beds), and the southern one on a palimpsest base. Since the bases of the portico columns are recognized and partially presented - at least on the southeastern side, which was previously discussed - the dimensions are known as well as the appearance and layout of the profiles, and the diameter of the upper surface (*torus*) on which the column shaft rested with a base diameter of 0.63 -0.65 m (Fig. 9). Measurement of columns from St. Donatus showed that the diameter of the lower part of the northern column shaft is 0.74 m, and the southern one 0.70 m (measured on a well preserved part of the column), but when the profiles at the bottom are added to that, their diameter rises to 0.83 and 0.77 m, respectively. This means that they are definitely too big for the bases of the presented part of the portico! The same seems to apply to the capitals, because they are not only too high, but the diameter of the bases (0.68 m northern and 0.62 m southern) are either larger or identical to the diameter of the base of the portico columns, and should be significantly smaller! This leads to the assumption that the two columns with capitals were taken from the ruins of some other massive (forum?) building, and with them probably the base of the northern column. Not all the pieces of columns placed on the portico bases today actually match their

[49] VEŽIĆ 2002: 70.
[50] The measurement was made by the photographer and documentarist of the Archaeological Museum in Zadar, R. Maršić, to whom I would like to express my gratitude.

bilo riječi – poznate su im dimenzije, izgled i raspored profila, te promjer gornje plohe (torus) na koju je nalijegalo stablo stupa promjera osnovice 0,63-0,65 m (sl. 9). Mjerenje stupova iz Sv. Donata pokazalo je da promjer panja stabla sjevernog stupa iznosi 0,74 m, a južnoga 0,70 m (mjereno na zdravom dijelu tijela), no kada se tomu pridodaju profili na dnu, promjer im se penje na 0,83 odnosno 0,77 m. To znači da su definitivno preveliki za baze otkrivenog dijela trijema! Isto, čini se, vrijedi i za kapitele, jer su ne samo previsoki nego i promjera osnovica (0,68 m sjeverni i 0,62 m južni) koje su ili veće ili identične promjeru osnovice stupova trijema, a trebale bi biti znatno manje! To upućuje na pretpostavku kako su dva stupa s kapitelima uzeta iz ruševina neke druge masivne (forumske?) građevine, a s njima vjerojatno i baza sjevernog stupa. Ni svi komadi stupova danas postavljeni na baze trijema dimenzijama im zapravo ne odgovaraju. Onaj na krajnjem jugu, od zelenkastog *cipollino* mramora s izražajnim venama očito je prevelik i pri tome, čini se, okrenut naopačke, a oni prema sjeveru su premaleni (sl. 9). Uviđa to i Suić, jer u više puta spomenutom rukopisu upozorava da ta rekonstrukcija ima karakter improvizacije te da je izvedena iz didaktičkih razloga.[51] Važno je naglasiti da se jedino u tom tekstu Suić osvrće na stupove iz matroneja (galerije) Sv. Donata, točnije dva koja stoje unutar zazidanih prolaza, za koje vjeruje da su komadi stupova koji su stajali unutar trijema.[52] Potvrđuje to i njihov promjer 0,55-0,56 m, koji odgovara polumjeru donesenom u *Antičkom gradu*.[53] Međutim, kako je već spomenuto, maksimalni promjer stupova mora biti 0,62-0,64 m (sl. 9). Ostaje nejasno zašto Suić ni jednom riječju ne spominje dva stupa postavljena ponad onih u prizemlju crkve, iako su izrađena od istog sivkastomodrastog

dimensions. The one in the southern periphery, made of greenish *cipollino* marble with expressive veins, is clearly too large and, at the same time, seems to be turned upside down, while those towards the north are too small (Fig. 9). Suić also sees this, because in the mentioned manuscript, he emphasizes that this reconstruction has the character of improvisation and that it was carried out for didactic reasons.[51] It is important to emphasize that only in this text does Suić refer to the columns from the matroneum (gallery) of St. Donatus, or rather the two that stand inside the walled-up passages, which he believes are pieces of columns that stood inside the portico.[52] This is also confirmed by their diameter of 0.55-0.56 m, which corresponds to the radius presented in the "Ancient City".[53] However, as already mentioned, the maximum diameter of the columns must be 0.62-0.64 m (Fig. 9). It remains unclear why Suić does not mention a single word about the two columns placed above those on the ground floor of the church, even though they are made of the same grayish-blue stone as the two from the walled-up passages or the columns inside the reconstruction of the portico? Why is this important? Because with their diameter of 0.63 m at the bottom (southern) and 0.64 m (northern), they perfectly match the portico bases! At the bottom of the southern column, a trace of the original double profile can be seen, and at the top of the northern column, the remains of a simple high profile (the same as the profiles of some columns with smaller diameter on the portico that are presented today). That these columns are spolia is evidenced by the fact that they are both broken off at the top, which would not be the case if they were purpose-built and erected. They were broken off in the same way as the pillars in the walled-up passages! This clearly shows that they were also reworked from columns taken from the forum. Applying the modules in which the lower two columns were

[51] SUIĆ, p. 20.
[52] SUIĆ, p. 31.
[53] Usp. bilj. 46.

[51] SUIĆ, p. 20.
[52] SUIĆ, p. 31.
[53] Cf. note 46.

kamena kao i dva iz zazidanih prolaza ili stupovi unutar rekonstrukcije trijema? Zašto je to važno? Jer svojim promjerom od 0,63 m u dnu (južni) i 0,64 m (sjeverni) savršeno odgovaraju bazama trijema! Na dnu južnog stupa zamjećuje se trag izvornog dvostrukog profila, a na vrhu sjevernoga ostatak običnog visokog profila (istovjetnog profilima nekih danas izloženih stupova manjeg promjera na trijemu). Da su ti stupovi spoliji, dokaz je i što su oba pri vrhu odlomljena, što ne bi bio slučaj da su namjenski izrađeni i uspravljeni. Odlomljeni su na istovjetan način kao i stupovi u zazidanim prolazima! To jasno pokazuje da su i oni prerađeni od stupova uzetih s Foruma. Primijenivši module u kojima su izrađena donja dva stupa na one iznad njih (makar okvirno), izvorna visina potonjih ne bi smjela prelaziti 4,40 m, odnosno s kapitelima bi mogla iznositi oko 5 m. To bi bila očekivana visina s obzirom na dimenzije baza te ukupne gabarite trijema.[54] Stupovi u zazidanim prolazima mogli su eventualno stajati unutar galerije, a visina im je mogla dosezati oko 3,20 m.

* * *

Problem izvornog konteksta stubaca s protomama Jupitra-Amona i Gorgone neraskidivo je povezan i s pitanjem njihove datacije, o čemu su izneseni sasvim oprečni stavovi. Ovdje ćemo se osvrnuti samo na one s najvećom „težinom". Pripisivanjem balustradi Kapitolija i severskoj bazilici Suić se dvoumio između ranije datacije (koju ne precizira) i kasnije

[54] U publiciranim tekstovima Suić je opetovano iznosio mišljenje da je ukupna visina trijema bila i do 15 m, međutim u rukopisu (p. 63) je spušta na 11,60 m (do vrha stupova gornje kolonade). Posljednja je visina prihvatljivija, premda i nju možda treba ponešto spustiti. To potvrđuju tri detalja: samo jedan red stupova-nosača u prizemlju, zidovi pročelja taberni koji nemaju dovoljnu masu (debljinu) da dosegnu preveliku visinu i baze stupova trijema koje su do 10-ak cm (ili za 1/10) kraće od onih s pulskog Foruma (usp. bilj. 30). Začelni zid taberni sačuvao se inače u maksimalnoj visini od oko 6 m (sjeverni zid najstarijeg oratorija): VEŽIĆ 2005: 18.

made to the ones above them (at least tentatively), the original height of the latter should not exceed 4.40 m, i.e. with the capitals it could be around 5 m. This would be the expected height considering the dimensions of the bases and overall dimensions of the portico.[54] The columns in the walled-up passages could possibly stand inside the gallery, and their height could reach about 3.20 m.

* * *

The question of original context of the pillars with the protomes of Jupiter-Ammon and Gorgon is closely linked to the question of their dating, on which quite contradictory views have been expressed. Here we will refer only to those with the greatest "weight". By attributing to the balustrade of the Capitolium or Severan basilica, Suić hesitated between an earlier date (which he does not specify) and a later one (the Severan age), to which he was obviously more inclined.[55] More recently, N. Cambi has on several occasions dated the pillars to the earlier 1st century.[56] Due to the "intensive" use of drills in the curls, corners of the lips and in other places, Casari places them in the later Antonine period, linking them to the comprehensive program of reconstruction after the Marcomannic Wars.[57] Rather recently, Goldbeck also dated them to the 2nd century, based on (always dangerous) iconographic-typological comparisons and similar observations about the nature of the use of

[54] In the published texts, Suić repeatedly expressed the opinion that the total height of the portico was up to 15 m, however, in the manuscript (p. 63) he lowers it to 11.60 m (to the top of the columns of the upper colonnade) which is more acceptable, although it may also need to be lowered a bit. This is confirmed by three details: only one row of supporting columns on the ground floor, the walls of the front of the tabernae that do not have enough mass (thickness) to reach big height, and the bases of the portico columns that are up to 10 cm (or by 1/10) shorter than those of the Forum in Pula (cf. note 30). The back wall of the tabernae was preserved at a maximum height of about 6 m (the northern wall of the oldest oratory): VEŽIĆ 2005: 18.

[55] Cf. notes 5-7 (Suić).

[56] CAMBI 2002: 89 (Tiberius' period); 2003a: 63 (ibid); 2005: Fig. 25-27 (1st half of the 1st cent.).

[57] CASARI 2004a: 126 ff., 148 ff.

(seversko doba), kojoj je očito više bio sklon.[55] U novije vrijeme N. Cambi je stubce u nekoliko navrata datirao u ranije 1. stoljeće.[56] Casari ih zbog „intenzivne" uporabe svrdla u loknama, uglovima usana i na drugim mjestima smješta u kasnije antoninsko doba, povezujući ih sa zamašnim programom obnove nakon markomanskih ratova.[57] Sasvim ih je recentno u 2. stoljeće datirala i Goldbeck, i to na temelju (uvijek opasnih) ikonografsko-tipoloških komparacija i sličnih zapažanja o prirodi uporabe svrdla, pitajući se ipak nije li zbog brojnih usporedbi taj tip prikaza u Zadru mogao biti zastupljen već u 1. stoljeću?[58]

Smatram da su datacije spomenutih stranih autora dobrim dijelom kontaminirane starijom literaturom te da nemaju odgovarajuće pokriće u stilskim kriterijima, posebice uzme li se u obzir izrada pripadajućih pluteja! Na novootkrivenom komadu pluteja svrdlanje je samo sporadično zastupljeno (sl. 10), dok se na malom fragmentu drugog pluteja (starijem nalazu) istina obilnije rabilo, ali uglavnom bušenjem s pomoću glave svrdla i tek na nekoliko mjesta izradom kraćih kanala. To je posve drukčiji pristup negoli na pluteju s erotima kao nosačima girlandi, gdje se (iz blizine) dobro vide dugi svrdlani kanali unutar kojih su gusti ubodi svrdlom. Casari je s pravom primijetio kako je na slabije očuvanom stubcu Jupitra-Amona brada odvojena od lica svrdlanim kanalima, što mu je jedan od argumenata za datiranje u 2. stoljeće, no sličan postupak bilježimo na stubcu s glavom Jupitra-Amona iz Julije Konkordije, koji ipak datira u sredinu 1. stoljeća[59] Stoji kako je u Zadru svrdlanje nešto naglašenije, ali ne s tako intenzivnim tretmanom u kosi i bradi, što bismo najprije očekivali kada bi bila riječ o skulpturi s kraja 2. ili početka 3. stoljeća,

[55] Usp. bilj. 5-7 (Suić).
[56] CAMBI 2002: 89 (Tiberijevo doba); 2003a: 63 (isto); 2005: sl. 25-27 (1. pol. 1. st.).
[57] CASARI 2004a: 126 i d., 148 i d.
[58] GOLDBECK 2015: 137 i d. Autorica se nije koristila ovdje citiranim Cambijevim radovima.
[59] Usp. bilj. 34 (Casari).

drills, wondering if, due to numerous comparisons, this type of depiction could have been represented in Zadar already in the 1st century?[58]

In my opinion, the datings of the mentioned foreign authors are largely contaminated by older literature and they are not supported by stylistic criteria, especially if the modelling of the associated plutei is taken into account! On the newly discovered piece of pluteus, drilling is only sporadically represented (Fig. 10), while on a small fragment of another pluteus (an older find) it was actually used more abundantly, but mostly with a drill bit and only in a few places by making shorter channels. This is a completely different approach than on the pluteus with putti as garland supports, where (up close) one can clearly see long drilled channels inside which there are dense drill holes. Casari rightly noticed that on the less well-preserved pillar of Jupiter-Ammon, the chin is separated from the face by drilled channels, which is one of his arguments for dating it to the 2nd century, but we have noticed a similar procedure on the pillar with the head of Jupiter-Ammon from Julia Concordia which he nevertheless dated to the middle of the 1st century.[59] Drilling on the Zadar examples is indeed somewhat more pronounced, but not with such intensive treatment of the hair and beard, which we would first expect if it were a sculpture from the late 2nd or the early 3rd century, as is the case, for example, with Satyr's head from the second Zadar set.[60] And the style of modelling the eyes speaks in favor of an earlier date. Although Casari believes that the state of preservation does not allow us to conclude whether the pupils were marked in the eyes, the photographs taken immediately after the discovery and the current state show two of the three protomes without these details.[61] The only problem is the previously mentioned pillar, because in the right eyeball, inside the exaggerated eyelids, the lowered upper

[58] GOLDBECK 2015: 137 ff. The author did not use Cambi's works cited here.
[59] Cf. note 34 (Casari).
[60] Cf. CAMBI 2003b: 114, fig. 6.
[61] CASARI 2004a: 126.



Slika 10. *Fotokolaž dijela ograde sa stubcem i plutejom* (izradio: D. Maršić)
Figure 10 *Photo collage of a part of the railing with pillar and pluteus* (made by D. Maršić)

kao što je npr. slučaj na Satirovoj glavi s drugog zadarskog seta.[60] I stil izrade očiju govori u prilog ranijoj dataciji. Iako Casari smatra kako stanje sačuvanosti ne dopušta zaključak jesu li u očima bile naznačene pupile, fotografije nastale odmah po otkriću i današnje stanje prikazuju dvije od tri protome bez tih detalja.[61] Problematičan je jedino prije spomenuti stubac jer se u jabučici desnog oka, unutar prenaglašenih kapaka, nazire i opipava sniženi gornji dio, no istoga čini se nema u lijevom oku, a i spomenuti detalj nije usječen nego koso udubljen, pa se s velikom sigurnošću može zaključiti kako je riječ o oštećenju kamena.

Zadarski stubci morfologijom se posve očito naslanjaju na starije serije stubaca iz Pule i Akvileje, datirane svakako u julijsko-klaudijsko doba, a stilski su i formativno drukčiji od primjeraka drugog zadarskog seta. Drukčiji su im motivi, debljina i duljina pluteja, način

[60] Usp. CAMBI 2003b: 114, sl. 6.
[61] CASARI 2004a: 126.

part can be seen and felt, but the same does not seem to be the case in the left eye, and the mentioned detail is not cut but obliquely impressed, so it can be concluded with great certainty that it is actually damage in the stone.

The morphology of the Zadar pillars is quite obviously similar to the older series of pillars from Pula and Aquileia, dated to the Julio-Claudian period with certainty, and they are stylistically and formatively different from the examples of the second Zadar set. They differ in motifs, the thickness and length of the plutei, the way of connecting the columns and the plutei, the execution of the garlands, and it is not at all likely that they are (at least approximately) contemporary.[62] We also saw that the Zadar pillars are connected to the Pula specimens by the presence of large grooves on the back, which is an extremely important detail! The execution of garlands with fruits and decorative ribbons at the double ends on our pillars (Fig. 10) finds it's best comparisons on the sepulchral altars of

[62] Such opinion is expressed by CASARI 2004a: 128.

spajanja stubaca i pluteja, izvedba girlandi, te nije nimalo vjerojatno da su (makar približno) suvremeni.[62] Vidjeli smo i da zadarske stubce s pulskima povezuje prisutnost velikih utora na poleđini, što je iznimno važan detalj! Izvedba girlandi s voćnim plodovima i ukrasnim vrpcama dvostrukih krajeva s naših stubaca (sl. 10) najbolje usporedbe nalazi na grobnim arama grada Rima iz ranijeg 1. stoljeća.[63] I rješenje s vješanjem krajeva girlandi na glave (tj. krajeve stubaca) usporedivo je praksi s grobnih ara grada Rima, datiranih redovno u 1. stoljeće, gdje često vise obješene o ovnujske rogove ugaono postavljenih glava Jupitra-Amona.[64] Zapravo, girlande na zadarskim stubcima izradom su i sastavom nesumnjivo na tragu girlandi s pulskih i akvilejskih pluteja! Cijeli je niz razloga koji idu u prilog ranijoj dataciji, pri čemu ne treba isključiti da su neki stubci iz julijsko-klaudijskog, a neki iz flavijskog doba. Stariji autori za detalje izrade pluteja, naravno, nisu mogli znati. Recimo na kraju i to da je teško povjerovati kako je Zadar dekoraciju koja je očito bila vrlo važnog imperijalno-propagandnog karaktera (što u ovom radu posve zaobilazimo) dobio tek krajem 2. stoljeća, kad su je Akvileja, Trst i Pula imali već prije sredine 1. stoljeća.

Na temelju trenutačnih spoznaja može se zaključiti kako zadarski stubci s protomama Jupitra-Amona i Gorgone sigurno nisu stajali kao čeona balustrada Kapitolija (zbog tehnoloških razloga), unutar severske bazilike (zbog stilsko-databilnih razloga i premale udaljenosti stubaca), na pročelju nekog podija, odnosno kao oplata postolja ili velikog žrtvenika (zbog fine izrade stražnjih strana koje su se očito vidjele). Nije izgledno niti da su stajali na parteru, svakako ne unutar trijema Foruma, jer bi pluteji kojima su se povezivali

[62] Takvo mišljenje izražava CASARI 2004a: 128.

[63] Usp. npr. BOSCHUNG 1987: 96 i d., br. 641 i 645, tab. 15 (sigurno datirani primjerci).

[64] BOSCHUNG 1987: 22 i d., bilj. 238, s kronologijom na str. 24 i d., iz koje je vidljivo da gotovo svi sigurno i stilski datirani primjerci idu u kasnije klaudijsko i flavijsko doba.

the city of Rome from the earlier 1st century.[63] And the solution with hanging the ends of the garlands on the heads (i.e. the ends of the pillars) is comparable to the practice from the sepulchral altars of the city of Rome, dated regularly to the 1st century, where they are often hung from the ram's horns of the angularly placed heads of Jupiter-Ammon.[64] In fact, the garlands on the Zadar pillars are undoubtedly similar to the garlands from the Pula and Aquileia plutei in their construction and composition! There is a number of reasons in favor of earlier dating, whereby it should not be excluded that some pillars are from the Julio-Claudian period and some from the Flavian period. Of course, the older authors could not know the details of the pluteus modelling. Finally, let us say that it is hard to believe that Zadar received the decoration, which was obviously of a very important imperial-propaganda character (to which we have not paid attention in this paper), only at the end of the 2nd century, when Aquileia, Trieste and Pula already had it before the mid-1st century.

On the basis of current knowledge, it can be concluded that the Zadar pillars with Jupiter-Ammon and Gorgon protomes certainly did not stand as the front balustrade of the Capitolium (due to technological reasons), or inside the Severan basilica (due to reasons of style and dating but also the too small distance between the pillars), on the front of a podium, that is, as a paneling for a pedestal or a large altar (due to the fine workmanship of the back sides which were clearly visible). It is not even likely that they stood on the ground floor, certainly not inside the portico of the forum, because the plutei with which they were connected would have prevented communication with the open part of the square, one of the basic premises of such compositions. In that case, in front of them,

[63] Cf. e.g. BOSCHUNG 1987: 96 ff., nr. 641 and 645, pl. 15 (specimens dated with certainty).

[64] BOSCHUNG 1987: 22 ff., note 238, chronology on p. 24 ff., from which it is evident that almost all specimens with reliable dating based on stylistic features belong to the later Claudian and Flavian era.

priječili komunikaciju s otvorenim dijelom trga, jednu od osnovnih premisa takvih sklopova. Ispred njih bi se u tom slučaju nalazili počasni spomenici koji bi ih zakrivali (otkrivene su im baze cijelom sačuvanom duljinom trijema).[65] Sigurno je i to da su im pluteji bili monolitne izrade, ali s vršnom i prizemnom profiliranom gredicom iz više dijelova. Monoliti su nosili prikaze običnih girlandi čiji su krajevi završavali na istacima stubaca (sl. 10). Duljina pluteja može se rekonstruirati na oko 1,65 m, iako buduća istraživanja i neki sretni nalaz, koji će pridonijeti potpunoj rekonstrukciji, može pokazati da su bili i nešto veće duljine.

Detalji izrade stražnje strane i usporedba s Pulom osnažuju pretpostavku kako je tako formirana ograda pripadala galeriji neke masivne forumske građevine, unutar koje su stubci, po svoj prilici, nosili stupove gornje kolonade, ali se jednako mora uvažiti mogućnost da su stajali unutar atike (polukata), u kojem su slučaju mogli ponijeti i neku drugu dekoraciju (kipovi, vaze?). Vidjeli smo da je unutar atike pretpostavljen položaj i akvilejskih stubaca, a sličan oblik trijema s atikom (istina s nešto drukčijom izvedbom pripadajućih elemenata) pretpostavlja se i u slučaju foruma Mediolana.[66] Na ozbiljnost takve pretpostavke tjera i otkriće ninskog natpisa *CIL* 3, 14322[4] s kojeg doznajemo kako je lokalni edil Kvint Bebije Zuprik u 1. stoljeću na forumu Enone financirao gradnju jedne taberne s pergulom i menijanom (...*t[abern] am pergu[lam] maenianum... dedit*). Iako se terminu „pergula" pridaje dvojako značenje, tj. može se shvatiti kao metalni/drveni nosač balkona (menijana) na pročelju trijema ili neke druge građevine, odnosno kao niska prostorija iznad taberne u visini polukata, uvjeren sam da je na ninskom natpisu spomenuto ovo drugo rješenje. Kad bi pergula

[65] Usp. bilj. 36 (sačuvana su ležišta na crtežu označena tamnom bojom).

[66] CAPORUSSO et al. 2014: 65 i d., sl. 70 i 73.

there would be honorary monuments that would cover them (their bases were found along the entire preserved length of the portico).[65] It is also certain that their plutei were of monolithic construction, but with the top and bottom segments molded and made of several parts. The monoliths bore depictions of ordinary garlands, the ends of which ended at the pillar protrusions (Fig. 10). The length of the pluteus can be reconstructed at about 1.65 m, although future research and some lucky find, which will contribute to a complete reconstruction, may show that they were somewhat longer.

The details of the construction of the rear side and the comparison with Pula reinforce the assumption that the railing formed in this way belonged to the gallery of some massive forum building, inside which the pillars probably carried the columns of the upper colonnade, but there is also the possibility that they stood inside the attic (mezzanine), in which case they could have supported some other decoration (statues, vases?). We have seen that the position of the Aquileian pillars was assumed within the attic, and a similar form of the portico with the attic (admittedly with somewhat different design of the associated elements) is also assumed in the case of the Forum of Mediolanum.[66] The seriousness of such assumptions is also reinforced by the discovery of the Nin inscription CIL 3, 143224, from which we learn that in the 1st century, the local aedile Quintus Baebius Zupricus financed the construction of a taberna with a pergola and a *maenianum (...t[abern]am pergu[lam] maenianum... dedit*). Although the term "*pergula*" is given a double meaning, i.e. it can be understood as a metal/wooden support for a balcony (*maenianum*) on the front of a portico or some other building, i.e. as a low room above the taberna at the height of the mezzanine, I am convinced that the inscription from Nin refers to this second solution. If the pergola on that

[65] Cf. note 36 (preserved beds are marked in dark color in the drawing).

[66] CAPORUSSO et al 2014: 65 ff., fig. 70 and 73.

na tom natpisu kojim slučajem i označavala balkon, valjalo bi se zapitati kako bi mu se pristupalo? Odgovor je samo jedan: preko prostorije u njegovu stražnjem dijelu, a to onda pokazuje da pergula na ovom natpisu upravo to i označava – nisku prostoriju u sklopu polukata iznad taberne! Nije nemoguće da su graditelji enonskog foruma i trijema kao uzor imali upravo istorodne građevine Jadera, što bi mogao biti novi vrijedan trag u pokušaju kontekstualizacije stubaca koji su predmet ovog rada.

Obje strukture galerije i atike ponajprije bismo očekivali unutar arhitekture forumskog trijema ili bazilike u Jaderu, ali u obzir mogu doći i drugi objekti sa stupovima ili polustupovima između kojih su se otvarali lukovi (arkade), koji su tako imali dovoljnu masu da ponesu njihovu težinu. Istraživanje i mjerenje *in situ* sačuvanih elemenata pokazalo je da naši stubci nisu stajali u sklopu jugoistočnog trijema, nad tamo sačuvanim izvornim bazama. Tim bazama ne odgovaraju ni stupovi iz prizemlja Sv. Donata, nego eventualno oni iznad njih, u matroneju. Prizemna etaža trijema Foruma morala je zapravo biti znatno niža negoli je to pretpostavljao Suić, pa bi u takvom kontekstu stubci mnogo lakše našli svoje mjesto, osobito u sklopu sjevernog trijema. No ako je taj bio izgrađen prema istim parametrima kao i onaj prezentirani, tu će mogućnost valjati odbaciti. Ne smije se isključiti iz vida ni neka druga građevina na koju ovog trenutka i ne pomišljamo, kao npr. ranija bazilika. Suić je vjerovao u njezino postojanje i tražio ju je iza začelnog zida sjevernih taberni, na mjestu katedrale sv. Petra, no pokazalo se da je tom longitudinalom prolazila ulica sjeverno od koje je bio još jedan red taberni.[67] Zadar je svakako morao imati baziliku i prije one severske. Takva je građevina mogla imati natkrivenu galeriju ili otkrivenu lođu okrenutu Forumu, koja je

[67] SUIĆ 1981: 208, 214. Za ulicu i taberne vidi VEŽIĆ 2005: sl. gore na str. 20.

inscription by any chance meant a balcony, one would have to wonder how it would be accessed? There is only one answer: through the room in its rear part, and this then shows that the pergola in this inscription marks exactly that - a low room within the mezzanine above the taberna! It is not impossible that the builders of the Aenonian Forum and portico had the buildings of the same kind from Iader as a model, which could be a new valuable clue in the attempt to contextualize the pillars that are the subject of this work.

We would primarily expect both structures of gallery and attic within the forum portico or the basilica in Iader, but we must also consider other buildings with columns or half-columns between which arches (arcades) opened, which thus had sufficient mass to bear their weight. Research and measurement of elements preserved *in situ* showed that our pillars did not stand in the southeastern portico, above the original bases preserved there. The columns from the ground floor of St. Donatus also do not correspond to these bases, but possibly those above them, in the matroneum. The ground floor of the forum portico must actually have been much lower than Suić assumed, so in such a context the pillars would have found their place much more easily, especially in the northern portico. But if that portico was built according to the same parameters as the one presented, that possibility will have to be rejected. Another building that we do not even think about at this moment, such as the earlier basilica, should also be considered. Suić believed in its existence and searched for it behind the back wall of the northern tabernae, on the site of the cathedral of St. Peter, but it turned out that there was a street in that longitudinal line north of which was another row of tabernae.[67] Zadar must have had a basilica even before the Severan one. Such a building could have had a covered gallery or an open loggia facing the forum, which for some reason could have survived incorporated into later architecture. The oldest

[67] SUIĆ 1981: 208, 214. About the street and tabernae see VEŽIĆ 2005: fig. on p. 20, above.

iz nekog razloga mogla opstati uklopljena u kasniju arhitekturu. Jasnije spoznaje o najstarijoj građevnoj fazi Foruma svakako su veliki problem. Drugi znatan problem krije se u činjenici da je objava komparativne građe popraćena nepotpunom dokumentacijom, koja obično ne donosi detalje izrade bočnih i stražnjih stranica.

construction phase of forum is certainly an open question. Another significant question relates to the fact that the publication of comparative materials is accompanied by incomplete documentation, which usually does not provide details of the rendering of the lateral and back sides.

Translation and proof-reading:
Marija Kostić

Literatura / References

BERTACCHI, L. 1989, Il foro romano di Aquileia. Gli studi, gli interventi e le principali scoperte fino al marzo 1989, *Aquileia Nostra*, LXV, 34–112.

BOSCHUNG, D. 1987, *Antike Grabaltäre aus den Nekropolen Roms*, Acta Bernensia, Band X, Bern: Stämpfli Verlag.

BUDISCHOVSKY, M. Ch. 1973, Jupiter-Ammon et Meduse danas les forums du Nord de l'Adriatique, *Aquileia Nostra*, XLIV, 202–220.

BUDISCHOVSKY, M. Ch. 1977, *La Diffusion des cultes isiaques autour de la mer Adriatique. I. Inscriptions et monuments*, Leiden: Brill.

CAMBI, N. 2002, *Antika*, Povijest umjetnosti u Hrvatskoj, Zagreb: Naklada Ljevak.

CAMBI, N. 2003, Ograda na aserijatskom forumu, *Asseria*, 1, 45–69.

CAMBI, N. 2003b, Mitrički Aion iz Jadera, *Diadora*, 21, 101–119.

CAMBI, N. 2005, *Kiparstvo rimske Dalmacije*, Split: Književni krug.

CASARI, P. 2004a, *Iuppiter Ammon e Medusa nell'Adriatico nordorientale. Simbologia imperiale nella decorazione architettonica forense*, Roma: Quasar.

CASARI, P. 2004b, La decorazione architettonica del portico forense di Aquileia: analisi e riflessioni, u/in: *Aquileia dalle origini alla costituzione del ducato Longobardo. Topografia – urbanistica – edilizia pubblica*, Cuscito, G.,Verzár Bass, M. (ur./eds.), *Antichita altoadriatiche*, LIX, Trieste: Universita degli studi di Trieste, 217–255.

CAPORUSSO, D., DONATI, M. T., MASSEROLI, S., TIBILETTI, T. 2014, *Immagini di Mediolanum. Archeologia e storia di Milano dal V secolo a.C. al V secolo d.C.*, Milano: Civico Museo Archeologico di Milano.

CREMA, L. 1959, *L'architettura romana* (Enciclopedia classica, sezione III: Archeologia e storia dell' arte classica vol. XII, tomo I), Torino: Societa Editrice Internazionale.

FISCHER, G. 1996, *Das römische Pola. Eine archäologische Stadtgeschichte*, München: Verlag der Bayerischen Akademie der Wissenschaften.

GIRARDI-JURKIĆ, V., DŽIN, K., URANIĆ, I. 2001, *Egipatska religija i antička Istra*, katalog izložbe, Pula: Arheološki muzej Istre.

GIUNIO, K. A. 1999, Neke bilješke o zadarskom forumu i kapitoliju, *Histria antiqua*, 5, 55–66.

GIUNIO, K. A. 2002, Egyptian Gods on the Eastern Adriatic Coast, u/in: *Aegyptus et Pannonia 1, Acta Symposii anno 2000*, Gyory, H., Mrav, Z. (ur./eds.), Budapest: Comité de l'Égypte Ancienne (MEBT - ÓEB), 21–63.

GIUNIO, K. A. 2005, Carski kult u Zadru, *Histria antiqua*, 13, 167–177.

GOLDBECK, V. 2015, *Fora augusta. Das Augustusforum und seine Rezeption im Westen des Imperium Romanum*, Regensburg: Schnell & Steiner.

GORSKI, G. J. PACKER, J. E., 2015, *The Roman Forum: A Reconstruction and Architectural Guide*, Cambridge: Cambridge University Press.

KALAS, G. 2015, *The Restoration of the Roman Forum in Late Antiquity: Transforming Public Space*, Austin: University of Texas Press.

MARŠIĆ, D., DUBOLNIĆ-GLAVAN, M. 2015, Dva primjerka arhitektonske dekoracije u formi pilastra iz Jadera i Enone, *Radovi Zavoda za povijesne znanosti HAZU u Zadru*, 57, 41–91.

SELEM, P. 2013, Jupiter-Amon na sjevernom Jadranu. Simbolika i značenja, u/in: *Znakovi i riječi – Signa et litterae, IV*, Zbornik projekta „Mythos – cultus – imagines deorum", Kuntić-Makvić, B., Vilogorac, I. (ur./eds.), Zagreb: FF Press, 113–132.

STARAC, A. 1996, Forum u Puli, *Opuscula archaeologica*, 20, 71–89.

SUIĆ, M. 1965, Orijentalni kultovi u antičkom Zadru, *Diadora*, 1, 91–128.
SUIĆ, M. 1976, *Antički grad na istočnom Jadranu*, Zagreb: Liber.
SUIĆ, M. 1981, *Zadar u starom vijeku*, Zadar: Filozofski fakultet.
SUIĆ, M. 2003, *Antički grad na istočnom Jadranu* (2nd ed.), Zagreb: Golden Marketing.
VERZÁR BASS, M. 2006, Rapporto tra Aquileia e Salona, u/in: *Le regioni di Aquileia e Spalato in epoca romana*, *Castello di Udine 4 aprile 2006*, Buora, M. (ur./ed.), Treviso: Fondazione Cassamarca, 107–133.
VEŽIĆ, P. 2002, *Sveti Donat. Rotonda Sv. Trojstva u Zadru*, Split: Muzej hrvatskih arheoloških spomenika.
VEŽIĆ, P. 2005, *Zadar na pragu kršćanstva. Arhitektura ranoga kršćanstva u Zadru i na zadarskome području*, Zadar: Arheološki muzej Zadar.

IZVAN IZVORNOG KONTEKSTA: KERAMIČKI NALAZI IZ GROBLJA OKO CRKVE UZNESENJA BLAŽENE DJEVICE MARIJE U GORI

OUTSIDE OF THE ORIGINAL CONTEXT: CERAMIC FINDS FROM THE GRAVEYARD NEXT TO THE CHURCH OF THE ASSUMPTION OF THE BLESSED VIRGIN MARY IN GORA

FILOMENA SIROVICA
Arheološki muzej u Zagrebu
Archaeological Museum in Zagreb
Trg N. Šubića Zrinskog 19
HR-10000 Zagreb
fsirovica@amz.hr

TATJANA TKALČEC
Institut za arheologiju
Institute of archaeology
Jurjevska ulica 15, Zagreb
HR-10000 Zagreb
ttkalcec@iarh.hr

EVA BUĆA
Ruina d.o.o.
Paška Zjačića 10
HR-22000 Šibenik
arheo@ruina.hr

UDK: 904:738(497.527Petrinja)"637/653"
DOI: 10.15291/archeo.4682
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-5-15
Prihvaćeno / Accepted: 2024-9-15

Ključne riječi:
lončarija, građevinska i tehnička keramika, srednji vijek, rimsko i brončano doba, distribucija, učestalost, izvorni depozit

Keramički materijal uobičajena je i često najzastupljenija vrsta nalaza na arheološkim nalazištima te su od mlađega kamenog doba brojni nalazi ulomaka lončarije tipičan rezultat arheoloških iskopavanja. Ipak, od srednjeg vijeka lončarija postaje izniman nalaz na grobljima oko crkava, a zbog često intenzivnog ukopavanja pokojnika obično je lišena izvornih konteksta. Unatoč tomu, moguće je pretpostaviti da kontinuirano ukopavanje neće nužno rezultirati premještanjem materijala na veće udaljenosti te da koncentracija ulomaka keramike na određenom prostoru može biti naznaka područja, intenziteta i vrste aktivnosti tijekom određenog razdoblja. Time njezina pojava, specifične tehnološke, tipološke i kronološke značajke te učestalost i distribucija mogu proširiti uvid u načine korištenja istraživanog prostora. Iz tog je razloga ovaj rad posvećen razmatranju informativnog potencijala keramičkih nalaza nađenih većinom izvan izvornih konteksta, najčešće u zapunama brojnih grobova ukopanih oko crkve Uznesenja Blažene Djevice Marije u mjestu Gori, smještenom oko osam kilometara jugozapadno od Petrinje. Na temelju analize značajki tehnike izrade te očuvanih tipoloških karakteristika, prikupljeni keramički materijal tipološko-kronološki je determiniran. U skladu s definiranim vremenskim opredjeljenjem, u GIS okruženju provedena je analiza obrazaca njegove pojave, učestalosti i distribucije na nalazištu. Time je otvorena mogućnost izvođenja određenih pretpostavki i donošenja pojedinih zaključaka o obrascima korištenja ovog prostora tijekom različitih vremenskih perioda.

Key words:
pottery, construction and technical ceramics, Middle Ages, Roman period and Bronze Age, distribution, frequency, original deposit

Ceramic material is a common – and often the most frequent – find type at archaeological sites. Numerous potsherds are a typical result of archaeological excavations at sites dating from the Neolithic period onwards. However, at sites dating from the Middle Ages, pottery can become an exceptional find at church graveyards; due to often intensive historical burial activities it is generally deprived of its original contexts. Nevertheless, it may be assumed that continuous interments will not necessarily result in a displacement of the material over greater distances and it follows that the concen-

tration of potsherds in a specific location may yet be an indication of the area, intensity and type of activity over a certain period. Hence, their presence, specific technological, typological and chronological features, frequency and distribution can expand our insight into the ways in which a researched location was used. Accordingly, this paper is dedicated to considering the informative potential of pottery finds recovered around the Church of the Assumption of the Blessed Virgin Mary in the village of Gora, located approximately eight kilometres southwest of Petrinja, mainly not in their original contexts and mostly found in the backfills of the numerous graves excavated there. The collected ceramic material has been typologically-chronologically determined based on an analysis of production-technology characteristics and preserved typological features. In accordance with the defined chronological attribution, an analysis of patterns of its occurrence, frequency and distribution at the site was carried out in a GIS environment. This opened the possibility of making specific assumptions and conclusions about patterns of use of the location over different periods.

UVOD

Uobičajeni rezultat arheoloških iskopavanja nalazi su ulomaka keramičkih posuda koji su od mlađega kamenog doba najzastupljenija vrsta nalaza na većini arheoloških nalazišta. Njihova prisutnost temeljna je značajka naseobinskih položaja, no sve do u rani srednji vijek keramičke posude mogu se nalaziti i kao prilog u grobovima. Ipak, sa širenjem kršćanstva, nestaje većina do tada uobičajenih grobnih priloga pa lončarija, kao i drugi predmeti iz svakodnevnog života, postaje izniman nalaz na crkvenim grobljima. Kako takvi položaji često imaju višestoljetni kontinuitet korištenja, arheološki zapis rezultat je kontinuiranog prekopavanja postojećih depozita pa nalazi lončarije najčešće ne potječu iz izvornih konteksta. Unatoč gubitku izvornih depozita i time temeljnih informacija, u kombinaciji s drugim poznatim podatcima, njihova pojava, specifične tehnološke, tipološke i kronološke značajke te učestalost i distribucija mogu proširiti uvid u načine korištenja istraživanog prostora tijekom zastupljenih vremenskih perioda. Iz tog je razloga ovaj rad posvećen razmatranju informativnog potencijala keramičkih nalaza nađenih većinom izvan izvornih konteksta, najčešće u zapunama brojnih grobova ukopanih oko crkve Uznesenja Blažene Djevice Marije u mjestu Gori, koje se nalazi oko osam kilometara jugozapadno od Petrinje (karta 1).

Crkva je smještena nedaleko od današnjeg toka rječice Šanje, a izgrađena je na donekle neobičnom mjestu,[1] u svojevrsnoj udubini među blagim uzvisinama sjeverozapadnog podgorja Vučjaka odnosno Hrastovačke gore (sl. 1). Oko kilometar sjeverno od naselja i crkve, na uzvišenju iznad

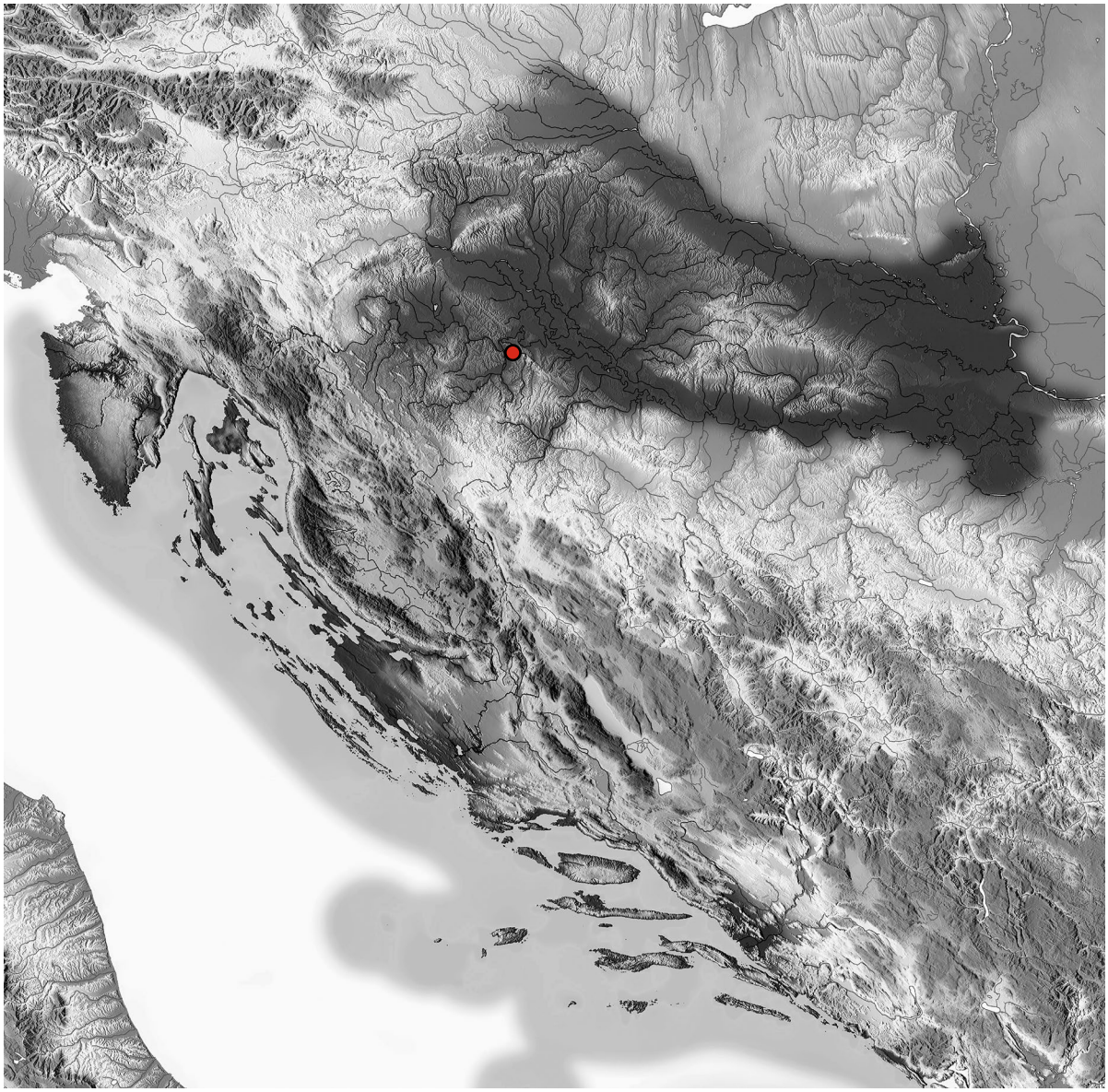
[1] O neobičnom položaju crkve i legendi povezanoj s njegovim odabirom vidi MILETIĆ 1999: 145–146, bilj. 81.

INTRODUCTION

Finds of fragments of ceramic vessels are the usual result of archaeological excavations and have been the most common find type at most archaeological sites dating from the beginning of the Neolithic period. Their presence is a basic characteristic of settlement sites. Additionally, up to the Early Middle Ages ceramic vessels were also a frequent grave good. However, with the spread of Christianity, most of the usual burial offerings stopped being made; finds of pottery (along with other objects of everyday use) at church graveyards are therefore exceptional. Given that such sites have often been continuously used for centuries, archaeological records reflect the constant disturbance of existing deposits, and hence pottery finds usually do not originate from their original contexts. Notwithstanding the loss of original deposits and thus basic information, when they are combined with other known data, their occurrence, specific technological, typological and chronological features, as well as their frequency and distribution can still expand our insight into the ways the investigated space was used over the represented time periods. For this reason, this paper is dedicated to considering the informative potential of pottery finds unearthed around the Church of the Assumption of the Blessed Virgin Mary in the village of Gora, located about eight kilometres southwest of Petrinja (Map 1), mainly not in their original contexts and mostly found in the backfills of the numerous graves excavated there.

The church is situated not far from the present-day course of the Šanja brook, and it was built in a somewhat unusual place,[1] in a recess between the gentle elevations of the northwestern foothills of Vučjak and Hrastovačka Gora (Fig. 1). About a kilometre north of the village and the church, on an elevation above the brook,

[1] For the unusual location of the church and a legend related to the selection of this position, s. MILETIĆ 1999: 145-146, n. 81.



Karta 1. *Položaj crkve Uznesenja Blažene Djevice Marije u Gori* (izradio: J. Belaj)
Map 1 *The position of the Church of the Assumption of the Blessed Virgin Mary in Gora* (made by J. Belaj)

rječice, nalazi se istodobna srednjovjekovna kamena utvrda Gorski grad. Prvi poznati pisani izvori upućuju na postojanje naselja 1200. godine, a utvrđenog grada 1242. godine,[2] međutim povjesničari drže da je Gora vjerojatno već za kralja Ladislava, krajem 12. stoljeća, bila središtem županije.[3] Tijekom čitavoga srednjeg vijeka bila je važno kulturno-političko središte šireg prostora, a smještaj na srednjovjekovnoj

[2] KRUHEK, HORVAT 1986: 161, 172–173.
[3] KLAIĆ 1975: 258.

is a contemporaneous medieval stone fortress called Gorski Grad. The first known written sources point to the existence of a settlement in 1200, and of a castle by 1242.[2] However, historians believe that Gora had become the county seat probably as early as during the rule of King Ladislaus, towards the end of the 12th century.[3] Throughout the Middle Ages it was an important cultural and political centre in the wider region, and its position on a medieval road leading

[2] KRUHEK, HORVAT 1986: 161, 172-173.
[3] KLAIĆ 1975: 258.



Slika 1. *Položaj crkve u Gori snimljen 1939. godine* (snimio: Đuro Griesbach, Ministarstvo kulture i medija, Zbirka fotografske dokumentacije, MKM, FKB-29527)
Figure 1 *The location of the church in Gora recorded in 1939* (photo: Đuro Griesbach, Ministry of Culture and Media, Collection of Photographic Documentation, MKM, FKB-29527)

prometnici koja je vodila prema jadranskoj obali pridonio je jačanju njezina gospodarskog značenja.[4]

O postojanju romaničke crkve posvećene Sv. Mariji u Gori znalo se i prije arheoloških iskopavanja, iz isprave Andrije II. koji 1209. potvrđuje darovnicu svojeg oca Bele III. s kraja 12. stoljeća, kojom templarima daruje crkvu Svete Marije i trg ispod nje.[5] Prema tome, templari su u posjed Gore (i romaničke crkve) došli prije 1196. godine.[6] Spoliji romaničke crkve pronađeni su u strukturi ranogotičke crkve, a vjerojatni ostatci temelja arheološkim iskopavanjima.[7] Ranogotičku crkvu templari grade na istome

to the Adriatic coast contributed to the consolidation of its economic significance.[4]

The fact that a Romanesque church dedicated to St. Mary existed in Gora was known (even before archaeological excavations) from a document issued by Andrew II, who in 1209 confirmed his father Béla III's deed of gift from the late 12th century, whereby he donated the church of St. Mary and the square below it to the Templars.[5] Thus, the Templars came into possession of Gora (and its Romanesque church) before 1196.[6] Archaeological excavations discovered spolia of the Romanesque church in the structure of the early Gothic church as well as the probable remains of its foundations.[7] The Templars built the early

4 DOBRONIĆ 2002: 88.
5 DOBRONIĆ 2002: 32.
6 DOBRONIĆ 1984: 116.
7 MILETIĆ 1999: 144, 145; MILETIĆ, VALJATO FABRIS 2014: 57; BELAJ, SIROVICA 2012: 59, 60, sl. 1/2.

4 DOBRONIĆ 2002: 88.
5 DOBRONIĆ 2002: 32.
6 DOBRONIĆ 1984: 116.
7 MILETIĆ 1999: 144, 145; MILETIĆ, VALJATO FABRIS 2014: 57; BELAJ, SIROVICA 2012: 59, 60, Fig. 1/2.

mjestu,[8] prema pojedinim autorima u prvoj četvrtini 13. stoljeća.[9] Ipak, podatci dobiveni analizom isprave iz 1209. godine te analizom stratigrafije, radiokarbonskih datuma i indikativnih nalaza, upućuju na mogućnost da je kralj Bela III. krajem 12. stoljeća (su)financirao upravo njezinu izgradnju, odnosno da su templari vrlo brzo nakon dobivanja posjeda pristupili izgradnji ranogotičke crkve.[10] Ubrzo nakon ukinuća templarskog reda Gora je prešla u posjed ivanovaca te se već 1314. godine u njoj spominju ivanovački preceptori.[11]

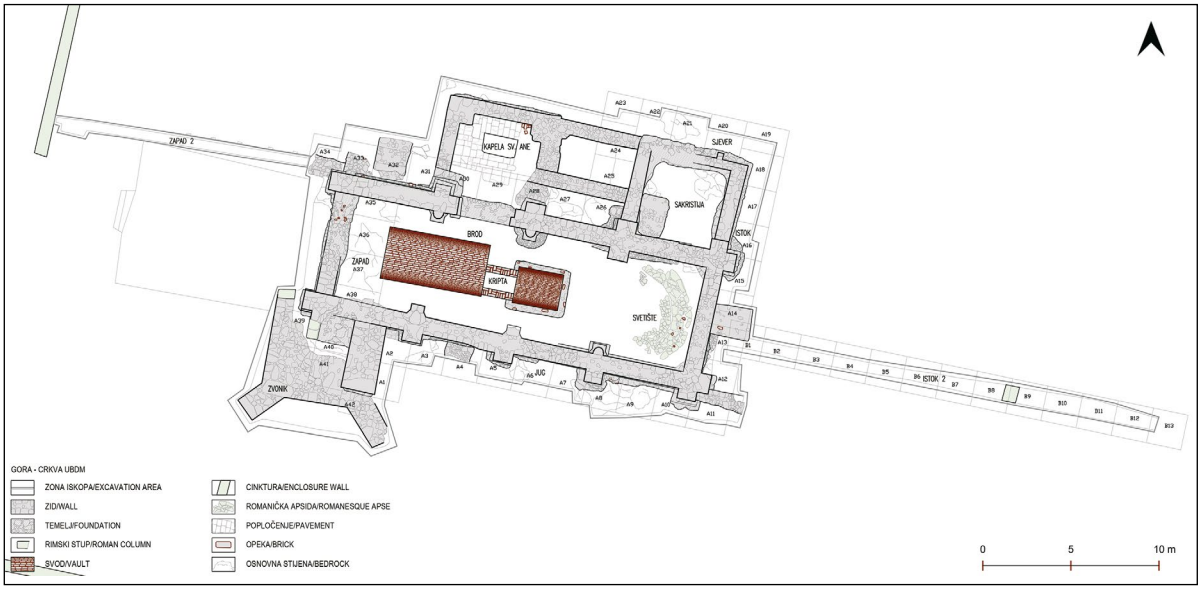
Izvorno templarska ranogotička crkva stradala je u osmanlijskim prodorima te je u 18. stoljeću temeljito barokizirana, a u 19. stoljeću znatno produžena, da bi u potpunosti bila razrušena u Domovinskom ratu 1991. i 1992. godine.[12] Nakon rata pokrenuta je obnova i rekonstrukcija templarskog sloja crkve. Prva faza radova uključivala je opsežna raščišćivanja ruševina, istraživanje ostataka arhitekture te arheološko iskopavanje provedeno najvećim dijelom unutar crkve, posebno u svetištu te oko zapadnog zida crkve.[13] U drugoj fazi,[14] arheološka iskopavanja provedena su oko crkve, u iskopu širine 1 m, podijeljenom na kvadrate širine 2 m (sl. 2). Iskop, koji je najvećim dijelom zahvatio crkveno groblje, proveden je uz južni, istočni i sjeverni zid (sektori Jug, Istok i Sjever) te u iskopnim rovovima istočno i zapadno od crkve (sektori Zapad 2 i Istok 2). Tijekom radova pro-

Gothic church at the same place,[8] according to some authors in the first quarter of the 13th century.[9] However, the data obtained from an analysis of the 1209 deed, as well as that of the stratigraphy, radiocarbon dates and indicative finds, suggest the possibility that, at the end of the 12th century, Béla III (co)financed its construction, and that the Templars initiated the construction of the early Gothic church soon after obtaining the property.[10] Shortly after the dissolution of the Templar order, Gora became the property of the Knights Hospitaller, and in 1314 the Hospitaller preceptors operating therein are mentioned.[11]

The Templar early Gothic church was damaged in the Ottoman invasions. In the 18th century it was thoroughly remodelled in the Baroque style, and in the 19th century significantly extended, only to be completely destroyed during 1991 and 1992 in the Croatian War of Independence.[12] After the war, restoration and reconstruction of the Templar layer of the church was initiated. The first phase of the works included clearing the ruins, exploring the architectural remains, and archaeological excavations, which were conducted mostly within the church, especially in the sanctuary and around its western wall.[13] In the second phase,[14] archaeological excavations were carried out around the church, in a one-m-wide dig, divided across two-m-wide grid (Fig. 2). The excavation, the major part of which included the church graveyard, was carried out

8 BELAJ, SIROVICA, BEDIĆ 2021: 91, sl. 1.
9 MILETIĆ 1999: 149; MILETIĆ, VALJATO FABRIS 2014: 57; MARKOVIĆ, KARLO 2014: 583.
10 BELAJ, SIROVICA, BEDIĆ 2021: 108–110.
11 DOBRONIĆ 2002: 75.
12 MILETIĆ 1999.
13 Prvu fazu istraživanja, 1997. i 1998. te potom 2003. godine, proveo je Hrvatski restauratorski zavod (MILETIĆ 1999; AZINOVIĆ BEBEK, PLEŠE 2004).
14 Druga faza arheoloških iskopavanja obavljena je od 2008. do 2011. godine, a proveo ju je Institut za arheologiju (BELAJ, SIROVICA 2012) u sklopu građevinskih radova koje je Sisačka biskupija provela radi obnove crkve završene 2015. godine (MILETIĆ, VALJATO FABRIS 2014). Rekonstruirana i obnovljena crkva iznova je teško oštećena u razornom potresu 29. prosinca 2020. godine te je ponovna obnova započela 2021. godine.

8 BELAJ, SIROVICA, BEDIĆ 2021: 91, Fig. 1.
9 MILETIĆ 1999: 149; MILETIĆ, VALJATO FABRIS 2014: 57; MARKOVIĆ, KARLO 2014: 583.
10 BELAJ, SIROVICA, BEDIĆ 2021: 108-110.
11 DOBRONIĆ 2002: 75.
12 MILETIĆ 1999.
13 The first phase of the campaign, in 1997 and 1998 and then in 2003, was conducted by the Croatian Conservation Institute (MILETIĆ 1999; AZINOVIĆ BEBEK, PLEŠE 2004).
14 The second phase of the archaeological campaign lasted from 2008 to 2011. The excavations were conducted by the Institute of Archaeology (BELAJ, SIROVICA 2012) as part of the construction works contributing to the church restoration, organised by the Diocese of Sisak and completed in 2015 (MILETIĆ, VALJATO FABRIS 2014). The reconstructed and restored church was again severely damaged in the devastating earthquake of 29 December 2020, and renewed restoration began in 2021.



Slika 2. *Tlocrt crkve u Gori s označenom podjelom na sektore i kvadrate* (izradio: A. Kovačević, Arheoplan d. o. o.)
Figure 2 *Ground-plan of the Church in Gora with division into sections and grid squares* (made by A. Kovačević, Arheoplan d.o.o.)

vedena su i završna iskopavanja u sektorima istraženim tijekom prve faze radova (sektori Svetište, Brod i Zapad) te sveobuhvatna iskopavanja prostora sakristije (sektor Sakristija), a ukupno je istraženo 426 grobova podijeljenih u pet faza ukopavanja.[15] Iz tih istraživanja potječu detaljnije objave faza ukopavanja grobova,[16] bioarheološke analize ljudskih kosturnih ostataka[17] te analize nošnje pokojnika i nabožnih predmeta u grobovima.[18]

MATERIJALI I METODE

U ovom radu obrađuju se keramički nalazi iz druge faze arheoloških istraživanja koji obuhvaćaju ulomke lončarije te ulomke prikupljene tehničke i građevinske keramike.[19]

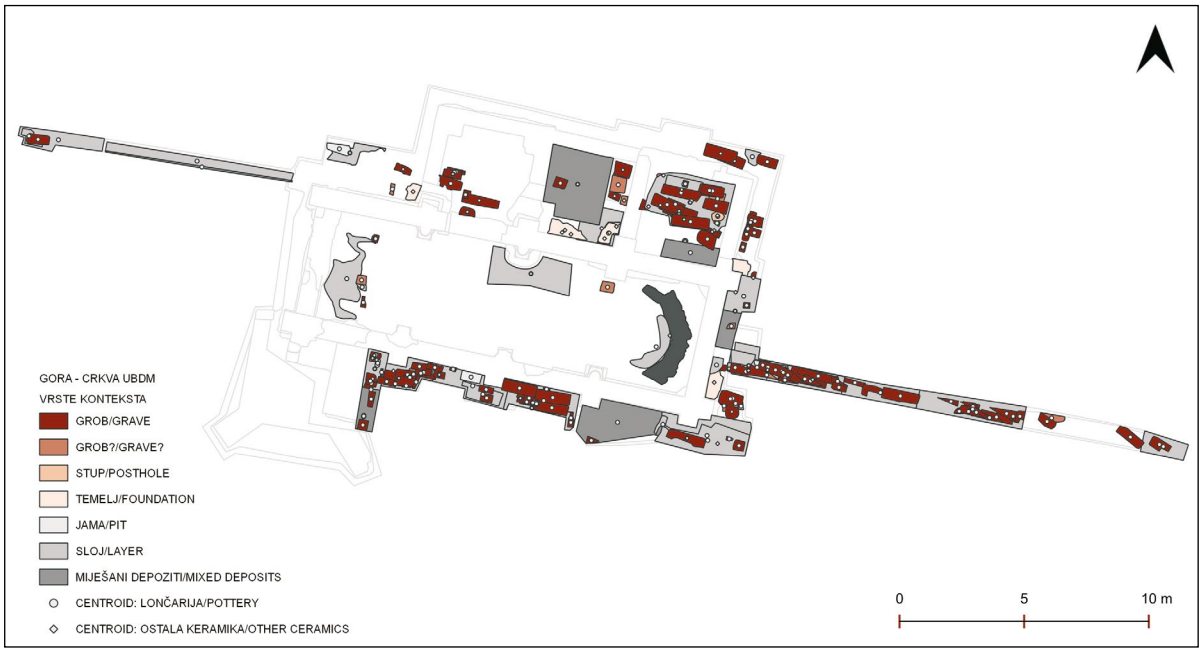
15 BELAJ 2011; BELAJ, SIROVICA 2012.
16 BELAJ, SIROVICA, BEDIĆ 2021.
17 BEDIĆ, BELAJ, SIROVICA 2022.
18 BELAJ, BELAJ 2016; STINGL, BELAJ 2021; STINGL, BELAJ 2023.
19 Analizirani materijal prikupljen je tijekom arheoloških iskopavanja koja su od 2008. do 2011. provedena pod vodstvom Jurja Belaja, kojem ovom prigodom zahvaljujemo na ustupljenim nalazima i podatcima. Ovaj je rad sufinancirala Hrvatska zaklada za znanost projektom „milOrd – Razvoj i nasljeđe viteških redova u Hrvatskoj" (HRZZ, IP-2019-04-5513), koji se provodi na Institutu za arheologiju.

along the southern, eastern and northern walls (Sections South, East and North) and in trenches to the east and west of the church (Sections West 2 and East 2). The works also included final excavations of sections investigated in the first phase (Sections Sanctuary, Nave and West), as well as comprehensive excavations of the sacristy zone (Section Sacristy). A total of 426 graves were excavated and subsequently apportioned into five burial phases.[15] The excavations resulted in detailed publications of burial phases,[16] bioarchaeological analyses of human skeletal remains[17] and analyses of the attire of the deceased and of sacral grave goods.[18]

MATERIALS AND METHODS

This paper deals with ceramic finds from the second phase of the archaeological campaign, which include potsherds and the collected fragments of technical and construction ceramics.[19]

15 BELAJ 2011; BELAJ, SIROVICA 2012.
16 BELAJ, SIROVICA, BEDIĆ 2021.
17 BEDIĆ, BELAJ, SIROVICA 2022.
18 BELAJ, BELAJ 2016; STINGL, BELAJ 2021; STINGL, BELAJ 2023.
19 The analysed material was collected in the course of the 2008–2011 archaeological excavations led by Juraj Belaj,



Slika 3. *Vrste konteksta s nalazima keramičkog materijala i definiranim težištem geometrije* (izradila: F. Sirovica)
Figure 3 *Types of context with ceramic material finds and defined geometric centre of gravity* (made by F. Sirovica)

Nalazi potječu iz 177 stratigrafskih jedinica, najvećim dijelom zapuna grobnih raka i različitih vrsta manjih i većih ukopa te pojedinih slojeva. Manji dio nalaza prikupljen je tijekom čišćenja iskopne površine te potječe iz miješanih depozita s različitih dijelova nalazišta. Radi uvida u prostornu distribuciju tako prikupljenih nalaza, na temelju podjele iskopne površine na manje prostorne jedinice, podijeljeni su na pet dodatnih konteksta. Ulomci lončarije nađeni su u 150 različitih konteksta, dok prikupljeni komadi tehničke odnosno građevinske keramike potječu iz 55 konteksta. Naime, od ukupnog broja konteksta s keramičkim materijalom, iz samo njih 23 prikupljena je i lončarija i građevinska ili tehnička keramika. Za potrebe analize distribucije keramičkog materijala na nalazištu, konteksti s pripisanim atributima o keramičkom materijalu, vektorski prikazani kao poligoni, analizirani su u GIS okruženju.[20] Geometrijskim alatima svakom kontekstu definira-

The finds originate from 177 stratigraphic units: mostly grave backfills and various types of smaller and larger cuts, as well as individual layers. A small part of the finds was collected during the cleaning of the excavated area and originates from mixed deposits from different parts of the site. In order to gain insight into the spatial distribution of the collected finds, the excavated area was divided into smaller spatial units, and the finds into five additional contexts. Potsherds were found in 150 different contexts, while the pieces of technical or construction ceramics collected came from 55 contexts. Of the total number of contexts with ceramic material, only in 23 were both potsherds as well as construction or technical ceramics collected. For the purpose of analysing the distribution of ceramic material at the site, contexts with attributed ceramic material, presented as vector polygons, were analysed in a GIS environment.[20] With geometric tools, the

[20] Na savjetima u vezi s pojedinim postupcima vizualizacije podataka u GIS-u zahvaljujemo kolegi Zoranu Ćučkoviću sa Sveučilišta Clermont Auvergne.

whom we thank for providing us with the finds and data. This paper was co-financed by the Croatian Science Foundation within the project "milOrd – Development and Heritage of the Military Orders in Croatia" (HRZZ, IP-2019-04-5513), carried out at the Institute of Archaeology.

[20] We would like to thank to our colleague Zoran Ćučković from Clermont Auvergne University for his advice regarding certain GIS data visualisation procedures.

TABLICA 1. *Ulomci lončarije nađeni tijekom arheološkog iskopavanja oko crkve u Gori. Kratice: MD = miješani depoziti, S = sloj, Z = zapuna, G = grob, ST = stup, JM = jama, T = temelj; NOP = neopredijeljeno, PP = prapovijest, RD = rimsko doba, RSV = rani srednji vijek, RzSV = razvijeni srednji vijek, KSV = kasni srednji vijek, RNV = rani novi vijek, NV = novi vijek, SD = suvremeno doba. Datacije koje se u tekstu razmatraju zajedno označene su istom nijansom* (izradile: T. Tkalčec, E. Buća, F. Sirovica)

TABLE 1 *Potsherds uncovered in archaeological excavations around the church in Gora. Abbreviations: MD = mixed deposits, S = layer, Z = backfill, G = grave, ST = postholes, JM = pit, T = foundation; NOP = unclassified, PP = Prehistoric period, RD = Roman period, RSV = Early Middle Ages, RzSV = High Middle Ages, KSV = Late Middle Ages, RNV = early modern era, NV = modern era, SD = contemporary period. Datings considered contemporaneous are indicated in the text by the same shade* (made by T. Tkalčec, E. Buća, F. Sirovica)

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
NC_J	Jug	A1-3/6-10	MD	24	24	245,3	4							2		7		7	1	7			T. 3/10; 4/11
NC_I	Istok	A14/15	MD	3	3	45													3				
NC_S	Sjever	-	MD	3	3	4										3							
NC_SK	Sakristija	-	MD	14	12	34	1	1	1	1		1			1			8					
NC_Z2	Zapad 2	-	MD	1	1	2,3														1			
0001	Istok 2	B12/13	S	2	2	44												1		1			T. 4/3
0002	Istok 2	B1/2	S	2	2	27	1													1	1		
0013	Jug/Istok	A2-7/10-12/15	S	102	94	1136	15	9	1						4	3	15	18	32	21			T. 2/13; 3/3-8, 12-13; 4/1, 2, 6-9, 12-13
0014	Jug	A8	G 4	1	1	1								1									
0020	Jug	A5	G 6	2	2	30														2			
0032	Jug	A6/7	G 10	1	1	3												1					
0035	Jug	A4	G 11	1	1	14	1												1				
0047	Jug	A3/4	G 15	4	4	20	1										4						
0053	Jug	A5	G 17	5	5	24	1									5							

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
0063	Zapad	A36-38	S	1	1	6														1			
0068	Jug	A4	G 20	9	9	25											6						
0069	Jug	A5/6	G 19	8	7	86,7		1											7				
0072	Jug	A6	Z-ST	2	1	14															1		
0078	Jug	A10/11	S	3	3	21	1									1		2					T. 2/12
0081	Jug	A4/5	S	20	20	170	3	1					2	1		5		6	6				T. 2/8
0082	Jug	A3	G 25	2	2	3	1									1		1					T. 4/5
0083	Jug	A4/5	Z-JM	2	2	20		1											2				
0100	Jug	A2	G 28	2	2	13										2							
0112	Istok	A17	G 30	2	2	12												2					
0122	Jug	A6/7	G 33	9	9	23		1										9					
0125	Jug	A3	G 34	3	3	14													3				
0128	Jug	A2/3	G 35	5	4	21,5											4						
0131	Jug	A2	S	22	22	93,3		2										3	19				
0136	Jug	A6	G 37	3	3	17	1									1		2					T. 2/5
0139	Jug	A6	G 38	7	6	45		1										1		5			
0150	Jug	A3	Z-G?	1	1	3												1					
0152	Jug	A2	G 42	1	1	12												1					
0155	Jug	A6	Z-ST	2	2	5													1	1			
0156	Jug	A6/7	G 43	4	4	27	3											3		1			T. 2/18-19; T. 4/4
0175	Jug	A6	G 46	1	1	6	1										1						

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
0177	Jug	A3	G 48	1	1	9		1												1			
0187	Jug	A3	Z-ST	2	2	7		1										2					
0188	Sjever	A32/33	S	4	4	34				1				3									T. 1/18-20; sl. 12/11, 12
0190	Jug	A1	G 49	2	2	4												2					
0191	Jug	A2/3	G 51	9	9	47										9							
0199	Jug	A8	G 53	1	1	1												1					
0219	Jug	A8	G 57	3	3	11		1										3					
0229	Jug	A3/4	G 64	10	7	104,5	3	2								7							T. 2/7, 9
0247	Jug	A2	G 63	1	1	1												1					
0254	Jug	A3	G 69	2	2	6	1									1		1					
0257	Jug	A3	Z-G?	1	1	5												1					
0271	Zapad	A37	G 65	1	1	4										1							
0274	Zapad	A35/36	G 66	1	1	4														1			
0275	Jug	A2/3	G 67	1	1	9,4										1							
0289	Jug	A1	G 71	4	4	28	1											3		1			
0305	Zapad	A37	Z-G?	1	1	17		1								1							
0310	Zapad	A37	S?	1	1	4												1					
0320	Jug	A2	Z-JM	4	4	20	1									1		3					T. 2/2
0326	Sjever	A25	Z-G?	1	1	3						1											T. 1/6; sl. 12/4
0346	Jug	A2	Z-G?	1	1	4									1								
0394	Jug	A2	G 89	1	1	2														1			

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
0395	Istok	A11	G 105	1	1	10	1									1							T. 2/6
0396	Istok	A13	S?	1	1	7												1					
0438	Istok	A16	G 102	2	2	9,9										2							
0455	Istok	A17	G 193	1	1	3												1					
0481	Jug	A1	Z-ST	1	1	5				1													
0485	Istok	A16/17	G 115	1	1	3												1					
0528	Istok	A17	G 123	1	1	3												1					
0621	Sjever	A26	Z-T	1	1	15	1							1									T. 1/16
0637	Sjever	A19	G 257	3	3	14			1	1			1										
0670	Sjever	A31/32	Z-G?	1	1	6								1									
0689	Sjever	A29/30	G 163	7	7	31,9	1		1					6									T. 1/13,17; sl. 12/10
0721	Sjever	A30	G 166	2	2	8				1			1										
0730	Sjever	A30	G 204	4	4	16	1					4											T. 1/12; sl. 12/6, 7
0758	Istok	A15	G 172	1	1	5	1											1					T. 2/15
0894	Istok 2	B1-3/4-8	S	6	6	74,2	2	2													2	4	
0902	Istok	A17	G 201	1	1	7												1					
0947	Istok 2	B1	S	7	4	22												4					
0949	Istok 2	B2/3	S	4	4	33	3													4			
0975	Istok	A17	G 218	2	1	17	1							1									T. 1/15; sl. 12/9
0983	Jug	A10/11	G 223	1	1	10	1											1					T. 2/16
1018	Istok 2	B1/2	S	3	3	9									1			2					

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
1019	Istok 2	B1	Z-ST	4	4	18	1								1	3							T. 2/3
1025	Sjever	A30	G 224	2	2	18										2							
1047	Istok 2	B1	S	6	5	36	1									2		3					T. 2/4
1051	Sjever	-	G 230	1	1	2,4	1												1				
1057	Istok 2	B1	G 238	7	7	20				1								6					
1058	Istok 2	B1/2	S	3	3	24			1			1								1			
1068	Istok	A14	Z-G?	2	1	21	1			1													T. 1/2
1069	Istok	A12	Z-G?	1	1	4													1				
1091	Istok	B1	Z-JM	3	3	7									1			2					
1093	Sjever	A30	G 237	1	1	12										1							
1097	Istok	A12	Z-ST?	1	1	4	1											1					T. 2/20
1104	Istok	A11	Z-JM?	1	1	14						1											T. 1/5; sl. 12/3
1119	Sjever	A30	G 241	1	1	1								1									
1130	Istok 2	B2/3	G 245	5	5	29	1	1								1		3	1				T. 3/1
1133	Jug	A10	S	7	7	8	1			7													
1166	Sjever	A33	Z-JM	1	1	16		1														1	
1169	Istok 2	B2	G 249	2	2	10								1		1							
1189	Istok 2	B2/3	G 253	8	8	30		2		1								3		4			
1205	Istok	A12	Z-G?	1	1	14	1			1													T. 1/1; sl. 12/1
1249	Istok 2	B4	G 266	1	1	1												1					
1262	Istok 2	B2	G 274	1	1	3														1			

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
1307	Istok 2	B7/8	G 287	2	2	21,4												2					
1320	Sjever	A19/20	S	1	1	19				1													T. 1/3; sl. 12/2
1323	Istok	A12	G 295	1	1	10		1		1													
1352	Istok 2	B4/5	G 296	1	1	4										1							
1354	Istok 2	B7	G 294	1	1	7														1			
1361	Svetište/ Brod	-	Z-G?	1	1	9	1				1												T. 1/4
1379	Istok 2	B2	G 302	1	1	9								1									T. 1/21
1430	Istok 2	B5	G 317	1	1	51						1											T. 1/8
1453	Istok 2	B2/3	G 326	3	1	11							1										T. 1/11
1454	Istok 2	B2	G 318	1	1	4	1							1									T. 1/14; sl. 1/8
1471	Istok	A12	Z-ST	1	1	16		1		1													
1473	Istok 2	B8	G 323	1	1	1									1								
1484	Istok 2	B7	G 325	1	1	6	1									1							T. 2/1
1485	Istok 2	B7/8	G 328	2	2	28									2								
1487	Istok 2	B1/2	Z-G?	4	1	4												1					
1488	Istok 2	B1/2	G 341	2	2	12				1				1									
1518	Istok 2	B6/7	G 330	1	1	8,1				1													
1524	Istok 2	B3/4	G 333	1	1	15										1							
1525	Istok 2	B8	G 334	1	1	12												1					T. 2/22
1534	Istok 2	B12	G 356	1	1	9								1									
1541	Istok 2	B3/4	G 339	1	1	8										1							

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
1548	Istok 2	B7	G 342	6	6	23,2	1	1		1					4				1				T. 3/2
1567	Istok 2	B9	Z-G?	1	1	1,8				1													
1574	Istok 2	B7/8	G 347	1	1	1												1					
1599	Istok 2	B11	G 350	1	1	1														1			
1603	Istok 2	B9	G 358	1	1	5												1					T. 2/14
1606	Svetište	-	S	5	5	66				1		4											T. 1/9-10
1615	Istok 2	B7	G 355	3	3	6						1			2								T. 1/7; sl. 1/5
1626	Brod	-	S	1	1	4	1											1					T. 2/17
1636	Istok 2	B7	G 359	1	1	2								1									
1695	Sakristija	-	S	12	12	117	4			1						1		4	2	4			T. 3/9,11; 4/10
1696	Zapad 2	-	S	2	1	15	1	1													1		
1701	Zapad 2	-	G 372	8	8	160	2	2								7			1				T. 2/10-11; 4/14;
sl. 12/13-14																							
1707	Zapad 2	-	S	2	2	8										1		1					
1712	Zapad 2	-	S	3	3	22	1										3						T. 2/21
1719	Sakristija	-	G 374	4	4	15										4							
1726	Sakristija	-	Z-ST	1	1	3							1										
1727	Sakristija	-	S	8	8	31,5	1	1								2		6					
1729	Sakristija	-	G 377	4	3	48	1	1								3							
1735	Sakristija	-	Z-G?	1	1	4								1									
1738	Sakristija	-	G 379	4	4	14	1									4							

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARES	VRSTA KONTEKSTA / CONTEXT TYPE	BR. ULOMAKA / FRAGMENT NO.	BR. NAKON SPAJANJA / NO. AFTER REFITTING	MASA / MASS (g)	OBODI / RIMS	DNA / BASES	NOP	PP	RD	RSV	RSV / RzSV	RzSV	RzSV/KSV	KSV	KSV/RNV	KSV/NV	RNV	NV	NV/SD	SD	PRILOZI / ILLUSTRATIONS
1744	Sakristija	-	G 382	3	3	12		1								3							
1759	Sakristija	-	G 385	4	4	10,2										4							
1768	Sakristija	-	G 388	2	2	11		1							2								
1769	Sakristija	-	G 391	4	4	12										4							
1783	Sakristija	-	G 399	1	1	4								1									
1800	Sakristija	-	G 395	1	1	4,6				1													
1842	Sakristija	-	G 404	1	1	7				1													
1852	Sakristija	-	Z-G?	1	1	5						1											
1868	Sakristija	-	G 408	1	1	4	1			1													
1904	Sakristija	-	G 415	1	1	10										1							
1926	Sakristija	-	Z-G?	1	1	11						1											
UKUPNO/TOTAL				**554**	**524**	**4096,2**	77	**39**	**5**	**28**	**1**	**11**	**10**	**26**	**19**	**100**	**37**	**134**	**82**	**59**	**7**	**5**	

no je težište geometrije, odnosno centroid, čime su omogućene različite vrste vizualizacije distribucije i učestalosti keramičkog materijala prema utvrđenim kronološkim kategorijama (sl. 3).

Ukupno su nađena 554 ulomka lončarije, ukupne mase nešto više od 4 kg (tab. 1). Spojiti je bilo moguće tek manji broj ulomaka, uglavnom iz istih konteksta, te nakon spajanja ukupan broj ulomaka iznosi 524. Od 524 ulomka, njih 226 potječe iz 91 sa sigurnošću definirane zapune grobova. Dodatnih 15 ulomaka potječe iz potencijalnih grobova, odnosno nedovoljno očuvanih ili samo manjim dijelom istraženih zapuna. U 14 zapuna drugih vrsta ukopa, različitih jama ili rupa za stupove, nađeno je 25 ulomaka. Čak 215 ulomaka potječe iz 25 različitih slojeva, dok su 43 ulomka nađena tijekom različitih faza čišćenja iskopa i razvrstana u pet dodatnih konteksta (sl. 4).

Vremensko opredjeljenje ulomaka lončarije utemeljeno je na analizi tehnike izrade posuda očuvanih tipoloških značajki i prisutnih motiva i tehnika ukrašavanja te, dodatno, uz razmatranje fakture i tvrdoće materijala i indikacija upotrebe lončarskog kola. Pri analizi keramičkih nalaza u obzir je uzeta stratigrafija, kao i rezultati radiokarbonske analize uzoraka iz pojedinih cjelina.[21] Kako su pronađeni keramički ulomci uglavnom vrlo malih dimenzija i u najvećem broju bez karakterističnih oblikovnih elemenata ili karakterističnih načina i motiva ukrašavanja koji bi upućivali na precizniju dataciju, analiza velikog broja ulomaka temeljila se na usporedbi njihove fakture s dobro datiranim ulomcima, odnosno dijagnostičkim ulomcima i ulomcima koji potječu iz dobro datiranih konteksta. Na taj su način determinirane određene specifičnosti tehnoloških obilježja keramičkih posuda, osobito onih iz mlađih razdoblja izrađenih uz upotrebu lončarskog

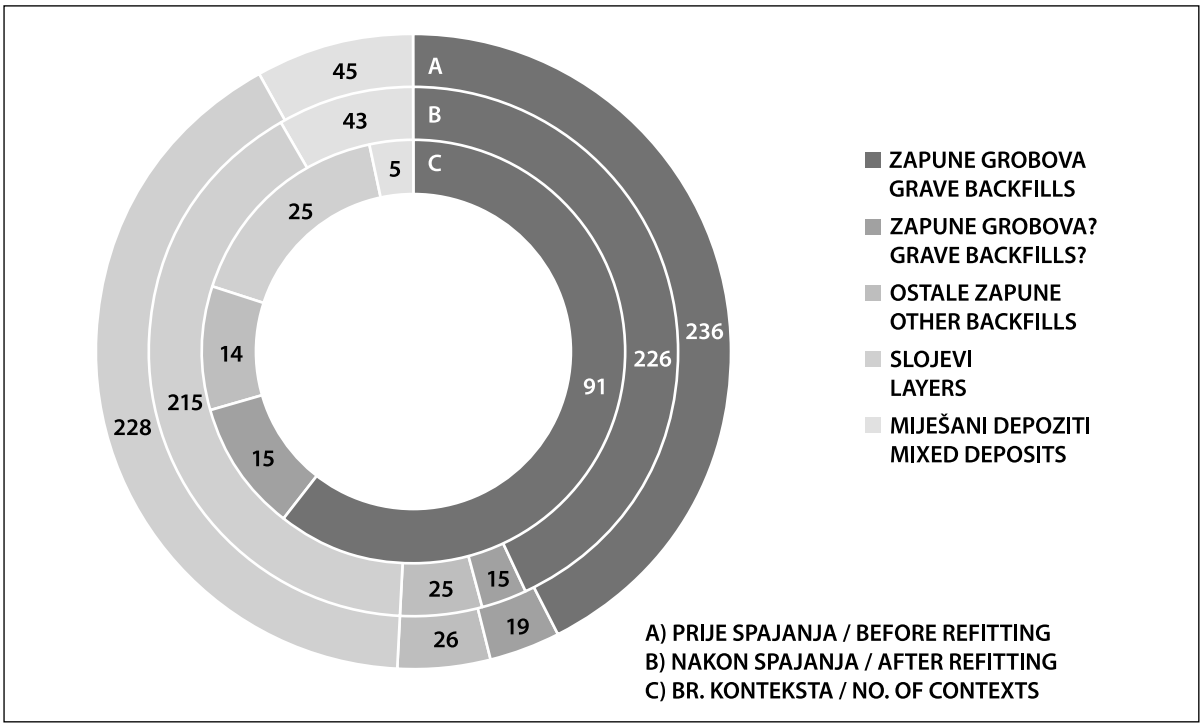
[21] MOLNÁR 2020a; 2020b; BELAJ, SIROVICA, BEDIĆ 2021: 94, tab. 1.

centre of gravity (a centroid) for each context was defined, enabling different types of visualisation of the distribution and frequency of ceramic material according to defined chronological categories (Fig. 3).

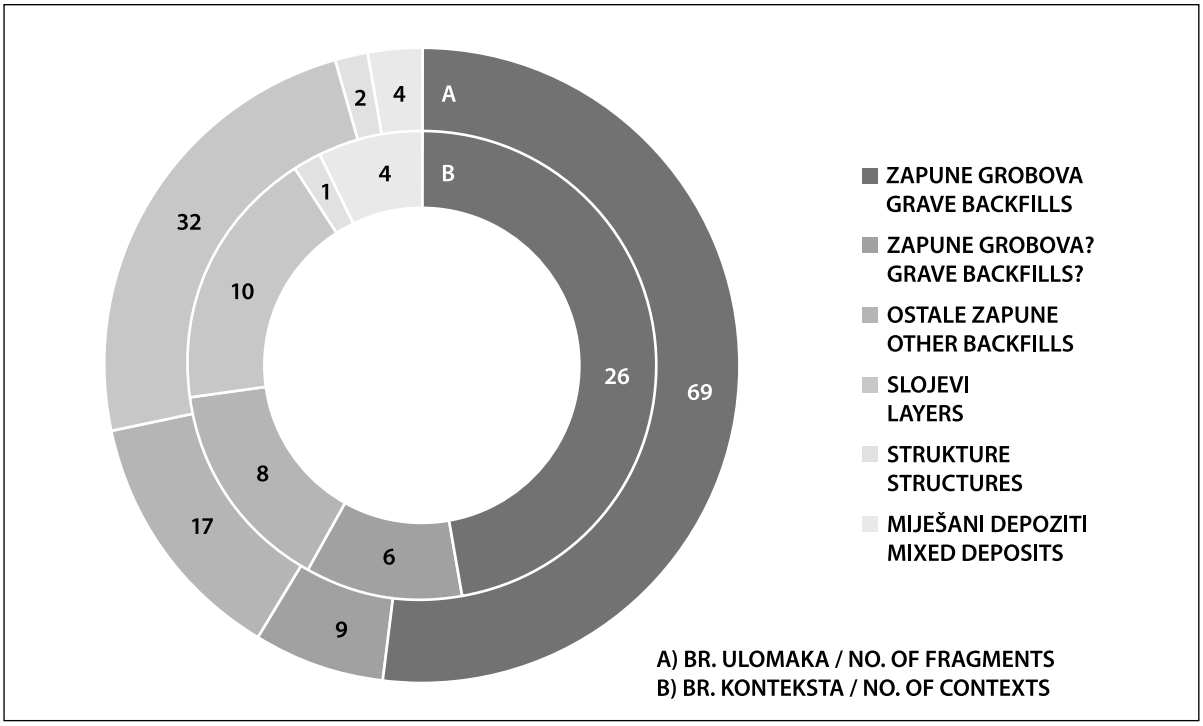
A total of 554 potsherds were found, with a total mass of just over 4 kg (Tab. 1). It was possible to conjoin only a small number of fragments, mainly from the same contexts, and the total number of sherds after refitting was 524. Of the 524 sherds, 226 originated from 91 confirmed grave backfills. An additional 15 sherds originated from potential graves, i.e... insufficiently preserved or only partially excavated backfills. In 14 backfills of other types of cuts, various pits or postholes, 25 sherds were found. As many as 215 sherds originate from 25 different layers, while 43 were found during different phases of dig cleaning and classified into five additional contexts (Fig. 4).

The chronological classification of the potsherds was based on an analysis of the production technology of vessels with preserved typological features, extant decoration motifs and techniques, as well as additional consideration of the fabric and hardness of the material and indications of the use of a potter's wheel. The analysis of pottery finds took into consideration the stratigraphy, as well as the results of radiocarbon analysis of samples from individual contexts.[21] Given that the pottery fragments found were mostly very small and in most cases without characteristic form elements or characteristic decoration methods and motifs that would suggest a more precise dating, the analysis of much of the fragments focused on comparing their fabric with that of fragments dated with certainty, that is to say diagnostic fragments and fragments originating from well-established contexts. This enabled the determination of certain specific technological features of ceramic vessels, especially those from more recent periods, made with the use of a potter's wheel. In addition, the analysis took into

[21] MOLNÁR 2020A; 2020b; BELAJ, SIROVICA, BEDIĆ 2021: 94, Pl. 1.



Slika 4. *Učestalost lončarije u odnosu na vrste konteksta* (izradila: F. Sirovica)
Figure 4 *Frequency of pottery relative to context types* (made by F. Sirovica)



Slika 5. *Učestalost građevinske i tehničke keramike u odnosu na vrstu konteksta* (izradila: F. Sirovica)
Figure 5 *Frequency of construction and technical ceramics relative to the context types* (made by F. Sirovica)

kola. Tijekom analize, u obzir su uzete i poznate značajke keramičkog materijala iz različitih razdoblja te poznate razlike između faktura keramičkih posuda iz različitih peri-

account the known features of ceramic material from different periods and the known distinctive features of the fabrics of kitchenware from different medieval periods, which are recognisable by

TABLICA 2. *Ulomci građevinske i tehničke keramike prikupljeni tijekom arheološkog iskopavanja oko crkve u Gori. Kratice: MD = miješani depoziti, S = sloj, Z = zapuna, G = grob, ST = stup, T = temelj; RD = rimsko doba, SV/NV = srednji vijek / novi vijek; NOP = neopredijeljeno* (izradile: T. Tkalčec, E. Buća, F. Sirovica)
TABLE 2 *Fragments of construction and technical ceramics collected during archaeological excavations around the church in Gora. Abbreviations: MD = mixed deposits, S = layer, Z = backfill, G = grave, ST = postholes, T = foundation; RD = Roman period, SV/NV = Middle Ages / modern era; NOP = unclassified* (made by T. Tkalčec, E. Buća, F. Sirovica)

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARE	VRSTA KONTEKSTA / CONTEXT TYPE	RAZDOBLJE / PERIOD	BR. ULOMAKA / FRAGMENT NO.	MASA / MASS (g)	RIMSKO DOBA / ROMAN PERIOD				OPEKA / BRICK SV/NV	ZLIJEB/UREZ / GOUGE/INCISION	ZBUKA / MORTAR
							NOP	TUBUL / TUBULUS	TEGULA	OPEKA / BRICK			
NC_S	Sjever	-	MD	RD	1	91		1				1	1
NC_SK	Sakristija	-	MD	RD	1	12	1						
NC_I	Istok	A14/15	MD	RD	1	68		1				1	
NC_J	Jug	A6/7	MD	SV/NV	1	27					1		
0068	Jug	A4	G 20	RD	2	9	2						1
0131	Jug	A2	S	RD-SV/NV	3	25			1		2		
0139	Jug	A6	G 38	RD-SV/NV	2	50	1				1		
0188	Sjever	A32/33	S	RD	1	8	1						
0191	Jug	A2/3	G 51	RD	1	366		1					
0346	Jug	A2	Z-G?	RD	2	17	1	1				1	2
0392	Sjever	A26	S	RD	1	31		1				1	1
0459	Sjever	A20/21	G 114	RD	2	27	1	1				1	
0516	Jug	A2	G 121	RD	2	46	2						2
0589	Jug	A2	Z-G?	RD	1	20	1						
0614	Jug	A11	G 148	RD	1	659				1			
0643	Jug	A2/3	G 159	RD	1	35		1				1	
0660	Sjever	A27	Z-T	RD	1	297			1				
0667	Sjever	A26/27	Z-T	RD	3	59		3				3	
0669	Sjever	A26	Z-T	RD	1	126		1				1	1
0686	Jug	A2	S?	RD	1	250	1						1
0689	Sjever	A29/30	G 163	RD	1	2		1					
0696	Sjever	A31/32	G 164	RD	1	81		1				1	
0709	Sjever	A26	Z-T	RD	1	54		1				1	1
0719	Sjever	A26/27	S	RD	1	529			1				1
0722	Sjever	A31	Z-T	RD	1	135	1						1
0731	Sjever	A26	Z-T	RD	3	419		2	1			2	2
0757	Sjever	A25	Z-G?	RD	2	95	2						2
0789	Sjever	A25	G 175	RD	2	187	1	1				1	
0854	Sjever	A29/30	G 204	RD	1	52	1						
0904	Sjever	A24/25	G 200	RD	2	31	1	1				1	
0947	Istok 2	B1	S	RD	1	6	1						
0949	Istok	B2/3	S	RD	1	213				1			1
0983	Jug	A10/11	G 223	RD	13	609	11	2				2	6
1000	Svetište	-	T	RD	2	384		2				2	2
1018	Istok 2	B1/2	S	RD	18	402	18						6
1044	Istok	A12-16	Z-T	RD	6	1525		4	1	1		3	6
1057	Istok 2	B1	G 238	RD	15	848	12	2	1			2	9

ID KONTEKSTA / CONTEXT ID	SEKTOR / SECTOR	KVADRAT / GRID SQUARE	VRSTA KONTEKSTA / CONTEXT TYPE	RAZDOBLJE / PERIOD	BR. ULOMAKA / FRAGMENT NO.	MASA / MASS (g)	RIMSKO DOBA / ROMAN PERIOD				OPEKA / BRICK SV/NV	ZLIJEB/UREZ / GOUGE/INCISION	ZBUKA / MORTAR
							NOP	TUBUL / TUBULUS	TEGULA	OPEKA / BRICK			
1058	Istok 2	B1/2	S	RD	4	490	2		1	1			1
1119	Sjever	A30	G 241	RD	1	9	1						
1161	Istok	A15/16	G 247	RD	1	106		1				1	
1180	Istok	A12	G 233	RD	1	8		1				1	
1263	Istok	A13	G 280	RD	1	37		1				1	
1418	Sjever	A20	G 313	RD	1	22	1						
1626	Brod	-	S	SV/NV	1	124					1		
1820	Sakristija	-	Z-ST	RD	1	3	1						1
1842	Sakristija	-	G 404	RD	2	138		1		1		1	
1850	Sakristija	-	G 403	RD	6	167	6						4
1854	Sakristija	-	G 413	RD	1	1	1						
1868	Sakristija	-	G 408	RD	1	43	1						
1878	Sakristija	-	Z-G?	RD	1	78	1						1
1883	Sakristija	-	G 409	RD	3	39	3						3
1904	Sakristija	-	G 415	RD	3	472	2		1				1
1919	Sakristija	-	G 417	RD	2	28	2						
1926	Sakristija	-	Z-G?	RD	2	30	2						
1950	Sakristija	-	Z-G?	RD	1	4	1						
UKUPNO / TOTAL					**133**	**9594**	**83**	**32**	**8**	**5**	**5**	**29**	**57**

oda srednjeg vijeka koje su prepoznatljive u tvrdoći ulomaka, veličini primjesa i njihovoj sipkosti, odnosno trusnosti ili kompaktnosti ulomaka. Provedbom tog postupka tek pet ulomaka ostalo je neopredijeljeno, no zbog usitnjenosti nalaza, koji u najvećem broju ne potječu iz izvornih konteksta, te niskog udjela dijagnostičkih elementa, većinom ulomaka rubova oboda i dna posuda, znatan dio materijala pripisan je širim vremenskim periodima. Kako je iz tog razloga keramički materijal podijeljen u 14 različitih vremenskih kategorija, pri analizi obrazaca distribucije pojedine vremenske kategorije razmatrane su zajedno.

Tijekom iskopavanja prikupljena je i određena količina tehničke i građevinske keramike, odnosno ukupno 133 ulomka, ukupne mase nešto više od 9,5 kilograma (tab. 2). Od ukupnog broja, 69 ulomaka prikupljeno je tijekom iskopavanja grobova, a tom broju moguće je pridodati i devet ulomaka nađe-

the hardness of the fragments, the size and looseness of temper, and the flakiness or compactness of fragments. This procedure having been implemented, only five fragments remained undetermined; however, due to the fragmentation of the finds, which in most cases did not originate from their original contexts, as well as to a low proportion of diagnostic elements (mostly fragments of vessel rims and bases), a significant part of the material had to be dated to wider timespans. As the ceramic material was thus divided into 14 different chronological categories, in the analysis of distribution patterns certain chronological categories were considered jointly.

The technical and construction ceramics collected during the excavation amounted to a total of 133 fragments, with a total mass of just over 9.5 kilograms (T. 2). Of these, 69 fragments were recovered during the excavation of graves, and nine more were found in the backfills of supposed graves. Seventeen fragments were found in the backfills of other types of cut, of which all but

nih u zapunama vjerojatnih grobova. Sedamanest je ulomaka nađeno u zapunama drugih vrsta ukopa, od kojih su sve osim jedne zapunjivale ukope za temelje ranogotičke crkve. Iz različitih slojeva potječu 32 ulomka, dok su četiri prikupljena tijekom čišćenja iskopa. Posljednji ulomak nađen je među kamenjem koje tvori polukružnu strukturu utvrđenu u svetištu ranogotičke crkve interpretiranu kao apsida romaničke crkve (sl. 5).

REZULTATI: DATACIJA I DISTRIBUCIJA LONČARIJE

Tijekom tipološko-kronološke analize lončarije prikupljeni keramički nalazi razvrstani su u različite kronološke kategorije.[22] Najveći broj ulomaka lončarije opredijeljen je u mlađa arheološka razdoblja te je novom vijeku pripisan 141 ulomak, od čega je 82 bilo moguće preciznije smjestiti u rani novi vijek. Samo pet ulomaka pripada suvremenom dobu, dok dodatnih sedam nije bilo moguće preciznije odrediti u novi vijek ili suvremeno doba. U razdoblje kasnoga srednjeg ili novog vijeka opredijeljen je 171 ulomak, pri čemu je 37 ulomka preciznije datirano u prijelaz iz kasnog srednjeg u rani novi vijek. Kasnomu srednjem vijeku pouzdano je pripisano 100 ulomaka, a razvijenom njih 26, dok manje preciznoj kategoriji razvijenoga ili kasnoga srednjeg vijeka pripada 19 ulomaka. U rani srednji vijek smješteno je samo 11 ulomaka,[23] dok za 10 ulomaka nije

[22] Na pomoći pri datiranju dvojbenih nalaza zahvaljujemo kolegicama iz Instituta za arheologiju – za prapovijest Snježani Vrdoljak i Dariji Ložnjak Dizdar, za rimsko doba Ivani Ožanić Roguljić te za rani srednji vijek Tajani Sekelj Ivančan. Na ovom mjestu zahvaljujemo i kolegici Ivani Miletić Čakširan iz Konzervatorskog odjela u Sisku na podatcima o rezultatima novijih arheoloških istraživanja na razmatranom prostoru.

[23] Dio ulomaka ranosrednjovjekovne lončarije objavljen je u okviru širih razmatranja naseljavanja Slavena na prostore današnje Hrvatske (BEKIĆ 2016), no na ovom mjestu donosi se revizija pojedinih prethodno iznesenih zaključaka.

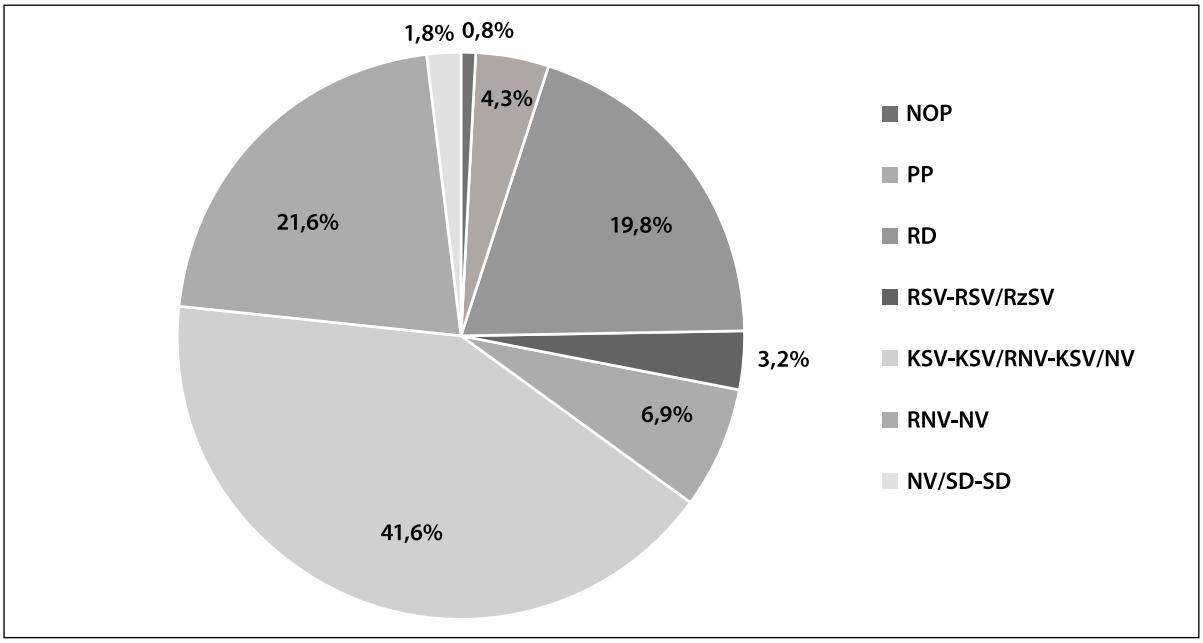
one were backfills of the foundations of the early Gothic church. Thirty-two fragments originate from different layers, while four were collected while cleaning the excavation trenches. The last fragment was found among the stones that form a semi-circular structure situated in the sanctuary of the early Gothic church and were interpreted as an apse of the Romanesque church (Fig. 5).

RESULTS: POTTERY DATING AND DISTRIBUTION

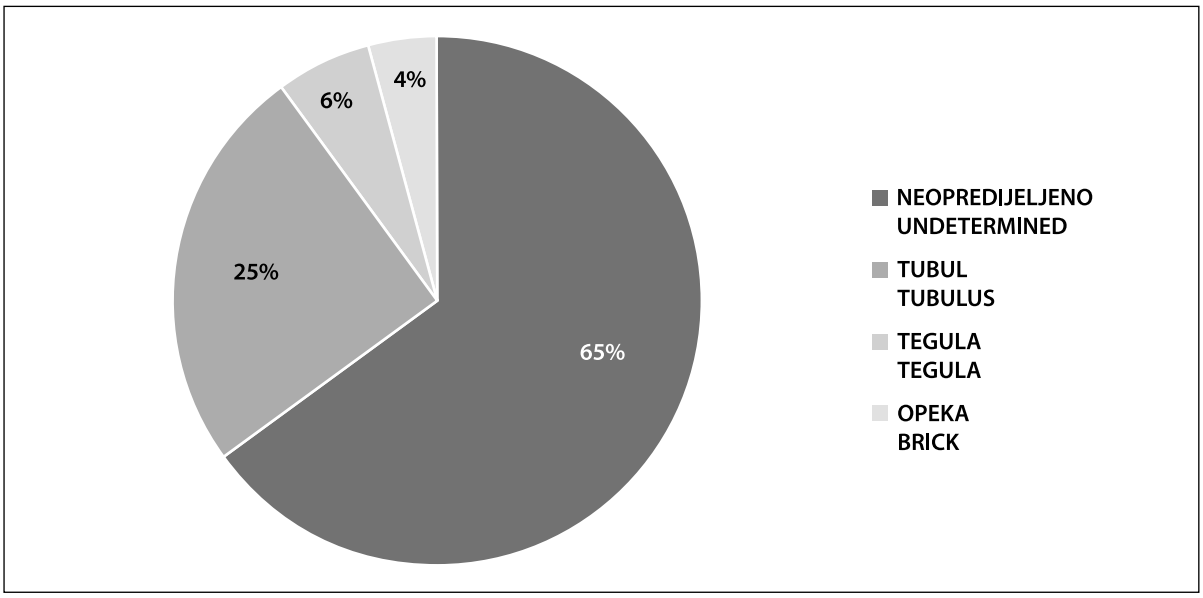
As part of the typological-chronological analysis of the pottery, the collected ceramic finds were classified into different chronological categories.[22] The largest number of potsherds was dated to more recent archaeological periods; thus, 141 sherds were attributed to the modern era, of which 82 were more precisely dated to the early modern era. Only five sherds belong to the contemporary period, while an additional seven could be dated only to either the modern era or the contemporary period. One hundred and seventy-one sherds were dated to the Late Middle Ages or the modern era periods, with 37 sherds more precisely dated to the transition period from the Late Middle Ages to the early modern era. A hundred sherds were with certainty dated to the Late and 26 to the High Middle Ages, while 19 sherds were less precisely dated to either the High or Late Middle Ages periods. Only 11 sherds were dated to the Early Middle Ages,[23] while for 10 sherds it was not possible to de-

[22] We would like to express our thanks to our colleagues from the Institute of Archaeology for their help in the dating of uncertain finds – for the prehistory period to Snježana Vrdoljak and Daria Ložnjak Dizdar, for the Roman period to Ivana Ožanić Roguljić and for the Early Middle Ages to Tajana Sekelj Ivančan. In addition, we would like to thank our colleague Ivana Miletić Čakširan from the Conservation Department in Sisak for the data of the on more recent archaeological investigation in the respective area.

[23] A part of the fragments of early medieval pottery was published in the framework of broader considerations of the settlement of Slavs in the territory of present-day Croatia (BEKIĆ 2016), but this paper reviews some of the previous conclusions.



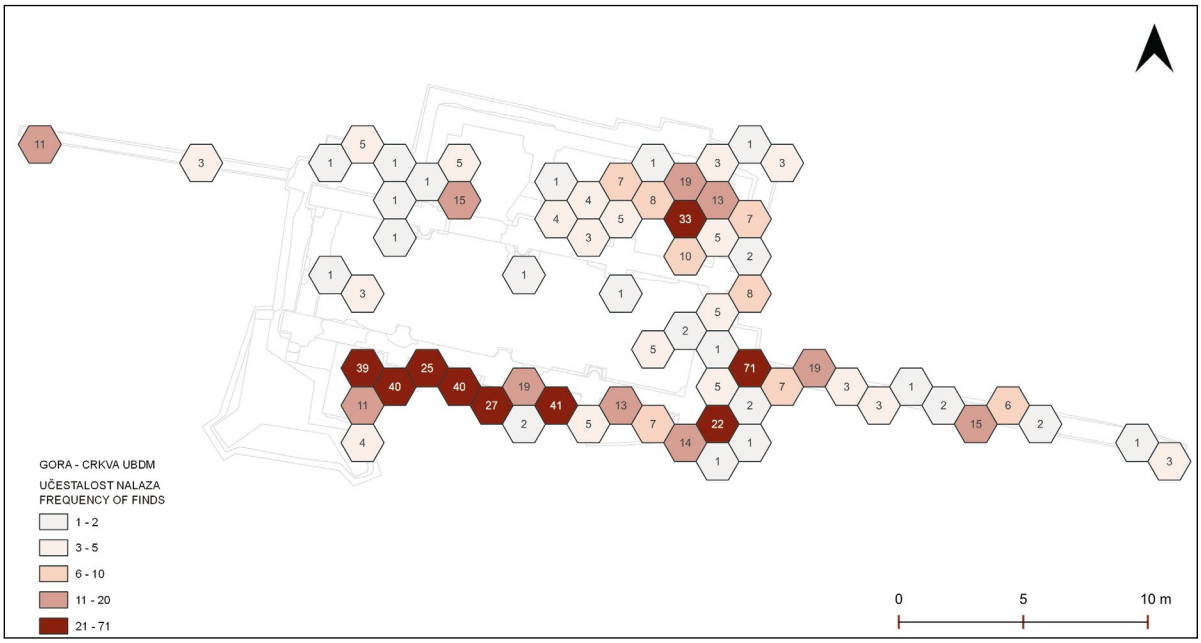
Slika 6. *Vremensko opredjeljenje keramičkog materijala. Kratice: NOP = neopredijeljeno, PP = prapovijest, RD = rimsko doba, RSV = rani srednji vijek, RzSV = razvijeni srednji vijek, KSV = kasni srednji vijek, RNV = rani novi vijek, NV = novi vijek, SD = suvremeno doba* (izradila: F. Sirovica)
Figure 6 *Chronological classification of the ceramic material. Abbreviations: NOP = unclassified, PP = Prehistoric period, RD = Roman period, RSV = Early Middle Ages, RzSV = High Middle Ages, KSV = Late Middle Ages, RNV = early modern era, NV = modern era, SD = contemporary period* (made by F. Sirovica)



Slika 7. *Tipološka podjela ulomaka rimskodobne građevinske i tehničke lončarije* (izradila: F. Sirovica)
Figure 7 *Typological division of fragments of Roman-period construction and technical ceramics* (made by F. Sirovica)

bilo moguće preciznije odrediti pripadaju li ranomu ili razvijenomu srednjem vijeku. Među lončarijom je izdvojeno i 28 ulomaka prapovijesnih keramičkih posuda te samo jedan ulomak rimskodobne lončarije. Ipak, rimsko je doba u većoj mjeri zastupljeno

termine more precisely whether they belonged to the Early or High Middle Ages. Among the pottery were also 28 sherds of prehistoric ceramic vessels, and a single sherd of Roman-period pottery. However, the Roman period is extensively represented by fragments of



Slika 8. *Prikaz učestalosti keramičkog materijala u heksagonalnoj mreži dimenzija 2 x 2 m* (izradila: F. Sirovica)
Figure 8 *Display of the frequency of ceramic material in a 2 x 2 m hexagonal mesh* (made by F. Sirovica)

ulomcima tehničke i građevinske keramike kojih je ukupno prikupljeno 128 (sl. 6). Kako je riječ o sustavno prikupljanim, specifičnim nalazima, odnosno velikom broju ulomaka tubula i tegula, taj je materijal moguće razmatrati zajedno s ulomcima lončarije (sl. 7). S druge strane, građevinska keramika iz kasnijih razdoblja nije sustavno prikupljana te je kasnomu srednjem ili novomu vijeku pripisano tek pet manjih ulomka. Iako taj materijal ne može biti detaljnije razmatran, moguće je izdvojiti da tri ulomka, ukupne mase 170 g i pronađena južno uz ranogotičku crkvu, vjerojatno pripadaju dijelovima iste opeke s prozirnom glazurom.

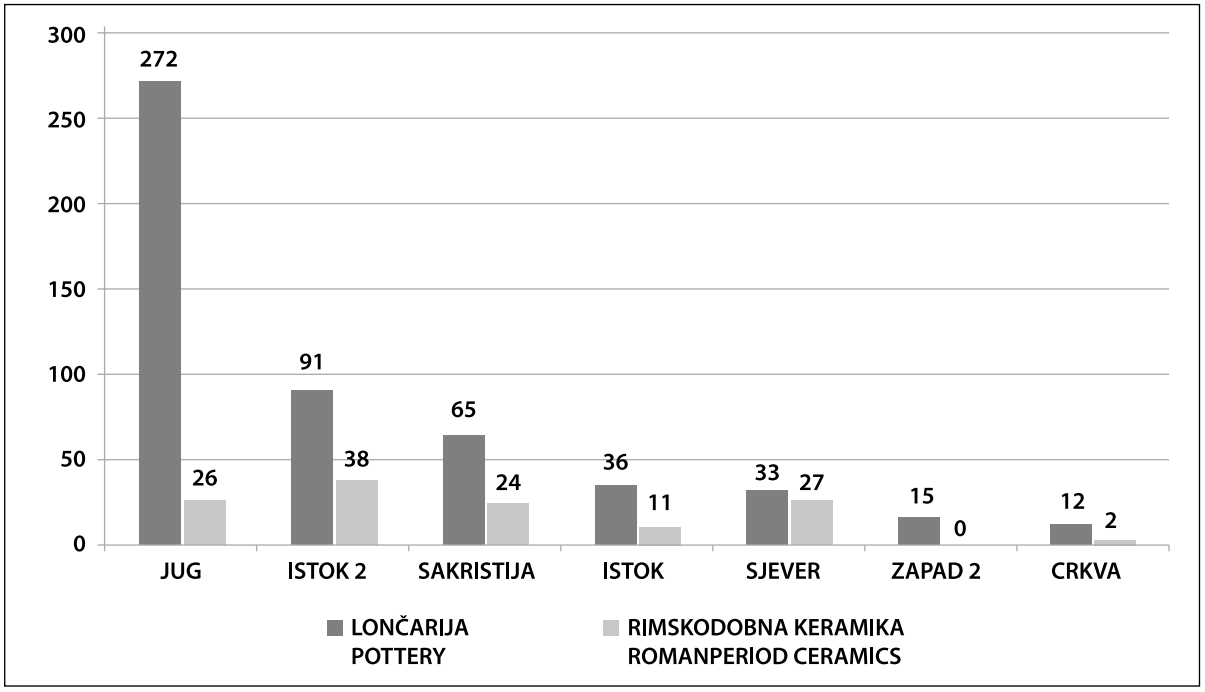
U skladu s definiranim vremenskim opredjeljenjem prikupljenoga keramičkog materijala, provedena je analiza obrazaca njihove pojave, učestalosti i distribucije na nalazištu. Iako podatke utvrđene unutar crkve, na području zahvaćenom prvom fazom arheoloških istraživanja, nije moguće smisleno uspoređivati,[24] moguće je istaknuti da dis-

[24] Ipak, podatci za sektore istražene tijekom prve faze arheoloških radova uključeni su u ovaj rad kako bi prikaz obuhvatio cijeli korpus keramičkih nalaza prikupljenih tijekom druge faze arheoloških iskopavanja.

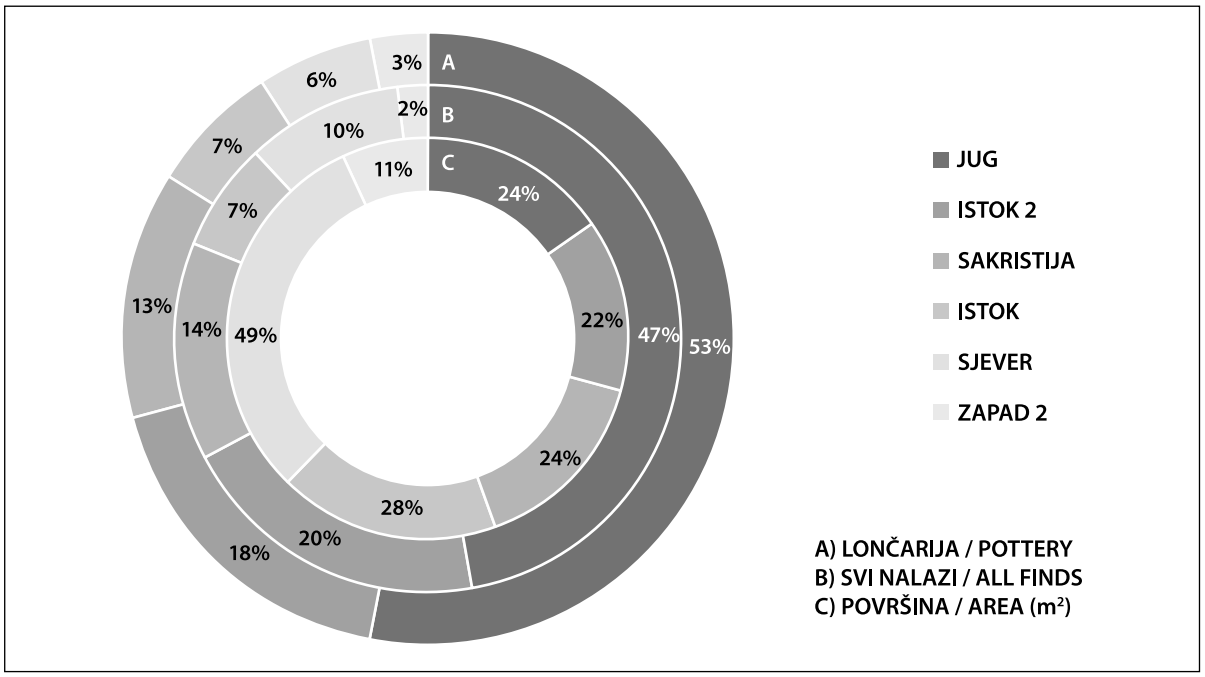
technical and construction ceramics, of which 128 were collected in total (Fig. 6). Given that these specific finds (a large number of tubules and tegulae fragments) were collected systematically, it is possible to analyse the material together with the potsherds (Fig. 7). On the other hand, building ceramics from later periods were not collected systematically, and only five smaller fragments were attributed to the Late Middle Ages or the modern era. Although this material cannot be analysed in more detail, it is possible to isolate three fragments (with a total mass of 170 g) found south of the early Gothic church as probably belonging to the same brick with a transparent glaze.

In accordance with the defined chronological classification of the collected ceramic material, an analysis of the patterns of their occurrence, frequency and distribution at the site was carried out. Although it is not possible to meaningfully compare the data established within the church in the area covered by the first phase of archaeological excavations,[24] it should

[24] Nevertheless, the data for the sections investigated during the first phase of archaeological works are included in this paper in order to cover the entire body of ceramic finds collected during the second phase of archaeological excavations.



Slika 9. *Broj ulomaka lončarije te rimskodobne građevinske i tehničke keramike u odnosu na podjelu iskopa na sektore* (izradila: F. Sirovica)
Figure 9 *Number of potsherds and Roman-period construction and technical ceramics in relation to excavation sections* (made by F. Sirovica)



Slika 10. *Učestalost nalaza u odnosu na podjelu iskopa na sektore i njihovu površinu obuhvaćenu drugom fazom arheoloških iskopavanja* (izradila: F. Sirovica)
Figure 10 *Frequency of finds according to excavation sections and their surface areas covered by the second phase of the campaign* (made by F. Sirovica)

tribucija svih nalaza iz ostalih sektora pokazuje određeni pad učestalosti prema rubnim područjima istraživanog prostora koji može

be pointed out that the distribution frequency of all finds from other sections drops towards the peripheral zones of the excavated area, pos-

upućivati na opseg nalazišta (sl. 8). Od ukupnog broja ulomaka lončarije, njih čak 52 % nađeno je u sektoru Jug, a razlike u učestalosti tek će se neznatno promijeniti kad se razmotre zajedno s nalazima rimskodobne tehničke i građevinske keramike (sl. 9). U tom slučaju, broj nalaza iz sektora Jug 2,3 puta je veći nego u sektoru Istok 2, te skoro 3,4 veći nego u sektoru Sakristija, dok čak pet puta nadmašuje broj nalaza iz sektora Sjever, a 6,3 puta broj nalaza iz sektora Istok. Ako se ti omjeri razmotre u odnosu na opseg iskopa u drugoj fazi radova, moguće je izdvojiti da sektor Jug, nakon oduzimanja prije početka iskopavanja strojno uklonjenog arheološkog zapisa na površini od 9,22 m^2, zauzima otprilike istu površinu kao i sektori Sakristija, Istok i Istok 2, no dva puta manju nego sektor Sjever (sl. 10). Ipak, bitno je istaknuti da je dubina iskopa na sjevernom dijelu nalazišta, u sektorima Sjever i Zapad 2, znatno niža nego na ostalom dijelu nalazišta.

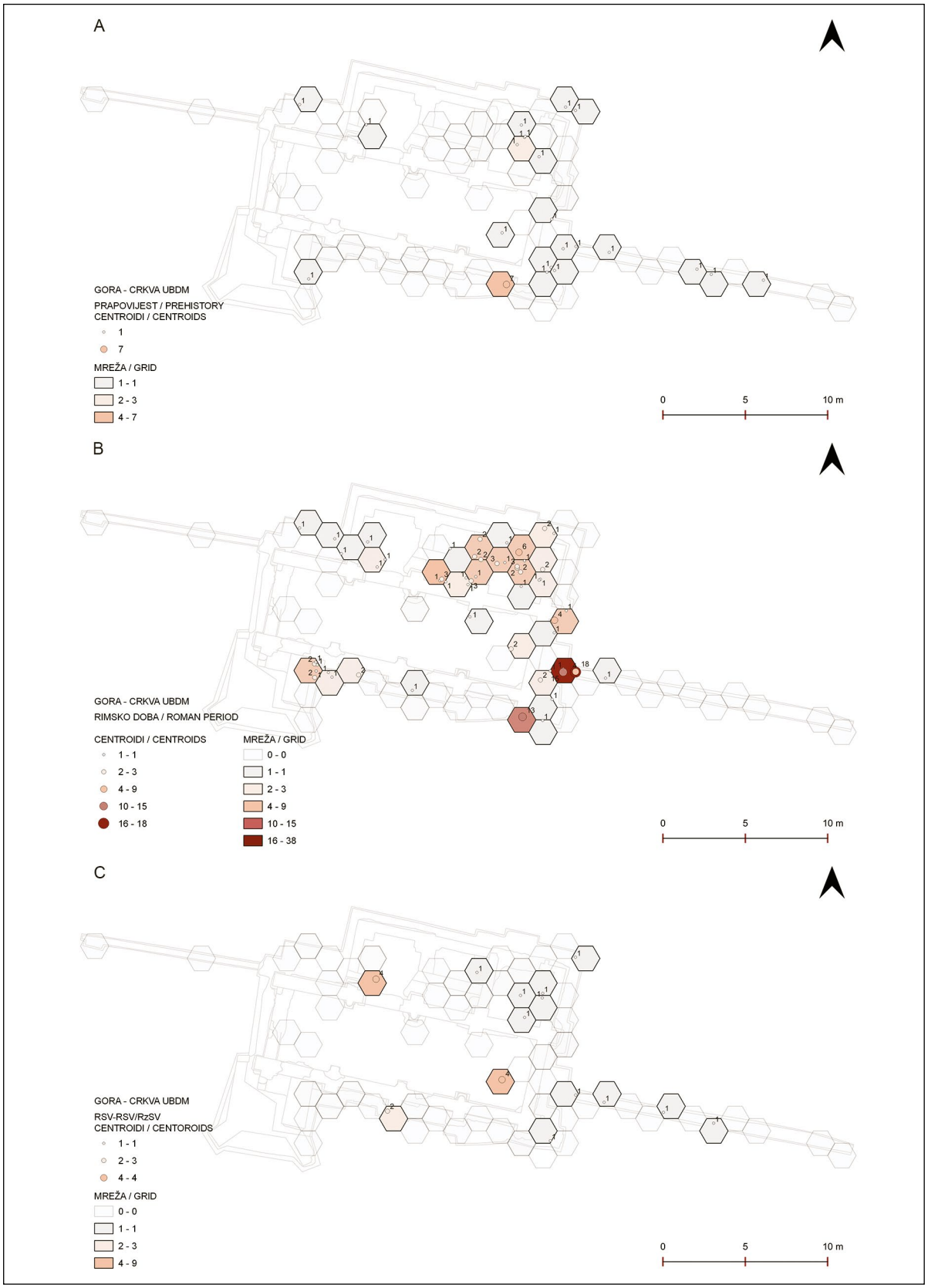
Ako se distribucija sagleda u odnosu na utvrđene vremenske kategorije, postaje razvidno da je materijal od kasnog srednjeg vijeka zastupljen na cijelom području istraživanja, dok keramički nalazi iz prethodnih razdoblja nedostaju u nekoliko sektora: u sektoru Brod, koji je u najvećoj mjeri vjerojatno prekopan tijekom izgradnje velike kripte pri baroknoj obnovi crkve; sektoru Zapad, koji je podvrgnut arheološkim istraživanjima tijekom prve faze radova; i sektoru Zapad 2, s plitko očuvanim depozitima vjerojatno na rubnom dijelu nalazišta.

Stoga je moguće istaknuti da je manji skup prapovijesnih nalaza prikupljen tijekom iskopavanja u svim ostalim sektorima (sl. 11/A), no u većini konteksta s pojedinačnim primjercima te u samo jednom kontekstu u vidu većeg broja ulomaka. Riječ je o vrlo usitnjenim i mekim ulomcima keramičkih posuda grublje fakture. Boje površine stijenki variraju od oker-crvene i crveno-smeđe do crne boje, dok su presjeci uglavnom tamnijih tonova. Na osnovi fakture te oblika

sibly suggesting the site's size (Fig. 8). Of the total number of potsherds, as many as 52% were found in Section South; the percentages will only slightly change when they are considered together with the finds of Roman-period technical and construction ceramics (Fig. 9). In this case, the number of finds from Section South is 2.3 times higher than in Section East 2, and almost 3.4 times higher than in Section Sacristy, while five times higher than the number of finds from Section North and 6.3 times higher than the number of finds from Section East. If these ratios are considered in relation to the scope of the second excavation phase, it follows that Section South (after subtracting the archaeological record over a surface of 9.22 m^2 that was mechanically removed before the start of the excavations), occupies approximately the same area as the Sections Sacristy, East and East 2, but is twice as small as Section North (Fig. 10). However, it is important to point out that the excavations in the northern part of the site, in Sections North and West 2, were significantly less deep than in the rest of the site.

The distribution in relation to the established chronological categories suggests that material from the Late Middle Ages is represented over the entire research area, while pottery finds from previous periods are missing in several sections: Section Nave, which was probably most extensively excavated in the course of the construction of the large crypt during the Baroque renovation of the church; Section West, in which archaeological excavations were conducted during the first phase of the campaign; and Section West 2, with shallowly preserved deposits, probably on the peripheral parts of the site.

In excavations in all other sections a smaller prehistoric assemblage was recovered (Fig. 11/A), but in most contexts only individual sherds were found, and only a single context rendered a larger number of fragments. The fragments are extremely crushed and are soft sherds of coarse ware. The wall surface colours



Slika 11. *Prikaz učestalosti keramičkog materijala u heksagonalnoj mreži dimenzija 2 x 2 m: A) prapovijest, B) rimsko doba, C) rani (RSV) i rani/razvijeni srednji vijek (RSV/RzSV)* (izradila: F. Sirovica)
Figure 11 *Frequency of ceramic material shown in a hexagonal 2 x 2 m mesh: A) Prehistory, B) Roman period, C) Early (RSV) and Early/High Middle Ages (RSV/RzSV)* (made by F. Sirovica)

rijetko očuvanih izvučenih rubova (sl. 12/1; T. 1/1, 2), kao i jednog ulomka s ukrasom valovnice (sl. 12/2; T. 1/3), opredijeljeni su u kasnu fazu kasnoga brončanog doba.[25]

Iz skupa nalaza izdvojen je tek jedan rub posude sa sigurnošću opredijeljen u rimsko doba (T. 1/4). Nađen je u loše očuvanom ostatku neke zapune utvrđene tijekom čišćenja unutrašnjosti crkve istražene tijekom prve faze radova. Ipak, rimsko je doba u većem broju zastupljeno s ulomcima tehničke i građevinske keramike. Iako dio ovih nalaza nije bilo moguće funkcionalno odrediti, mnogi ponajprije pripadaju većim ili manjim ulomcima tubula (sl. 13), a zatim u nešto manjem broju i dijelovima tegula i opeka. Na 57 ulomaka tubula i tegula zamijećeni su ostatci vezivne žbuke, dok je na 29 od 32 ulomka tubula prisutno žlijebljenje, odnosno urezivanje. Rimskodobni je materijal većinom nalažen blizu zidova gotičke crkve (sl. 11/B) te se javlja u svim vrstama stratigrafskih jedinica, a posebno često u zapunama grobova, najčešće u pojedinačnim primjercima. Ipak, primjetna je njihova izrazitija pojava u zapunama iznimno dubokih ukopa za temelje istočnog i sjevernog zida ranogotičke crkve iz kojih je, od ukupno 17 nalaza (16 rimskodobnih i jedan ulomak lončarije razvijenog srednjeg vijeka), izdvojeno čak 12 tubula.

Ulomci ranosrednjovjekovne lončarije najčešće se javljaju u pojedinačnim primjercima (sl. 11/C). Većinom su nađeni u zapunama grobova, nerijetko iz prve faze ukopavanja, ili nedovoljno očuvanim zapunama, znatno oštećenim kasnijim ukopavanjima. Većina ulomaka dijelovi su tijela i nešto rjeđe rubova lonaca. Faktura im je grublja, s primjesama krupnijih zrnaca kamenčića koja nerijetko nedostaju na površini stijenki. Pojedini ulomci, poput primjerka ukrašenog

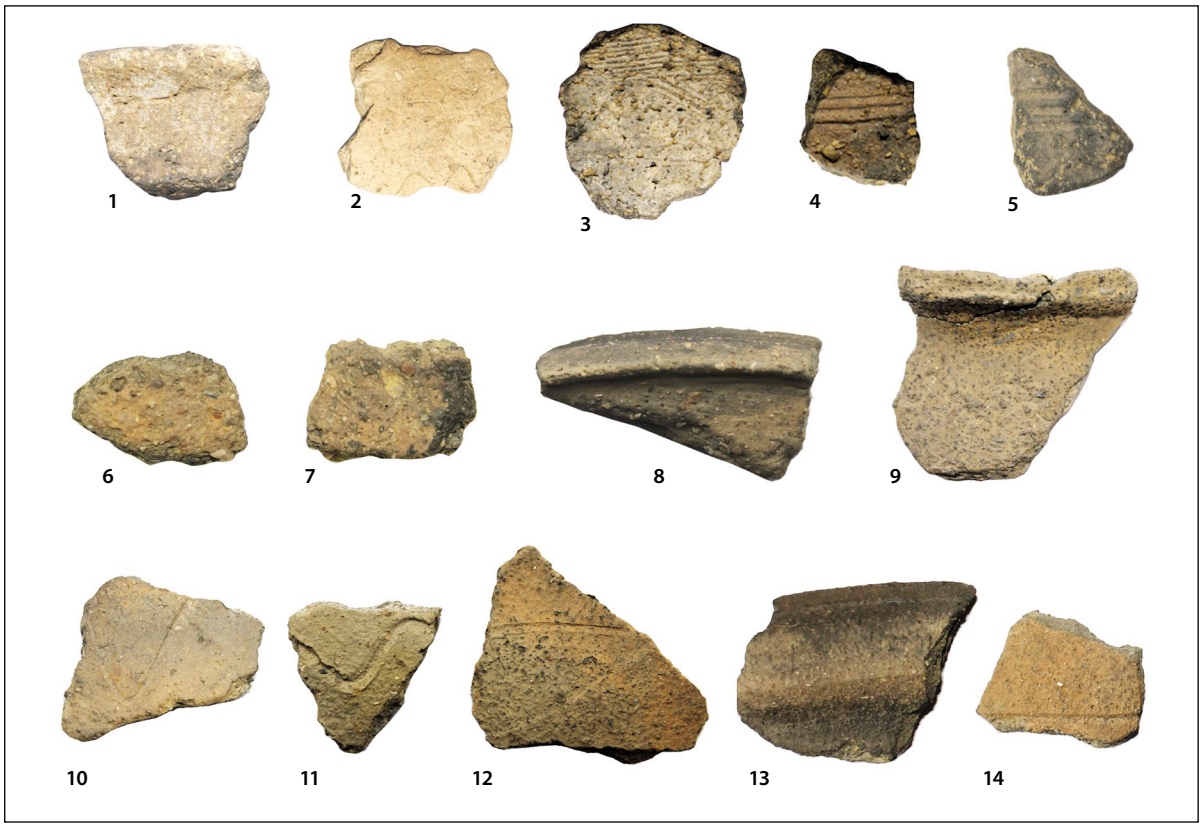
[25] Upravo ulomak ukrašen valovnicom (sl. 12/2; T. 1/3), kao i jedan od izvučenih rubova lonca (sl. 12/1; T. 1/1), prethodno su opredijeljeni u rani srednji vijek (BEKIĆ 2016: 285, T. 72: 2, 6).

vary from ochre-red and red-brown to black, while the cross-sections are mostly darker. On the basis of the fabric and form of the rarely preserved everted rims (Fig. 12/1; Pl. 1/1, 2), as well as a single fragment with wavy-line decoration (Fig. 12/2; Pl/1:3), the sherds were dated to the late phase of the Late Bronze Age.[25]

Only a single vessel rim from the assemblage could with certainty be dated to the Roman period (Pl. 1/4). It was found in the poorly preserved remains of a backfill established during the cleaning of the church´s interior, excavated in the first phase of the campaign. However, the Roman period is represented to a much greater extent by fragments of technical and construction ceramics. Although the function of a part of the finds could not be determined, many primarily belong to larger or smaller fragments of tubuli (Fig. 13), followed by a slightly smaller share of tegulae and brick parts. On 57 tubulus and tegula fragments, the remains of connective mortar were observed, while 29 of 32 tubulus fragments had gouges or incisions. The Roman-period material was mostly unearthed near the walls of the Gothic church (Fig. 11/B) and occurred in all stratigraphic unit types, particularly in grave backfills, mostly as individual finds. However, it was noticeable that they appeared more frequently in the backfills of the extremely deep cuts for the foundations of the eastern and northern walls of the early Gothic church, where out of 17 finds (16 Roman-period fragments, and one potsherd from the High Middle Ages), as many as 12 tubuli were identified.

Early medieval potsherds usually occurred as individual finds (Fig. 11/C). Most of them were recovered in grave backfills, often from the first burial phase, or in insufficiently preserved backfills, significantly disturbed by later burials. Most fragments are parts of vessel bodies and somewhat less often of pot rims.

[25] One fragment decorated with a wavy line (Fig. 12/2; Pl. 1/3) and another of everted rims of a pot (Fig. 12/1; Pl. 1/1) had previously been dated to the Early Middle Ages (BEKIĆ 2016: 285, Pl. 72: 2, 6).



Slika 12. *Pojedini ulomci lončarije s očuvanim tipološkim i/ili tehnološkim značajkama: kasno brončano doba: 1 – 2, rani srednji vijek: 3 – 5, rani/razvijeni srednji vijek: 6 – 7, razvijeni srednji vijek: 8 – 12, kasni srednji vijek: 13 – 14* (nije u mjerilu; izradila: T. Tkalčec)

Figure 12 *Individual potsherds with preserved typological and/or technological features: Late Bronze Age: 1–2, Early Middle Ages: 3–5, Early/High Middle Ages: 6–7, High Middle Ages: 8–12, Late Middle Ages: 13–14* (not to scale; made by T. Tkalčec)

češljastim predmetom vrlo tankih zubaca (sl. 12/3; T. 1/5), možda upućuju i na prisutnost organskih primjesa koje su pri pečenju keramike izgorjele i ostavile rupičasta oštećenja na površini stijenki. Rupičasta ili porozna keramika karakteristična je za najranija razdoblja doseljenja Slavena, odnosno 6. i 7. stoljeće,[26] a pojavljuje se još i u 8. stoljeću,[27] te je rasprostranjena na više nalazišta grupiranih na širem prostoru uz Dravu i Muru pa do Save.[28] S obzirom na fakturu, ali i ukras finim češljastim predmetom, ulomci iz Gore mogu se datirati u drugu polovinu 7. i u 8. stoljeće. Na ostalim ulomcima ukrašenim češljastim predmetom nešto grubljih zubaca

Their structure is coarse, tempered with larger grains of stone, often missing on the surface of the walls. Some fragments, such as a piece decorated with a comb-shaped object with very thin teeth (Fig. 12/3; Pl. 1/5), possibly indicate the presence of organic temper that was burnt during the pottery firing process, leaving cavities on the surface of the walls. Vesicular or porous pottery is characteristic of the earliest periods of Slavic settlement (6th and 7th centuries),[26] and still occurred as late as in the 8th century.[27] It is distributed across several sites grouped over a wider area along the rivers Drava and Mura, and as far as the Sava.[28] Based on the of the fabric, but also the decora-

[26] GUŠTIN, PAVLOVIČ 2009.
[27] BEKIĆ 2016: 101.
[28] BEKIĆ 2016: 102, 104, karta 3.

[26] GUŠTIN, PAVLOVIČ 2009.
[27] BEKIĆ 2016: 101.
[28] BEKIĆ 2016: 102, 104, Map 3.



Slika 13. *Ulomci tubula nađeni tijekom arheološkog iskopavanja oko crkve u Gori* (snimila: T. Tkalčec)
Figure 13 *Tubule fragments recovered in the course of archaeological excavations around the church in Gora* (photo by T. Tkalčec)

(sl. 12/4, 5; T. 1/6, 7) motiv nije prepoznatljiv, no neovisno o tome je li riječ o češljastoj valovnici ili vodoravnim linijama, oba motiva, faktura i tehnika ukrašavanja pripadaju repertoaru 8. stoljeća.

Dio ulomaka zasigurno pripada kasnijim fazama ranoga srednjeg vijeka, odnosno 10. i 11. stoljeću. Takvi ulomci nađeni su i u oskudno očuvanim ostatcima sloja koji je utvrđen ispod jednog reda kamenja smještenog zapadno uz polukružnu strukturu interpretiranu kao apsida romaničke crkve. Kako je to kamenje vjerojatno sastavni dio polukružne strukture, moguće je zaključiti da sloj ispod njega predstavlja ostatke izvornoga ranosrednjovjekovnog depozita. Upravo ulomci iz ovog sloja, grube fakture, srednje krupnih zrnaca kamenčića te oker površinom stijenki i presjeka (T. 1/9,10), prethodno su datirani u razdoblje 7. i 8.

tions applied with a fine comb-shaped object, the fragments from Gora can be dated to the second half of the 7th and to the 8th century. On other fragments decorated with a comb-shaped object with somewhat more coarse teeth (Fig. 12/4, 5; Pl. 1/6, 7) the motif is not recognisable, but both motifs – the combed undulation and the horizontal line – as well as the fabric and the decoration technique belong to the 8th century repertoire.

A part of the fragments certainly belongs to the later phases of the Early Middle Ages (10th and 11th centuries). Such fragments were also found in the poorly preserved remains of a layer identified under a row of stones located to the west of a semicircular structure interpreted as an apse of the Romanesque church. Since the stones are probably an integral part of the semicircular structure, it can be concluded that the layer below it represents the remains of the

stoljeća,[29] no njihove značajke ipak upućuju na kasnija stoljeća ranoga srednjeg vijeka. Naime, keramika iz ovog perioda je tvrđa, i dalje su prisutne primjese zrnaca kamenčića, no rijetko se javlja rupičasta površina, a na unutrašnjim stijenkama pojedinih ulomaka zamjećuje se okomito zaglađivanje rukom. Ramena i tijela posuda ukrašena su jednostavnim nizovima linija (T. 1/8) ili jednostrukim valovnicama.

Pojedine ulomke tijela lonaca teško je opredijeliti u razdoblje ranoga ili razvijenoga srednjeg vijeka (sl. 12/6, 7), jer se i u razvijenome srednjem vijeku javljaju lonci prilično grube fakture s dosta primjesa zrnaca kamenčića. To je vidljivo na ulomku ruba lonca složenije profilacije koji svakako pripada razvijenomu srednjem vijeku (sl. 12/8; T. 1/14). Stoga su pojedini ulomci lonaca jednostavno odrezanih rubova, ali već kompaktnije strukture, ili pak tijela vrlo grube fakture i ukrašena jednostrukim valovnicama (T. 1/9, 10, 12, 13), opredijeljeni u šire vremensko razdoblje od 10. do početka 13. stoljeća. U taj period, vjerojatno kraj 11. ili 12. stoljeće, može se datirati ulomak lonca grublje fakture, ukrašen nizovima otisaka izvedenih kotačićem (T. 1/11). Ukrašavanje kotačićem, odnosno nizovima kotačića javlja se već u ranome srednjem vijeku, krajem 9. i u 10. stoljeću,[30] a izrazito je karakteristično za razvijeni srednji vijek, odnosno 12. i početak 13. stoljeća, te će se intenzivno upotrebljavati do 14. stoljeća.[31]

Ulomci lončarije preciznije datirani u razdoblje razvijenoga srednjeg vijeka, odnosno u 12. i prvu polovinu 13. stoljeća, u najvećoj se mjeri javljaju u sektoru Sjever (sl. 14/A). Većinom potječu iz zapuna grobnih ukopa, a u jednom slučaju iz zapune ukopa za temelj jednog od sjevernih kontrafora ranogotičke crkve koja potječe iz ovog vre-

[29] BEKIĆ 2016: 47–48, 285, T. 72/7.
[30] SEKELJ IVANČAN, TKALČEC 2008: 118, 127, 128, kat. br. 29–31, 35, 38.
[31] SEKELJ IVANČAN 2010: 126, 127.

original early medieval deposit. Fragments from this layer have coarse fabric, medium-sized stone grains and ochre wall and cross-section surfaces (Pl. 1/9, 10) and had previously been dated to the period of the 7th and 8th centuries.[29] However, their features point to the later centuries of the Early Middle Ages. Namely, the pottery from this period is harder and there are still temper of small stone grains, but the surface is rarely vesicular (with cavities), while the inner walls of individual fragments were vertically hand-smoothed. The shoulders and bodies of the vessels are decorated with simple line series (Pl. 1/8) or single wavy lines.

Some pot body fragments are difficult to date to the Early or High Middle Ages (Fig. 12/6, 7) specifically because even in the High Middle Ages pots with a rather coarse fabric and a lot of small stone grain temper still appear. This is evident on a fragment of a pot rim with a more complex profile, dated with certainty to the High Middle Ages (Fig. 12/8; Pl. 1/14). This is why individual potsherds with simply cut rims but a more compact structure, or bodies with a very coarse fabric but decorated with single wavy lines (Pl. 1/9, 10, 12, 13), have been dated to a wider timespan: from the 10th to early 13th century. Also dated to this period, probably the end of the 11th or the 12th century, is a potsherd with coarse fabric and decorated with series of imprints made by a small row of wheel imprints (Pl. 1/11). Decoration or with a rows of wheel imprints, already started in the Early Middle Ages, at the end of the 9th and in the 10th century.[30] It was particularly characteristic during the High Middle Ages (12th and early 13th century), and was intensively used until the 14th century.[31]

Potsherds dated to the period of the High Middle Ages, more precisely to the 12th and the first half of the 13th century, occurred mostly in Section North (Fig. 14/A). The ma-

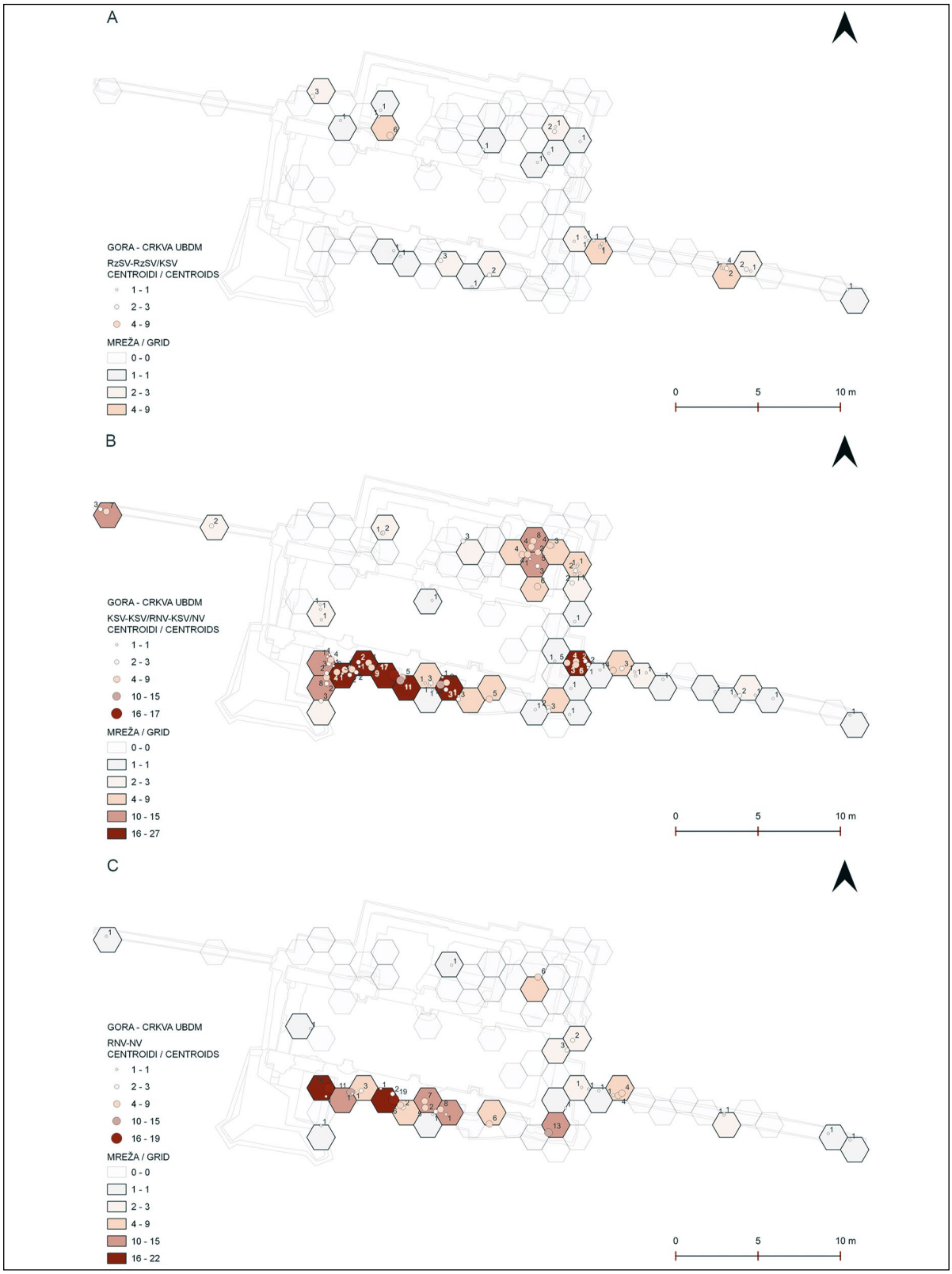
[29] BEKIĆ 2016: 47-48, 285, Pl. 72/7.
[30] SEKELJ IVANČAN, TKALČEC 2008: 118, 127, 128, Cat. No. 29-31, 35, 38.
[31] SEKELJ IVANČAN 2010: 126, 127.

mena. Kako je ponovno riječ o loše očuvanoj i usitnjenoj lončariji, dio ulomaka sa značajkama ovog razdoblja može pripadati i vremenu kasnoga srednjeg vijeka, a takvi su ulomci česti u sektoru Istok 2, ponovno većinom u zapunama grobova. U razdoblje razvijenoga srednjeg vijeka sa sigurnošću su opredijeljeni ulomci lonaca koji fakturom s primjesama zrnaca kamenčića podsjećaju na ranosrednjovjekovne tradicije, ali već složenije profilacije rubova upućuju na kasnije razdoblje (sl. 12/8; T. 1/14). Lončarija sadrži krupnija zrnca kamenčića, kompaktnija je i zrna ne ispadaju, a karakterizira je i pojava premazivanja površine stijenke žitkom glinom (sl. 12/9–12). Ulomci mogu biti ukrašeni motivom jednostruke valovnice visokih (sl. 12/10; T. 1/12), ali i niskih amplituda (sl. 12/9, 11; T. 1/15, 18), kao i nizovima jednostrukih valovnica (T. 1/19), nizovima valovnica koje se isprepleću (sl. 12/12; T. 1/20) ili jednostavnim vodoravnim linijama (najvjerojatnije nizovima vodoravnih linija) te rjeđe kosim zarezima (T. 1/21). Jednostruke valovnice ili nizovi valovnica koje se isprepliću odlika su razvijenoga srednjeg vijeka te se, osobito potonji motiv, uglavnom ne javljaju ni prije ni poslije tog razdoblja. Kosi zarezi na ramenu posuda na nekim se nalazištima javljaju već u 11. stoljeću, no uobičajeni su u 12. stoljeću. Na lokalitetu Šepkovčica u Turopolju datirani su u prvu polovinu 11. stoljeća,[32] dok na nalazištu Lendava-Gornje njive 2 u Sloveniji ovako ukrašeni lonci potječu iz objekata radiokarbonski datiranih u drugu polovinu 11. i u 12. stoljeće.[33] Na više lokaliteta oko Torčeca u koprivničkoj Podravini ukrašavanje kosim zarezima je učestalo u 12. stoljeću, u fazi Torčec IV.b, iako je sporadično zabilježeno i tijekom prethodne faze IV.a.[34] Rubovi lonaca iz Gore koso su odrezani, po-

[32] BUGAR 2008: 190, 191, kat. br. 14, 19, 21–23.
[33] KERMAN 2008: 83, 84, kat. br. 20–26, 32, 33.
[34] SEKELJ IVANČAN 2010: 134, kat. br. 407, 408, 420, 421, 433, 436, 442, 447.

jority were recovered from grave backfills, and one fragment from a backfill of a foundation for one of the northern buttresses of the early Gothic church that dates back to this period. Since, again, the pottery is poorly preserved and fragmented, some of the sherds with characteristics of this period might be dated to the Late Middle Ages. Such fragments are common in Section East 2, again mostly in grave backfills. Potsherds whose fabric with small stone grain temper is reminiscent of early medieval traditions has more complex rim profiles which suggest a later period can with certainty be dated to the High Middle Ages (Fig. 12/8; Pl. 1/14). The ware contains larger grains of small stones, it is more compact and the grains do not fall out, and it is also characterised by wall-surface coating of liquid clay (Fig. 12/9–12). The sherds are sometimes decorated with a single wavy-line motif, either with high (Fig. 12/10 1; Pl. 1/12) or low amplitudes (Fig. 12/9, 11; Pl. 1/15, 18), as well as with series of single wavy lines (Pl. 1/19), series of interlacing wavy lines (Fig. 12/12; Pl. 1/20) or simple horizontal lines (most likely series of horizontal lines), and less frequently with slanted incisions (Pl. 1/21). Single wavy lines or series of interlacing wavy lines are characteristic of the High Middle Ages; generally, they usually do not occur before or after that period (especially the latter motif). Slanted incisions on vessel shoulders in some sites occur as early as in the 11th century, but are common in the 12th century. At the Šepkovčica site in Turopolje they were dated to the first half of the 11th century,[32] while at the Lendava – Gornje Njive 2 site in Slovenia pots with such decorations originate from structures radiocarbon-dated to the second half of the 11th and to the 12th century.[33] In several localities around Torčec in the Koprivnica Podravina region, slanted incisions were a common decorative motif in the 12th century, during the Torčec IVb phase, although they were sporadically re-

[32] BUGAR 2008: 190, 191, Cat. No. 14, 19, 21-23.
[33] KERMAN 2008: 83, 84, Cat. No. 20-26, 32, 33.



Slika 14. *Prikaz učestalosti i distribucije lončarije u heksagonalnoj mreži dimenzija 2 x 2 m: A) razvijeni (RzSV) i razvijeni/kasni srednji vijek (RzSV/KSV), B) kasni srednji vijek (KSV) i kasni srednji / rani novi vijek (KSV/RNV) te kasni srednji / novi vijek (KSV/NV), C) rani novi vijek (RNV) i novi vijek (NV)* (izradila: F. Sirovica)
Figure 14 *Frequency and distribution of pottery in a 2 x 2 m hexagonal mesh: A) High (RzSV) and High/Late Middle Ages (RzSV/KSV), B) Late Middle Ages (KSV), Late Middle Ages / early modern era (KSV/RNV) and Late Middle Ages / modern era (KSV/NV), C) early modern era (RNV) and modern era (NV)* (made by F. Sirovica)

put ranosrednjovjekovnih, no zamjetna su izraženija oblikovanja bridova (T. 1/12, 13, 15), osobito izvlačenje donjeg brida ruba (T. 1/14) usporedivo s u 12. stoljeće datiranim primjercima s nalazišta Dubrava u Čepinskim Martincima.[35] Pojava kaležastih rubova (T. 1/16) potvrđena je upravo ulomkom lončarije nađenim u ukopu za temelj kontrafora, čime vrijeme njezine izgradnje, negdje od kraja 12. stoljeća,[36] postaje naznaka upotrebe tijekom ili neposredno prije tog perioda.[37]

Ulomci karakteristične kasnosrednjovjekovne lončarije javljaju se na čitavom području istraživanja, no najveći broj nađen je u različitim vrstama depozita utvrđenim tijekom iskopavanja u sektoru Jug. Fakture lonaca sadrže guste primjese sitnih zrnaca kamenčića, tj. pijeska, katkad i s primjesama tinjca, dok krupnija zrnca izostaju (sl. 12/13, 14). Keramika je kvalitetno pečena, sivo-smeđe ili crvenosmeđe boje, katkad svjetlijih tonova, a katkad i izrazito tamne, gotovo crne boje. Rubovi lonaca kaležastih su profilacija (T. 2/1–6), a javljaju se i rubovi čija je vanjska strana zadebljana (T. 2/7) ili narebrena, odnosno trostruko profilirana (T. 2/8–12). Sve su to značajke lončarije 14. do 16. stoljeća među kojom treba istaknuti pojedine ulomke preciznije datirane i kontekstom nalaza. Tu je ponajprije riječ o ulomcima lonaca (T. 2/7, 9) nađenim u zapuni groba 64 koji je smješten u drugu fazu ukopavanja koja završava u prvim desetljećima 14. stoljeća.[38] Ti su ulomci usporedivi i s materijalom nađenim u sloju iznad groba 50, radiokarbonski datiranom najkasnije u početak 13. stoljeća.[39] Među njima je moguće izdvojiti ulomak trostruko raščlanjenog ruba lonca crne boje

[35] TKALČEC, SEKELJ IVANČAN, KALAFATIĆ 2017: 250–252, T. 2/4; 3/7, 8; 4/13.
[36] BELAJ, SIROVICA, BEDIĆ 2021: 108–109.
[37] TKALČEC, SEKELJ IVANČAN, KALAFATIĆ 2017: 239.
[38] BELAJ, SIROVICA, BEDIĆ 2021: 101.
[39] BELAJ, SIROVICA, BEDIĆ 2021: 94, tab. 1; vidi i BELAJ, BELAJ 2016.

corded also in the course of the previous, IVa phase.[34] Pot rims from Gora are cut diagonally, as in early medieval pottery, but with more accentuated edges (Pl. 1/12, 13, 15), particularly everted lower rim edges (Pl. 1/14), which can be compared with finds from the Dubrava site in Čepinski Martinci, dated to the 12th century.[35] The occurrence of chalice-shaped rims (Pl. 1/16) was confirmed particularly by the potsherd recovered from the backfill of the buttress foundation, thus making the period of its construction (somewhere from the end of the 12th century)[36] an indication of the use of the pots during or just before that period.[37]

Fragments of characteristic late medieval pottery occurred in the entire excavated area, but the majority was found in different deposit types established during excavations in Section South. The pot fabric contains dense temper of fine grains of small stones or of sand, sometimes with mica inclusions, while larger grains are absent (Fig. 12/13, 14). The ware firing is of high quality, with grey-brown or red-brown colours, either of lighter shades, or extraordinarily dark, almost black. The pot rims have chalice-shaped profiles (Pl. 2/1–6), but rims thickened (Pl. 2/7) or ribbed, or triple profiled (Pl. 2/8–12) on the outside also appear. All these are features of pottery from the 14th to the 16th century; among them it is necessary to highlight certain fragments that were more precisely dated also by the context of the finds. Such are notably potsherds (Pl. 2/7, 9) found in grave backfill 64, dated to the second burial phase that ended in the first decades of the 14th century.[38] These sherds are comparable to the material found in the layer above Grave 50, radiocarbon-dated at the latest to the early 13th century.[39] Prominent among these is a

[34] SEKELJ IVANČAN 2010: 134, Cat. No. 407, 408, 420, 421, 433, 436, 442, 447.
[35] TKALČEC, SEKELJ IVANČAN, KALAFATIĆ 2017: 250-252, Pl. 2/4; 3/7, 8; 4/13.
[36] BELAJ, SIROVICA, BEDIĆ 2021: 108-109.
[37] TKALČEC, SEKELJ IVANČAN, KALAFATIĆ 2017: 239.
[38] BELAJ, SIROVICA, BEDIĆ 2021: 101.
[39] BELAJ, SIROVICA, BEDIĆ 2021: 94, Pl. 1; s. also BELAJ,

pečenja, relativno tankih stijenki, kompaktne sitnozrnate fakture (T. 2/8) koji ima paralele u Starom gradu Dubovcu, u lončariji iz sloja radiokarbonski datiranog u 14. stoljeće.[40] Osim kuhinjske keramike, tek je nekoliko ulomaka tijela posuda pripadalo kasnosrednjovjekovnoj stolnoj keramici. Uglavnom je riječ o ulomcima fine keramike, vjerojatno vrčeva, oker vanjske površine i svjetlosive unutrašnjosti, katkad s crvenim slikanjem.

Iz sektora Jug potječe sav keramički materijal koji nosi karakteristike i kasnoga srednjeg i ranoga novog vijeka te najveći broj ulomaka koji je još nešto šire datiran u kasni srednji i novi vijek (sl. 14/B). Naime, fakturu kasnosrednjovjekovne kuhinjske keramike nerijetko nije lako razlikovati od novovjekovne, dok su se pojedini oblici rubova lonaca u uporabi mogli zadržati tijekom nekoliko stoljeća. Iz tog razloga dosta velik broj nalaza nije bilo moguće uže vremenski opredijeliti između kasnoga srednjeg i novoga vijeka, a među njima se ističu ulomci lonaca kaležastih profilacija (T. 2/13–18) i ulomci rubova nešto složenijih, raščlanjenih profilacija (T. 2/19–21). U istu su vremensku kategoriju stavljeni i ulomci poklopaca (T. 4/1–5) te pojedini ulomci ramena lonaca ukrašenih vodoravnom linijom ili snopom vodoravnih linija, kakve se javljaju tijekom obaju perioda (T. 2/22). Od stolne keramike ovdje pripada i nalaz malog vrča finije fakture, unutrašnje stijenke sive, a vanjske svijetle, gotovo bijele boje s tragovima crvenog slikanja, koji se može datirati u izmak kasnog srednjeg ili u novi vijek (T. 4/13).

I materijal datiran u novi vijek najbrojniji je u sektoru Jug te je primjetno da se ulomci preciznije datirani u rani novi vijek u većem broju javljaju u zapadnom dijelu tog sektora (sl. 14/C). Novovjekovni keramički materijal najvećim je dijelom prikupljen tijekom

[40] TKALČEC 2024: 102, 128, Pl. 2/2–4.

fragment of a black-fired pot rim divided in three parts, with relatively thin walls and compact fine-grained fabric (Pl. 2/8), which has analogies in pottery from the Dubovac Castle in a layer that was radiocarbon-dated to the 14th century.[40] Besides the kitchenware, just a few fragments of vessel bodies were classified as late medieval tableware. These were mainly fragments of fineware, probably of jugs with ochre exterior surfaces and light grey interiors, sometimes with red painted decoration.

All ceramic material bearing the characteristics of both the Late Middle Ages and the early modern era (as well as the largest number of fragments that were somewhat more widely dated to the Late Middle Ages and the modern era (Fig. 14/B) originated from Section South. It is often difficult to distinguish late medieval and modern-era kitchenware fabric, some pot rim forms having been used for several centuries. For this reason, it was impossible to date a relatively large number of finds more precisely between the Late Middle Ages and the modern era: among these are fragments of pots with a chalice-shaped profile (Pl. 2/13–18) and fragments of rims with somewhat more complex, multipartite profiles (Pl. 2/19–21). Also classified in the same chronological category were lid fragments (Pl. 4/1–5) and certain shoulder fragments of pots decorated with a horizontal line or a bundle of horizontal lines, which occurred during both periods (Pl. 2/22). Of tableware, the find of a small jar of finer fabric, with grey inside and bright (almost white) outside walls and traces of red paintwork, which can be dated to the end of the Late Middle Ages or the modern era (Pl. 4/13), also belongs to this category.

Material dated to the modern era is also the most numerous in Section South; noticeably the fragments dated to the early modern period occur in a larger number in the western part of this Section (Fig. 14/C). The majority of mod-

BELAJ 2016.

[40] TKALČEC 2024: 102, 128, PL. 2/2-4.



Slika 15. *Novovjekovni zelenoglazirani vrč iz zapune groba djeteta* (snimila: T. Tkalčec)
Figure 15 *A modern-era green-glazed pitcher from the backfill of a child's grave* (photo by T. Tkalčec)

uklanjanja pojedinih slojeva, većinom utvrđenih ispod površinskih depozita humusa, šute i žbuke. U te slojeve ukopan je manji broj najmlađih grobova, a u pravilu su smješteni iznad grobova koji pripadaju četvrtoj fazi ukopavanja. Ulomci novovjekovne kuhinjske lončarije slične su fakture kao kasnosrednjovjekovna keramika, a kod pojedinih je zamjetna kompaktnija struktura i sitnija zrnca pijeska, dok je tinjac uglavnom izostao. Boje površina stijenki više su jednolične nego u kasnosrednjovjekovne keramike, a variraju od crvenosmeđih do tamnosivo-crnih tonova. Lonci kaležastih profilacija rubova, kakvi su uobičajeni u čitavome kasnom srednjem vijeku, u uporabi su i u novom vijeku (T. 3/1–3), a karakteristična je pojava jednostav-

ern-era ware was collected during the removal of individual layers, mostly identified under the surface deposits of humus, rubble and mortar. These layers contained a small number of the newest graves that, as a rule, were positioned above those belonging to the fourth burial phase. The fabric of modern-era kitchenware fragments is similar to that of the late medieval; some have a more compact structure and finer grains of sand, mostly without mica. The wall surface colours are more uniform than in late medieval ware, ranging from red-brown to dark grey-black shades. Pots with chalice-shaped rim profiles, common throughout the Late Middle Ages, were also in use in the modern era (Pl. 3/1–3); characteristic is the occurrence of simple (Pl. 3/4) or slanted rims with rounded

nih rubova (T. 3/4) ili koso odrezanih rubova zaobljenih bridova (T. 3/5). Takva je pojava uočena u mlađim novovjekovnim slojevima na Starom gradu Dubovcu datiranima u kraj 17. i početak 18. stoljeća.[41] U Starom gradu Bariloviću se učestalo javljaju s raznim inačicama, tj. preoblikovanjima i zadebljanjima, u slojevima datiranim od 17. do 19. stoljeća, s naglašenom uporabom tijekom 17. i 18. stoljeća.[42] Na utvrdi Čanjevu usporedivi primjerci prisutni su već u sloju datiranom novcem Rudolfa II. u kraj 16. stoljeća[43] te u slojevima 17. – 18. stoljeća.[44] Učestali su i oblici trostruko raščlanjenih rubova kakvi su uobičajeni već tijekom kasnoga srednjeg vijeka (T. 3/6–11). Među novovjekovnim nalazima pronađeno je nešto većih ulomaka posuda, poput ravnih dna i blago prstenastih dna lonaca (T. 3/12, 13) te većih ulomaka poklopaca (T. 4/8, 10). Drški poklopaca visoko su uzdignuti (T. 4/6), a rubovi poklopaca ne omogućuju preciznije vremensko opredjeljenje (T. 4/7–10).

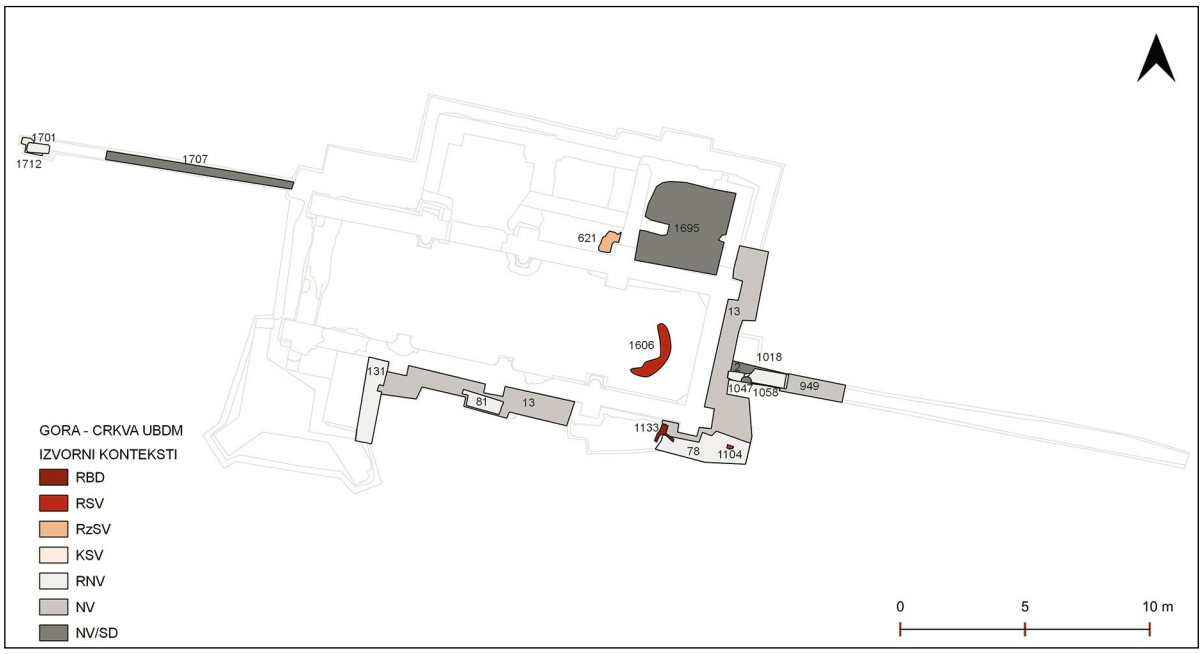
Glazirana keramika nije zastupljena u velikom broju. Ulomak noge tripoda, odnosno zdjele na tri noge, na očuvanom dijelu unutrašnjosti recipijenta premazan je zelenom glazurom (T. 4/12). Takve se posude, prilagođene praktičnom pripremanju hrane na otvorenom ognjištu, upotrebljavaju od kasnih razdoblja kasnoga srednjeg vijeka te u čitavome novom vijeku. Tanjur fine fakture, crvene boje pečenja s premazom bijelo-krem glazure na gornjem dijelu vanjske površine stijenke te žute glazure na čitavoj unutrašnjosti, predstavlja jedan od rijetkih inače fragmentiranih primjeraka stolne keramike koji jasnije upućuje na oblik posude (T. 4/11). Karakterističan je i nalaz manjega zelenoglaziranog vrča (sl. 15; T. 4/14) koji je nađen u zapuni groba djeteta iz sektora Zapad 2 (grob 372), uko-

[41] TKALČEC 2024: 107, 133, sl. 7/1; T. 6/1; 6/2; oblik ruba 1.
[42] KRMPOTIĆ 2014: 86, 203, 208, 209, tab. 7/tip 01A, T. 39/450; 44/524, 528; 45/539.
[43] ČIMIN 2008: 170, T. 3/13.
[44] ČIMIN 2008: 168, 170, 171, T. 1/5; 3/5, 9; 4/4, 6.

edges (Pl. 3/5). This occurrence was observed in the more recent modern-era layers of the Dubovac Castle dated to the late 17th and early 18th century.[41] In the Barilović Castle they frequently occur in different variations (reshaping, thickening) in layers dating from the 17th to the 19th century, and were particularly intensively used over the course of the 17th and 18th centuries.[42] At the Čanjevo fortress, comparable pieces were present in a layer dated to the late 16th century[43] on the basis of a Rudolf II coin, and in the 17th–18th century layers.[44] Tripartite forms of rims, which are common already from the Late Middle Ages onward, are also present (Pl. 3/6–11). Among modern-era finds, some larger potsherds were found, such as flat bases and ring-shaped pot bases (Pl. 3/12, 13), as well as larger fragments of lids (Pl. 4/8, 10). Lid handles are highly raised (Pl. 4/6), and the pot rims do not allow for a more precise chronological classification (Pl. 4/7–10).

Glazed ware was not found in large numbers. A foot fragment of a tripod pipkin (a three-footed bowl or pan) has green glaze on the preserved part of the receptacle's interior (Pl. 4/12). Such vessels, adapted to practical preparation of food on an open hearth, were in use from the Late Middle Ages and throughout the entire modern era. A plate with a fine fabric, red firing and white-cream-coloured glazing on the upper part of the outside wall surface, and yellow interior glazing, represents one of the few pieces of rather fragmented tableware that more clearly indicates the vessel's shape (Pl. 4/11). Another characteristic find is a small green-glazed pitcher (Fig. 15; Pl. 4/14) recovered from the backfill of a child's grave from Section West 2 (Grave 372), situated at its western edge next to the stone enclosure (cincture). Such pitchers were used for liturgical purposes at Mass celebrations; comparable

[41] TKALČEC 2024: 107, 133, Fig. 7/1; Pl. 6/1; 6/2; rim shape 1.
[42] KRMPOTIĆ 2014: 86, 203, 208, 209, Pl. 7/type 01A, Pl. 39/450; 44/524, 528; 45/539.
[43] ČIMIN 2008: 170, Pl. 3/13.
[44] ČIMIN 2008: 168, 170, 171, Pl. 1/5; 3/5, 9; 4/4, 6.



Slika 16. *Konteksti s nalazima ulomaka lončarije te interpretirani kao istovremeni ili primarni depoziti* (izradila: F. Sirovica)
Figure 16 *Contexts with finds of potsherds, interpreted as simultaneous or primary deposits* (made by F. Sirovica)

panog uz cinktor na zapadnom kraju iskopa. Takvi su vrčevi upotrebljavani u liturgijske svrhe pri misnim obredima, a usporedivi primjerci pronađeni su u novovjekovnom sloju izmiješanih zapuna grobova na nalazištu Crkvari – crkva svetog Lovre kraj Orahovice.[45]

RASPRAVA

Arheološki radovi provedeni oko crkve Uznesenja Blažene Djevice Marije u Gori izvedeni su u svrhu njezine obnove te su, uz definiranje temelja, većinom obuhvatili mnogobrojne grobove koji su na tom prostoru ukopani prije i tijekom njezina trajanja. Riječ je o specifičnome sakralno-funeralnom kontekstu, u kojem lončarija, kao i drugi predmeti korišteni u svakodnevnom životu, neće nužno biti karakterističan nalaz. Uz to, intenzivno i kontinuirano višestoljetno ukopavanje grobova, koje stalno premješta, ali i degradira pokretne arheološke ostatke, nužno umanjuje i njihovu interpretativnu vri-

[45] TOMIČIĆ, TKALČEC 2005: 15.

sherds were found in the modern-era layer of mixed grave backfills at the Crkvari – St. Lawrence Church site near Orahovica.[45]

DISCUSSION

In the archaeological excavations around the Church of the Assumption of the Blessed Virgin Mary in Gora, conducted prior to its restoration, its foundations were defined, while the excavation mostly encompassed numerous graves that had been dug there before and during the Church's construction and use. The context is typically sacral and funerary, making pottery or other everyday artefacts not necessarily a characteristic find. In addition, the intensive, continuous, and centuries-long burial practice has constantly displaced – but also degraded – movable archaeological remains, inevitably diminishing their interpretative value. Scarce and fragmented potsherds deprived of their original context are therefore an expected result of archaeological excavations of this

[45] TOMIČIĆ, TKALČEC 2005: 15.

jednost. Stoga su malobrojni i fragmentirani ulomci lončarije lišeni izvornog konteksta očekivani rezultat arheoloških iskopavanja ovog tipa arheološkog zapisa. Unatoč tomu, moguće je pretpostaviti da, neovisno o intenzitetu, ukopavanje grobova neće nužno rezultirati premještanjem materijala na veće udaljenosti te da koncentracija ulomaka na određenom prostoru može biti naznaka područja i intenziteta aktivnosti tijekom pojedinog razdoblja. Iz tog razloga, analiza skupa keramičkih nalaza i obrasci njihove pojave i distribucije na nalazištu otvaraju mogućnost izvođenja određenih pretpostavki i donošenja pojedinih zaključaka.

S obzirom na kronološku kategorizaciju lončarije, moguće je primijetiti da najraniji nalazi govore o korištenju ovog položaja već tijekom kasnoga brončanog doba. U najvećem su broju utvrđeni na istočnom dijelu nalazišta, gdje je, u istočnom dijelu sektora Jug, smješten i depozit (sl. 16/1133) u kojem je nađeno sedam ulomaka kasnobrončanodobne lončarije. Kako je bio relativno tanak i sačuvan na maloj površini uz jugoistočni kontrafor crkve, nije moguće sa sigurnošću utvrditi uzroke njegova nastanka, no riječ je vjerojatno o izvornom kontekstu, možda ostatcima sloja, nastalom aktivnostima tijekom kasnoga brončanog doba.

Rimsko je doba na nalazištu zastupljeno s tek jednim ulomkom lončarije, no s čak 128 ulomaka tehničke i građevinske keramike taj je keramički materijal iz ovog razdoblja moguće smatrati trećim najzastupljenijim na nalazištu. Među materijom se ističe relativno visok udio ulomaka tubula, šupljih opeka pravokutnog presjeka koji predstavljaju karakterističan konstruktivni element rimskodobnog sustava grijanja. Iz istog razdoblja mogla bi potjecati i dva komada većih kamenih stupova kružnog presjeka, koji su iskorišteni za gradnju temelja zvonika tijekom barokne obnove crkve,[46] te

[46] MILETIĆ 1999: 146–147.

type of archaeological records. Nevertheless, it can be assumed that, regardless of intensity, grave-digging will not necessarily result in the transfer of material over a larger area, and the concentration of fragments in specific locations may be an indication of the area and intensity of activity during a particular period. For this reason, the analysis of the pottery assemblage and its occurrence and distribution patterns at the site open up the possibility of making certain assumptions and conclusions.

In view of the chronological categorisation of the pottery, it should be noted that the earliest finds suggest the site was already being used during the Late Bronze Age period. Their greatest number was recovered in the site's eastern part where, in the eastern part of Section South, a deposit was located in which seven fragments of Late Bronze Age pottery were unearthed (Fig. 16/1133). Given that it was relatively thin and preserved in a small surface area along the church's south-eastern buttress, it is not possible to determine with certainty how it was created, but it is probably the original context, perhaps the remains of a layer created by activities during the Late Bronze Age.

At the site, the Roman period is represented by just one potsherd, but as many as 128 fragments of technical and construction ceramics, and the ceramic material from this period can be considered the third most abundant at the site. Prominent among the material is a relatively high proportion of fragments of tubuli: hollow, rectangular-section bricks, which represent a characteristic structural element of Roman-period heating systems. Two sections of rather large stone columns of a circular cross-section (used for the construction of the foundations of the bell tower during the Baroque renovation of the church),[46] and a stone beam with part of an inscription,[47] built (along

[46] MILETIĆ 1999: 146-147.

[47] The central part of the inscription with Roman capital script has been preserved. with the letters LO and a part of another letter (MILETIĆ, VALJATO FABRIS 1998: rec. no. 185; MILETIĆ 1999: 144).

kamena greda s dijelom natpisa,[47] koji je zajedno s drugim spolijima bio uzidan u glavni oltar uklonjen tijekom prve faze arheoloških radova.[48] Najraniji dokaz ponovne upotrebe rimskodobnog materijala jest opeka ugrađena u polukružnu strukturu interpretiranu kao temelj apside romaničke crkve. Iako je moguće da navedeni ostatci govore o korištenju ovog položaja tijekom rimskog doba, vrste nalaza te konteksti u kojima se javljaju, uz manjak lončarije te izostanak drugih vrsta nalaza, upućuju na specifičnost uzroka pojave rimskodobnih nalaza. Iz tog je razloga moguće pretpostaviti da je riječ o materijalu koji ne potječe s ovog nalazišta, već je u kasnijim razdobljima po potrebi donošen, vjerojatno s nekog obližnjeg položaja. Stoga je u bližoj okolici moguće očekivati rimskodobno nalazište, možda s ostatcima vile o čijoj raskoši govori i sustav grijanja i vrste nađenih kamenih spolija.[49]

Unatoč malobrojnosti i fragmentiranosti ranosrednjovjekovnih nalaza, sa sigurnošću se može govoriti o ponovnom naseljavanju ovog prostora već u 7. i 8., a zatim i u 10. i 11. stoljeću, iako nije moguće isključiti mogućnost da pojedini ulomci potječu i iz perioda između dviju predloženih datacija. Kao i materijal iz drugih razdoblja, lončarija većinom potječe iz višestruko izmiješanih depozita, no u dvama slučajevima depoziti nose značajke izvornih ranosrednjovjekovnih konteksta. U prvom je riječ o ostatku zapune loše očuvanog ukopa, ponovno smještenom nedaleko od jugoistočnog kontrafora (sl. 16/1104), u kojem je nađen ulomak koji svjedoči o najranijoj fazi ranosrednjovjekovnih naseljavanja (sl. 12/3; T. 1/5). Ulomci iz kasnije faze ranog srednjeg vjeka naseljavanja

[47] Sačuvan je središnji dio natpisa s rimskom kapitalom ispisanim slovima LO uz dio još jednog slova (MILETIĆ, VALJATO FABRIS 1998: ev. br. 185; MILETIĆ 1999: 144).

[48] MILETIĆ 1999: 144.

[49] U okolici crkve u Gori nekoliko je položaja čiji toponim ili topografske značajke upućuju na arheološki potencijal. Uz njih je potrebno spomenuti i bilješku o položaju Begovo smještenom oko 100 metara sjeverno od crkve, gdje se, prema predaji, nalaze ostatci palače ili dvorca (KRUHEK, HORVAT 1986: 173).

with other spolia) into the main altar removed during the first phase of archaeological excavations,[48] might also have originated from the same period. The earliest evidence of the reuse of Roman-period material is brick built into a semicircular structure interpreted as the foundations of the apse of the Romanesque church. Although these remains possibly suggest the use of the site in the Roman period, the find types and contexts along with the absence of pottery or other types of finds indicate a specific causes of the occurrence of Roman-period finds. For this reason it can be assumed that the material does not originate from this site, but was rather transfered in subsequent periods as needed, probably from a nearby location. Therefore, it can be expected that a Roman site exists in the near vicinity, possibly featuring the remains of a villa whose splendour is suggested by its heating system and the types of recovered stone spolia.[49]

Despite the scarcity and fragmentation of early medieval finds, it is certain that this area had already been resettled in the 7th and 8th centuries, and was again occupied in the 10th and 11th centuries. That said, the possibility that individual fragments originate from the period between these two proposed dates cannot be excluded. As with the material from other periods, the majority of pottery finds originates from multiple mixed deposits; however, in two cases, the deposits bear the features of the original early medieval contexts. One of them is the remains of the backfill of a poorly preserved cut, located not far from the south-eastern buttress (Fig. 16/1104), in which a fragment was unearthed that testifies to the earliest phase of early medieval activities (Fig. 12/3; Pl. 1/5). Fragments from a later phase of Early Middle Ages (Pl. 1/9, 10) were uncovered in the remains of what is believed to be an original deposit identi-

[48] MILETIĆ 1999: 144.

[49] In the vicinity of the church in Gora are several locations whose toponym or topographical features suggest archaeological potential. In addition, a note about the Begovo site needs to be mentioned: legend has it that approximately 100 metres north of the church lay the remains of a palace or a castle (KRUHEK, HORVAT 1986: 173).

(T. 1/9–10) nađeni su u ostatcima vjerojatno izvornog depozita utvrđenog ispod temelja romaničke crkve (sl. 16/1606). Pri tome je vjerojatno riječ o ostatcima naseobinskog sloja koji svjedoče o aktivnostima upravo one zajednice koja će sagraditi romaničku crkvu i time konačno definirati način korištenja ovog prostora.

U idućim stoljećima, tijekom korištenja romaničke i zatim izgradnje ranogotičke crkve (sl. 16/621), prostor oko crkve intenzivno se upotrebljava za pokopavanje pokojnika, no ulomci lončarije, većinom evidentirani sjeverno od crkve, ali i u sektoru Istok 2, i dalje svjedoče o svakodnevnim aktivnostima u neposrednoj blizini položaja. Usporedivi su s istodobnim materijalom sa šireg prostora savsko-dravskog međuriječja, i unatoč dolasku templara i promjenama u upravljačkim odnosima, mogu se smatrati implikacijom kontinuirane prisutnosti iste zajednice i neprekinutom naseljavanju ovog prostora.

Kontinuitet naseljavanja moguće je pratiti i tijekom kasnoga srednjeg vijeka, odnosno u periodu koji okvirno počinje s dolaskom ivanovaca i traje do 16. stoljeća i razdoblja intenzivnih prodora Osmanlija. Uz materijal koji je moguće striktnije povezati s kasnim srednjim vijekom, velik dio materijala ima značajke koje traju i tijekom idućeg razdoblja. Zbog slabe očuvanosti nije ih moguće preciznije opredijeliti te razmatrani zajedno čine najbrojniju skupinu nalaza koja obuhvaća više od 40 % ulomaka. Uz izrazitiju učestalost na južnom dijelu nalazišta, lončarija se prvi put javlja na cijelom području istraživanja, odnosno u svim iskopavanim sektorima. Prevladava kuhinjska keramika, ali sporadično se javlja i fina, stolna lončarija koja upućuje na to da je u relativnoj blizini moguće očekivati stambene objekte stanovnika višeg statusa ili župni dvor. Takva situacija utvrđena je na nalazištu Sarvaly u Mađarskoj gdje je istraženo kasnosrednjovjekovno selo čiju je dominantu činila crkva okružena grobljem.[50] Vrlo blizu grobljanske ograde nalafied under the foundations of the Romanesque church (Fig. 16/1606). The remains are probably of the layer which is an indication of the activities of the community that would build the Romanesque church and thus, to this day, define the way the area is used.

In the following centuries, during the use of the Romanesque, and then the construction of the early Gothic church (Fig. 16/621), the area around the church was intensively used for burials; however, potsherds (mostly recorded north of the church, as well as in Section East 2) testify to everyday activities in the site's immediate vicinity. They are analogous with contemporaneous material from the wider area of the Sava-Drava interfluve, dated to the same period and can be considered (despite the arrival of the Templars and the changes in governance relations) an implication of the continuous presence of the same community and the uninterrupted settlement of the area.

The continuity of settlement can be tracked also in the Late Middle Ages, in the period that began with the arrival of the Hospitallers and lasted until the 16th century, the period of intensive Ottoman invasions. In addition to artefacts strictly dated to the Late Middle Ages, a large part of the material has characteristics that were retained during the subsequent period. Due to their poor preservation, no precise dating is possible. Classified to the same category, they make up the most numerous part of the assemblage, with more than 40% of the fragments. While more frequent in the southern part of the site, pottery from this period is represented (for the first time) in the entire research area, in all excavated sections. Kitchenware prevails, but occasionally, fine tableware also occurs, indicating that relatively close nearby could have been residential structures of inhabitants of higher status, or possibly a parish court. Such a situation was confirmed at the Sarvaly site in Hungary, where a late medieval village was excavated in which the central position was occupied by a church

[50] NEKUDA 2005.

zilo se domaćinstvo ograđeno kamenim zidom s troprostornom kućom veličine 24 x 20 m. O posebnom društvenom položaju njezinih stanara govore nalazi stolne keramike, osobito talijanske majolike, venecijanskog stakla i pećnjaci, a zbog blizine crkve ovo je imanje protumačeno kao župni dvor.[51] Ipak, istraživanje zastupljenosti stolne keramike unutar kućanstava u ruralnim kasnosrednjovjekovnim naseljima i istraživanje prisutnosti višega društvenog sloja u ruralnim zajednicama u okvirima hrvatske arheologije tek je u začetcima.[52]

Većina lončarije i dalje potječe iz zapuna grobnih ukopa, no izvorne naseobinske ostatke iz ovog perioda možda je moguće prepoznati u manjem dijelu sloja zahvaćenog na samome zapadnom kraju iskopa iz kojeg su izdvojena tri ulomka (sl. 16/1712). Iako nose značajke koje se javljaju i u novom vijeku, dataciju je možda moguće suziti na temelju jedinog groba utvrđenog uz zapadni zid cinkture i ukopanog u ovaj sloj (grob 372). Naime, na dnu ukopa uz ruku djeteta nađen je srebrni krajcar, s naznačenom 1624. kao godinom kovanja,[53] a u zapuni (sl. 16/1701) ulomak zelenoglaziranog vrča koji preciznije datiraju vrijeme njegova ukopa. Istodobno, iz zapune je izdvojeno i sedam ulomaka uže datirane kasnosrednjovjekovne lončarije koja vjerojatno potječe iz sloja u koji je grob ukopan.

Dio nalaza bilo je moguće preciznije datirati u rani novi vijek, čiji je početak obilježen sukobima s Osmanlijama koji tijekom druge polovice 16. stoljeća u više navrata osvajaju obližnji Gorski grad.[54] Ipak, direktni dokazi tih događaja oko crkve nisu ustanovljeni, kao ni karakteristična osmanska keramika. Istodobno, primjetan je i potpuni izostanak pećnjaka, koji su od kasnoga srednjeg vijeka karakteristični nalazi na istovremenim nalazištima naseobinskog karaktera te će se u pravilu javljati i u usporedivim sakralno-

[51] NEKUDA 2005: 264–265.
[52] TKALČEC 2013: 81–82, 86; JANEŠ 2023.
[53] Za determinaciju novca zahvaljujemo Sebastijanu Stinglu.
[54] KRUHEK, HORVAT 1986: 174.

surrounded by a graveyard.[50] Very close to the graveyard fence was a household enclosed by a stone wall with a three-room 24 x 20-m dwelling. Tableware finds, particularly Italian majolica, Venetian glass and stove tiles, indicate the special social status of its residents, and in view of the vicinity of the church, the property was interpreted as a parish court.[51] However, the analysis by Croatian archaeologists of the representation of tableware within households in rural late medieval settlements (as well as of the presence of a higher social class in rural communities) is yet in its initial stage.[52]

The majority of the pottery still originates from the grave backfills, but the original occupational remains from this period are possibly recognisable in a small part of the layer excavated at the westernmost part of the excavated areas, where three potsherds were recovered (Fig. 16/1712). Although they bear characteristics that occur also in the modern era, their dating can perhaps be narrowed down due to the only grave identified along the western part of the stone enclosure and dug in this layer (Grave 372). Finds which enabled a more accurate dating of the burial are a silver Kreutzer with 1624 indicated as the year of minting,[53] found at the bottom of the grave, next to a child's hand, and in the backfill (Fig. 16/1701), a fragment of a green-glazed pitcher. In addition, recovered from the backfill were seven pottery fragments dated more narrowly to the Late Middle Ages, probably originating from the layer in which the very grave was buried.

It was possible to date part of the finds more accurately to the early modern era, whose beginning was marked by conflicts with the Ottomans, who on several occasions in the second half of the 16th century conquered the nearby fortress of Gorski Grad.[54] However, no direct

[50] NEKUDA 2005.
[51] NEKUDA 2005: 264-265.
[52] TKALČEC 2013: 81-82, 86; JANEŠ 2023.
[53] We would like to thank Sebastian Stingl for the determination of the coin.
[54] KRUHEK, HORVAT 1986: 174.

funeralnim arheološkim zapisima. U tom je kontekstu potrebno istaknuti da je na temelju analize pokopavanja na prostoru sakristije, za ovaj period pretpostavljen određeni pad intenziteta funeralnih aktivnosti, odnosno smanjenje ili s vremenom čak i prestanak ukopavanja grobova, jer crkva prestaje biti središte župe i u nekom trenutku postaje ruševna.[55]

Iako je pokopavanje moglo biti nastavljeno na dijelovima posvećene površine groblja, nešto udaljenijim od ruševne crkve, naznaku smanjenja intenziteta pokopavanja neposredno uz crkvu možda pruža i utvrđena distribucija preciznije datiranih ranonovovjekovnih nalaza. Naime, u ovom razdoblju prvi je put utvrđen znatno viši udio materijala u slojevima u odnosu na onaj koji dolazi iz zapuna različitih ukopa što upućuje na svojevrsnu promjenu u aktivnostima. Među tim slojevima, u sektoru Jug moguće je izdvojiti nekoliko depozita (sl. 16/78, 81, 131, 1018, 1047, 1058) smještenih iznad razine četvrte faze ukopavanja grobova koja, na temelju podataka iz sakristije, traje do kraja 16. te možda na početku 17. stoljeća.[56] Iznad tih slojeva mjestimično su utvrđene nakupine velikog kamenja interpretirane kao urušenje vjerojatno nastalo tijekom sukoba s Osmanlijama. Iznad njih nalaze se slojevi s nešto šire datiranim novovjekovnim nalazima (sl. 16/13, 40, 949), u pravilu smješteni ispod slojeva šute i žbuke (sl. 16/2, 1695, 1707), koji vjerojatno svjedoče o obnovi crkve tijekom 18. i zatim 19. stoljeća.

Ipak, potvrda ovih pretpostavki zahtijeva dodatna istraživanja, a grob djeteta s novcem iz prve polovine 17. stoljeća, nađen na rubu ograđenoga crkvenog prostora (sl. 16/1701, grob 372), ne može pružiti dodatni uvid u događanja tijekom ovog perioda. Iako je moevidence of these events in the church's surroundings has been established, nor has any characteristic Ottoman pottery been identified. At the same time, the complete absence of stove tiles is evident; these are characteristic of contemporaneous sites with a residential character from the Late Middle Ages on and appear, as a rule, in comparable sacral and funerary archaeological records. In this context, it should be pointed out that, on the basis of an analysis of burials in the sacristy area, a decline in the intensity of funerary activities (even a cessation of burials) in the said period is assumed, because the church lost its function as a parish centre and, at some point, became dilapidated.[55]

Although it would have been possible to continue with interments in the consecrated sectors of the graveyard somewhat further away from the dilapidated church, the distribution of the more precisely dated early modern-era finds might serve as an indicator of decreased burial intensity in the zones directly adjacent to the church. That is to say, in the early-modern-era layers, for the first time, a significantly higher proportion of material was recovered, compared to the share of artefacts unearthed in other grave backfills, which suggests a certain change in activities. Among these layers, several deposits are evident in Section South (Fig. 16/78, 81, 131, 1018, 1047, 1058) above the level of the fourth burial phase, which, on the basis of data from the sacristy, lasted until the late 16th and perhaps into early 17th century.[56] Identified at some spots above these layers were piles of large stones, interpreted as debris, probably originated from the period of conflicts with the Ottomans. Above them were layers with modern-era finds (Fig. 16/13, 40, 949) dated to a somewhat wider timespan, usually lying under layers of rubble and mortar (Fig. 16/2, 1695, 1707), which probably testify to the restorations of the church in the

[55] MILETIĆ 1999: 136; BELAJ, SIROVICA, BEDIĆ 2021: 111.

[56] BELAJ, SIROVICA, BEDIĆ 2021: 111.

[55] MILETIĆ 1999: 136; BELAJ, SIROVICA, BEDIĆ 2021: 111.

[56] BELAJ, SIROVICA, BEDIĆ 2021: 111.

gao biti ukopan tijekom 17. stoljeća, ne može biti isključeno ni da je ukopan nakon konačnog odlaska Osmanlija, čemu u prilog možda govori i nalaz manjega zelenoglaziranog vrča (sl. 15; T. 4/14) kakvi se rabe tijekom 17., ali i 18. stoljeća.[57] Ipak, izdvojenost njegova ukopa mogla bi biti indikacija nemogućnosti neposrednog pristupa prostoru oko ruševnoga sakralnog objekta uz koji je, prema kanonskim vizitacijama, početkom 18. stoljeća privremeno sagrađena drvena kapela.[58] Obnova crkve odvija se na samom početku 18. stoljeća, a trajat će i u sljedećim desetljećima,[59] dok se groblje upotrebljava do samog kraja 18. stoljeća,[60] o čemu svjedoče grobovi iz najmlađe faze ukopavanja.[61] Unatoč preseljenju groblja izvan naselja, upotreba crkve se nastavlja, a iako i dalje rijetki, nalazi lončarije i iz suvremenog doba svjedoče o tim aktivnostima.

ZAKLJUČAK

Lončarija, kao i druge vrste keramičkog materijala prikupljenog tijekom arheološkog iskopavanja oko crkve Uznesenja Blažene Djevice Marije u mjestu Gori, najvećim dijelom potječe iz zapuna brojnih grobova ukopavanih na području istraživanja tijekom osam stoljeća. Stoga je većina keramičkih nalaza utvrđena izvan izvornih konteksta te je lončarija izrazito fragmentirana i loše očuvana. Ipak, moguće je pretpostaviti da kontinuirano ukopavanje grobova ne rezultira premještanjem materijala na veće udaljenosti te da koncentracija ulomaka na određenom prostoru može biti naznaka izvornosti pojedinih konteksta te intenziteta i vrste aktivnosti tijekom određenog razdoblja. Iz tog je razloga provedena analiza prikupljenih ulomaka i obrazaca njihove pojave na na-

18th and 19th centuries.

However, confirmation of these assumptions requires further investigation, and the child's grave with the coin find from the first half of the 17th century, found at the periphery of the enclosed churchyard (Fig. 16/1701, Grave 372), cannot provide additional insight into the events of the period. Although the burial might have been performed in the 17th century, it cannot be excluded that it was conducted after the Ottomans had left, which might be confirmed by the find of the small green-glazed pitcher (Fig. 15; Pl. 4/14) of a type used in the 17th, but also in the 18th century.[57] However, the isolation of the burial might suggest it was impossible to directly access the space around the dilapidated church, next to which, ordered by the canonical visitation, a temporary wooden chapel was built in early 18th century.[58] The church restoration was in progress at the beginning of the 18th century, and would continue in the following decades,[59] while the graveyard was in use until the very end of the 18th century,[60] as evidenced by graves from the most recent burial phase.[61] Despite the graveyard being moved outside the settlement, the church continued to be used, as confirmed also by the still rare contemporary-period pottery finds.

CONCLUSION

The majority of finds of pottery and of other types of ceramic material collected during archaeological excavations around the Church of the Assumption of the Blessed Virgin Mary in the town of Gora originates from backfills of numerous graves in the excavated area dug over the course of eight centuries. Therefore, most ceramic finds were recovered outside their original contexts, while the pottery was

57 TOMIČIĆ, TKALČEC 2005: 15.
58 CVITANOVIĆ 1971: 151, bilj. 5.
59 MILETIĆ 1999: 146–147.
60 CVITANOVIĆ 1971: 154.
61 STINGL, BELAJ 2023.

57 TOMIČIĆ, TKALČEC 2005: 15.
58 CVITANOVIĆ 1971: 151, n. 5.
59 MILETIĆ 1999: 146-147.
60 CVITANOVIĆ 1971: 154.
61 STINGL, BELAJ 2023.

lazištu, koja pokazuje da razmatrani materijal još uvijek sadrži znatan informativni potencijal. Naime, u kombinaciji s drugim poznatim podatcima, rezultati provedenih postupaka omogućuju izvođenje određenih pretpostavki i donošenje pojedinih zaključaka o obrascima korištenja ovog prostora tijekom različitih vremenskih perioda.

Podatci dobiveni provedenim analizama s jedne strane upućuju na izvornost ili kronološko opredjeljenje pojedinih konteksta te omogućuju definiranje primarnog mjesta depozicije za određeni broj ulomaka. S druge strane, svjedoče o dugotrajnom korištenju samog položaja i njegove neposredne okolice, koje je moguće pratiti tijekom brončanog i rimskog doba pa, u skoro neprekinutom kontinuitetu, od 7. stoljeća do danas. U tom je kontekstu potrebno istaknuti da, uz pojedine nalaze od kamena, keramički nalazi predstavljaju trenutačno jedini dokaz korištenja ovog prostora tijekom rimskog doba te vjerojatno upućuju na smještaj rimskodobnog nalazišta u neposrednoj blizini ovog položaja. S druge strane, pojava, distribucija i učestalost ulomaka iz kasnijih razdoblja direktna su refleksija promjena u načinu korištenja samog položaja, prvo kao ranosrednjovjekovnog naselja, a zatim u sakralne i funeralne svrhe zasigurno već od početka 11. stoljeća. Iako malobrojan i sa sporadično očuvanim tipološkim značajkama, pronađeni keramički materijal od tog vremena i za iduća razdoblja i dalje ostaje indikacija pojedinih elemenata svakodnevnog života te dokaz smjena vremenskih razdoblja ili naznaka na druge načine posvjedočenih povijesnih zbivanja.

highly fragmented and poorly preserved. Nevertheless, it is possible to assume that continuous burials will not result in long-distance displacement of the material and that the concentration of sherds in a certain area may be an indication of the originality of a certain contexts, and of the intensity and type of activity over a certain period. For this reason, the collected fragments and patterns of their occurrence at the site were analysed, and the results showed that the considered material still contains significant information potential. In fact, combined with other known data, the results allow certain assumptions and conclusions about the patterns of use of the space over the course of different periods.

On the one hand, the data obtained from the analysis suggest the originality or enable the chronological classification of certain contexts, and allow the primary position of deposition of a certain number of fragments to be determined. On the other hand, they testify to the long-term use of the site and its immediate surroundings, which can be traced to the Bronze Age, the Roman period, and with almost uninterrupted continuity from the 7th century to the present day. In this context, it should be pointed out that, in addition to some stone finds, ceramic finds are currently the only evidence of the use of this area during the Roman period, probably indicating the location of a Roman site in the immediate vicinity. Nonetheless, the appearance, distribution and frequency of fragments from later periods are a direct reflection of changes in the site's use, initially probably as an early medieval settlement, and then certainly from as early as the 11th century for sacral and funerary purposes. Although scarce, and with sporadically preserved typological characteristics, the found ceramic material from that period onwards remains an indication of certain elements of everyday life, testifying to the shift of eras or indicating otherwise witnessed historical events.

Translation and proof-reading:
ETNOtrend d. o. o.

Literatura / References

AZINOVIĆ BEBEK, A., PLEŠE, T. 2004, Gora, župna crkva Uznesenja Blažene Djevice Marije, *Obavijesti Hrvatskog arheološkog društva*, XXXVI (1), 146–155.

BEDIĆ, Ž., BELAJ, J., SIROVICA, F. 2022, Bioarheološka studija populacije iz Gore kraj Petrinje, Hrvatska / Bioarchaeological study of the population of Gora near Petrinja, Croatia, *Prilozi Instituta za arheologiju u Zagrebu*, 39 (1), 173–198.

BEKIĆ, L. 2016, *Rani srednji vijek između Panonije i Jadrana: Ranoslavenski keramički i ostali arheološki nalazi od 6. do 8. stoljeća / The Early Medieval Between Pannonia and the Adriatic: Early Slavic Ceramic and Other Archaeological Finds from the Sixth to Eighth Century*, Monografije i katalozi 27, Pula: Arheološki muzej Istre.

BELAJ, J. 2011, Prikaz arheoloških istraživanja crkve Uznesenja Blažene Djevice Marije u Gori tijekom 2008. i 2009. godine, u/in: *Antiquam fidem*, *Zbornik radova sa znanstvenog skupa Antiquam fidem, Sisak, 3.–5. prosinca 2010.*, Tepert, D., Jurić, S. (ur./eds.), Zagreb: Glas Koncila, 121–147.

BELAJ, J., BELAJ, M. 2016, Prstenasti broš s natpisom iz templarske Gore – prijedlog dekodiranja / An Inscribed Annular Brooch from the Templar Site of Gora – A Possible Decipherment, *Prilozi Instituta za arheologiju u Zagrebu*, 33, 247–270.

BELAJ, J., SIROVICA, F. 2012, Arheološka istraživanja crkve Uznesenja Blažene Djevice Marije u Gori od 2008. do 2011. godine, *Annales Instituti Archaeologici*, VIII, 58–62.

BELAJ, J., SIROVICA, F., BEDIĆ, Ž. 2021, Crkva Uznesenja Blažene Djevice Marije u Gori kraj Petrinje i faze ukopavanja grobova na prostoru sakristije / Church of the Assumption of the Blessed Virgin Mary in Gora near Petrinja and the phases of the burials in the area of sacristy*, Prilozi Instituta za arheologiju u Zagrebu*, 38 (2), 89–114.

BUGAR, A. 2008, Naselje ranog srednjeg vijeka Velika Gorica – Šepkovčica, u/in: *Srednji vek. Arheološke raziskave med Jadranskim morjem in Panonsko nižino / Mittelalter. Archäologische Forschungen zwischen der Adria und der Pannonischen Tiefebene*, Guštin M. (ur./ed.), Ljubljana: Narodni muzej Slovenije, 179–193.

CVITANOVIĆ, Đ. 1971, Gorska župa i župna crkva Blažene Djevice Marije, *Peristil*, 14–15 (1971–1972), 151–162.

ČIMIN, R. 2008, Keramički nalazi s utvrde Čanjevo / Ceramic finds from fort Čanjevo, u/in: *Utvrda Čanjevo, istraživanja 2003–2007 / Fort Čanjevo, researches 2003–2007*, Bekić, L. (ur./ed.), Visoko: Općina Visoko, Hrvatski restauratorski zavod, 121–189.

DOBRONIĆ, L. 1984, *Posjedi i sjedišta templara, ivanovaca i sepulkralaca u Hrvatskoj*, Rad Jugoslavenske akademije znanosti i umjetnosti, knjiga 11 (406), Zagreb: Jugoslavenska akademija znanosti i umjetnosti.

DOBRONIĆ, L. 2002, *Templari i ivanovci u Hrvatskoj*, Zagreb: Dom i svijet.

GUŠTIN, M., PAVLOVIČ, D. 2009, Karakteristike najstarije slavenske keramike. Primjer lonca iz objekta SO 11 s nalazišta Murska Sobota – Nova Tabla, *Archaeologia Adriatica*, III, 293–303.

JANEŠ, A. 2023, Lord in the village: Can houseware and personal equipment indicate the presence of a social class?, u/in: *Household Goods in the European Medieval and Early Modern Countryside,* Ruralia XIV, Theune, C., Tente, C. (ur./eds.), Leiden: Sidestone Press, 199–207.

KERMAN, B. 2008, Srednjeveška lončenina z najdišča Gornje njive 2 pri Lendavi, u/in: *Srednji vek. Arheološke raziskave med Jadranskim morjem in Panonsko nižino / Mittelalter. Archäologische Forschungen zwischen der Adria und der Pannonischen Tiefebene*, Guštin, M. (ur./ed.),

Ljubljana: Narodni muzej Slovenije, 79–88.
KLAIĆ, N. 1975, *Povijest Hrvata u razvijenom srednjem vijeku*, Zagreb: Školska knjiga.
KRMPOTIĆ, M. 2014, Kasnosrednjovjekovno i novovjekovno posuđe, u/in: *Stari grad Barilović, 10 godina arheoloških istraživanja*, Azinović Bebek, A., Krmpotić, M. (ur./eds.), Zagreb: Hrvatski restauratorski zavod, 76–91, 141–162, 184–215.
KRUHEK, M., HORVAT, Z. 1986, Utvrde banske krajine od Karlovca do Siska, u/in: *Arheološka istraživanja na karlovačkom i sisačkom području*, *Izdanja Hrvatskog arheološkog društva 10*, Majnarić-Pandžić, N. (ur./ed.), Zagreb: Hrvatsko arheološko društvo, 161–187.
MARKOVIĆ, P., KARLO, K. 2014, Religious Architecture of the military Orders in Medieval Slavonia and its Reflections in the 13th and 14th Century, *Hortus artium medievalium*, 20 (2), 579–589.
MILETIĆ, D. 1999, Župna crkva Uznesenja Blažene Djevice Marije u Gori, *Godišnjak zaštite spomenika kulture Hrvatske,* 22/23 (1996/1997), 127–151.
MILETIĆ, D., VALJATO FABRIS, M. 1998, *GORA – Župna crkva Uznesenja B. D. Marije: Popis dijelova arhitektonske plastike 121 – 240*, neobjavljeno izvješće / unpublished report, Gora: Hrvatski restauratorski zavod.
MILETIĆ, D., VALJATO FABRIS, M. 2014, Rekonstrukcija templarskog sloja župne crkve Uznesenja Blažene Djevice Marije u Gori, *Portal*, 5, 49–70.
MOLNÁR, M. 2020a, *AMS 14C Analyses Report (Project code: I/2592)*, neobjavljeno izvješće / unpublished report, Debrecen: HEKAL AMS Laboratory, ISOTOPTECH-ATO MKI.
MOLNÁR, M. 2020a, *AMS 14C Analyses Report (Project code: I/2657)*, neobjavljeno izvješće / unpublished report, Debrecen: HEKAL AMS Laboratory, ISOTOPTECH-ATO MKI.
NEKUDA, V. 2005, Das hoch- und spätmittelalterliche Dorf im Ostmitteleuropa im Licht der archäologischen Forschung, *Archaeologia historica*, 30, 263–328.
SEKELJ IVANČAN, T. 2010, *Podravina u ranom srednjem vijeku*, Monographiae Instituti archaeologici 2, Zagreb: Institut za arheologiju.
SEKELJ IVANČAN, T., TKALČEC, T. 2008, Medieval settlements in the Virovitica Region of the Drava River Basin in the period from the 7th to the 11th centuries, u/in: *Srednji vek. Arheološke raziskave med Jadranskim morjem in Panonsko nižino / Mittelalter. Archäologische Forschungen zwischen der Adria und der Pannonischen Tiefebene*, Guštin, M. (ur./ed.), Ljubljana: Narodni muzej Slovenije, 113–128.
STINGL, S., BELAJ, J. 2023, Nabožni predmeti pronađeni tijekom arheoloških istraživanja crkve Uznesenja Blažene Djevice Marije u Gori / Devotional objects discovered during archaeological excavation of the church of the Assumption of the Blessed Virgin Mary in Gora, *Vjesnik Arheološkog muzeja u Zagrebu*, 3. serija, LVI, 63–98.
STINGL, S., BELAJ, M. 2021, Religijska medaljica pronađena u grobu 253 u Gori kraj Petrinje, *Annales Instituti Archaeologici*, XVII, 185–192.
TKALČEC, T. 2013, Kasnosrednjovjekovno naselje Buzadovec – Vojvodice (AN 3) na trasi autoceste A12 Sveta Helena – GP Gola, *Annales Instituti Archaeologici*, IX, 76–87.
TKALČEC, T. 2024, Stari grad Dubovac u kasnom srednjem i ranom novom vijeku / The Castle of Dubovac in the Late-Middle and the Early Modern Ages, *Vjesnik Arheološkog muzeja u Zagrebu*, 3. serija, LVII/1, 95–141.
TKALČEC, T., SEKELJ IVANČAN, T., KALAFATIĆ, H. 2017, Naseobine iz razvijenoga srednjeg vijeka na položaju Čepinski Martinci – Dubrava, u/in: *Srednjovjekovna naselja u svjetlu arheoloških izvora*, *Zbornik Instituta za arheologiju 6, 2. Međunarodni znanstveni skup srednjovjekovne arheologije / Mediaeval Settlements in the Light of Archaeological Sources, Serta Instituti*

archaeologici 6, 2nd International Conference of Medieval Archaeology, Zagreb: Institut za arheologiju/Institute of Archaeology, 2.–3. lipnja 2015., Sekelj Ivančan, T., Tkalčec, T., Krznar, S., Belaj, J. (ur./eds.), Zagreb: Institut za arheologiju, 235–253.

TOMIČIĆ, Ž., TKALČEC, T. 2005, Crkvari – crkva Sv. Lovre 2004., *Annales Instituti Archaeologici*, I, 14–24.

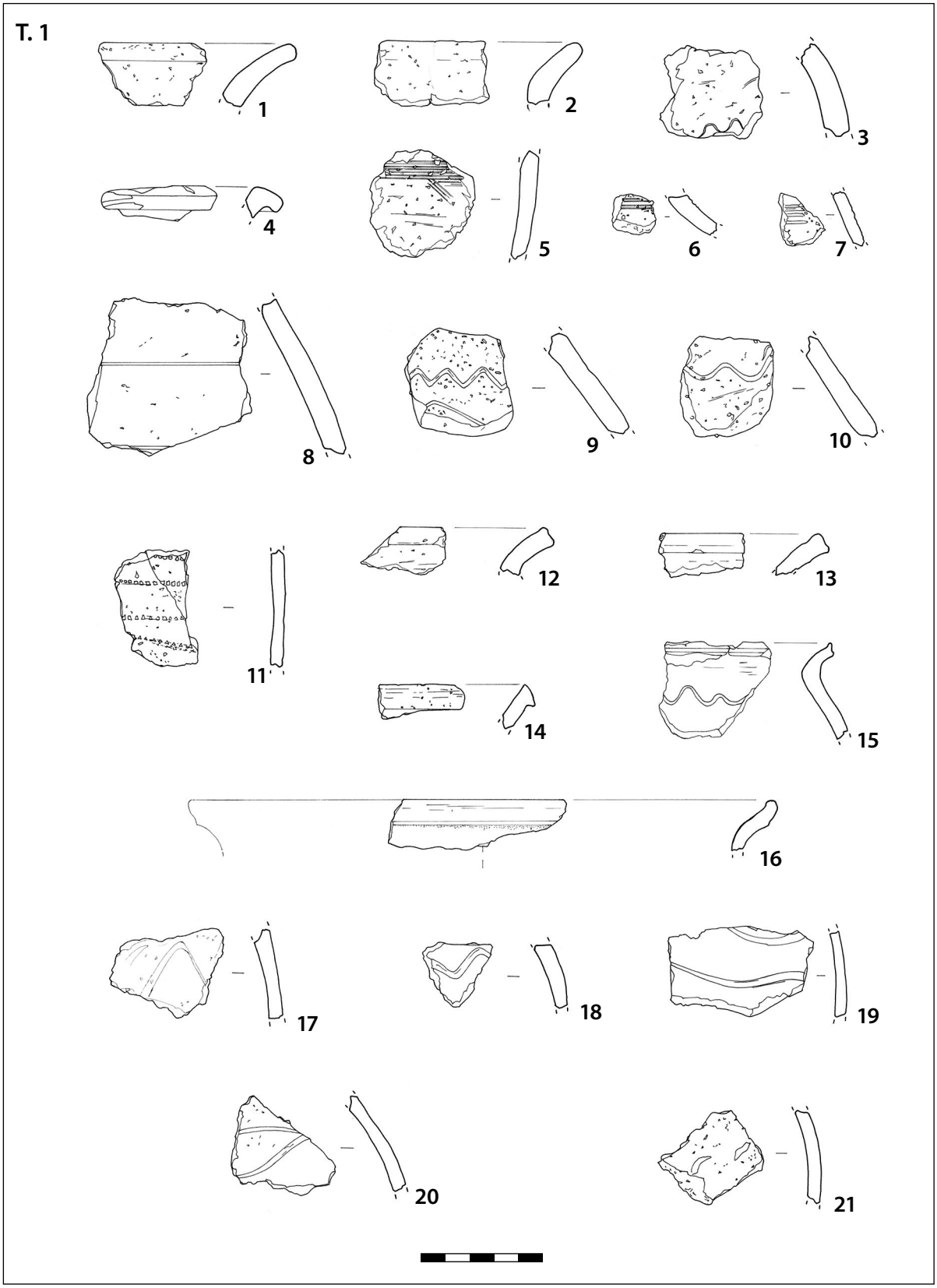


Tabla 1. *Lonci: prapovijest: 1–3, rimsko doba: 4, rani srednji vijek: 5–10, rani/razvijeni srednji vijek: 11–13, razvijeni srednji vijek: 14–21* (izradila: S. Čule)
Plate 1 *Pots: 1–3 Prehistory, 4 Roman period, 5–10 Early Middle Ages, 11–13 Early/High Middle Ages, 14–21 High Middle Ages* (made by S. Čule)

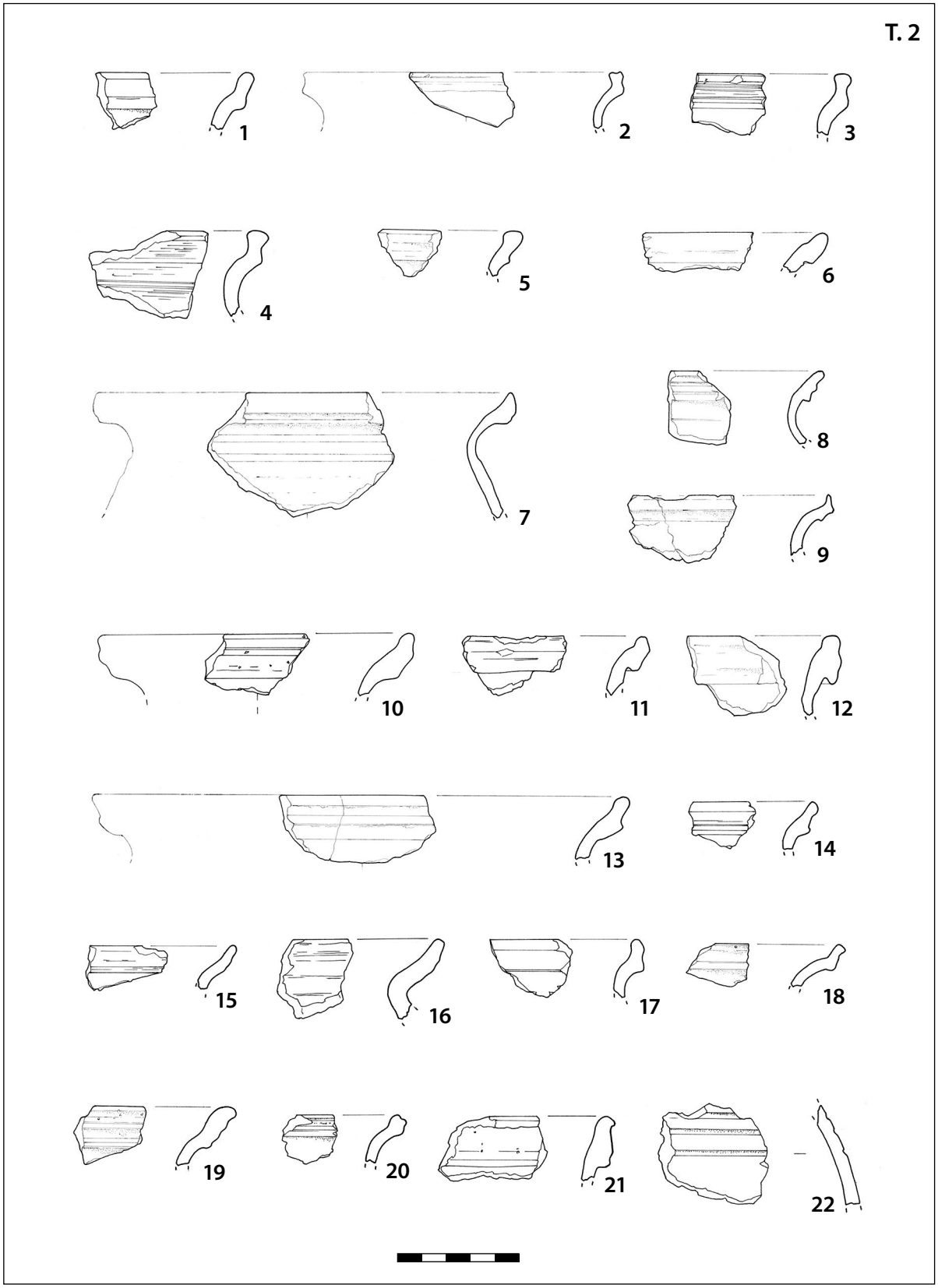


Tabla 2. *Lonci: kasni srednji vijek: 1–12, kasni srednji / novi vijek: 13–22* (izradila: S. Čule)
Plate 2 *Pots: 1–12 Late Middle Ages, 13–22 Late Middle Ages / modern era* (made by S. Čule)

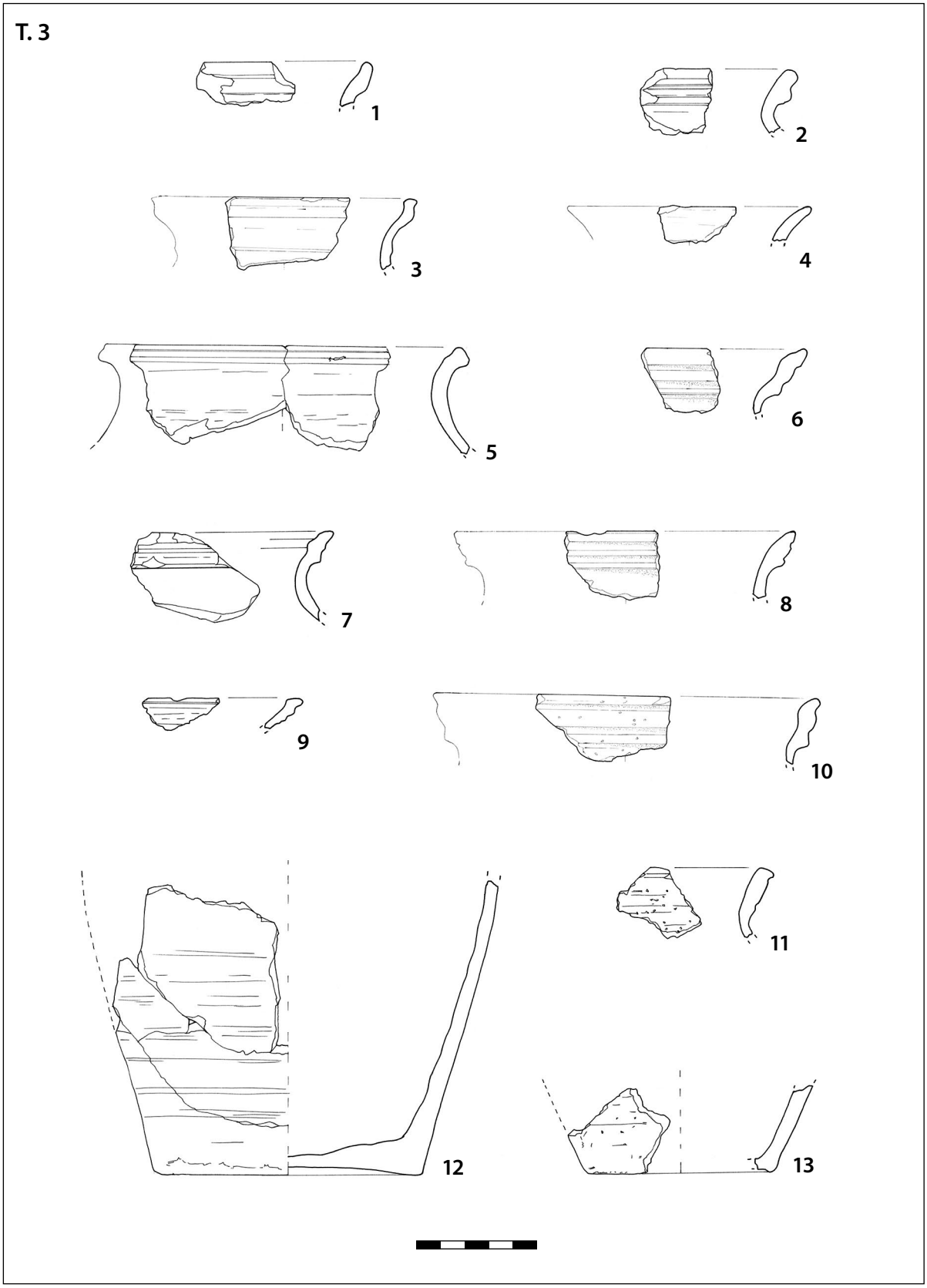


Tabla 3. *Lonci: novi vijek: 1–13* (izradila: S. Čule)
Plate 3 *Pots: 1–13 modern era* (made by S. Čule)

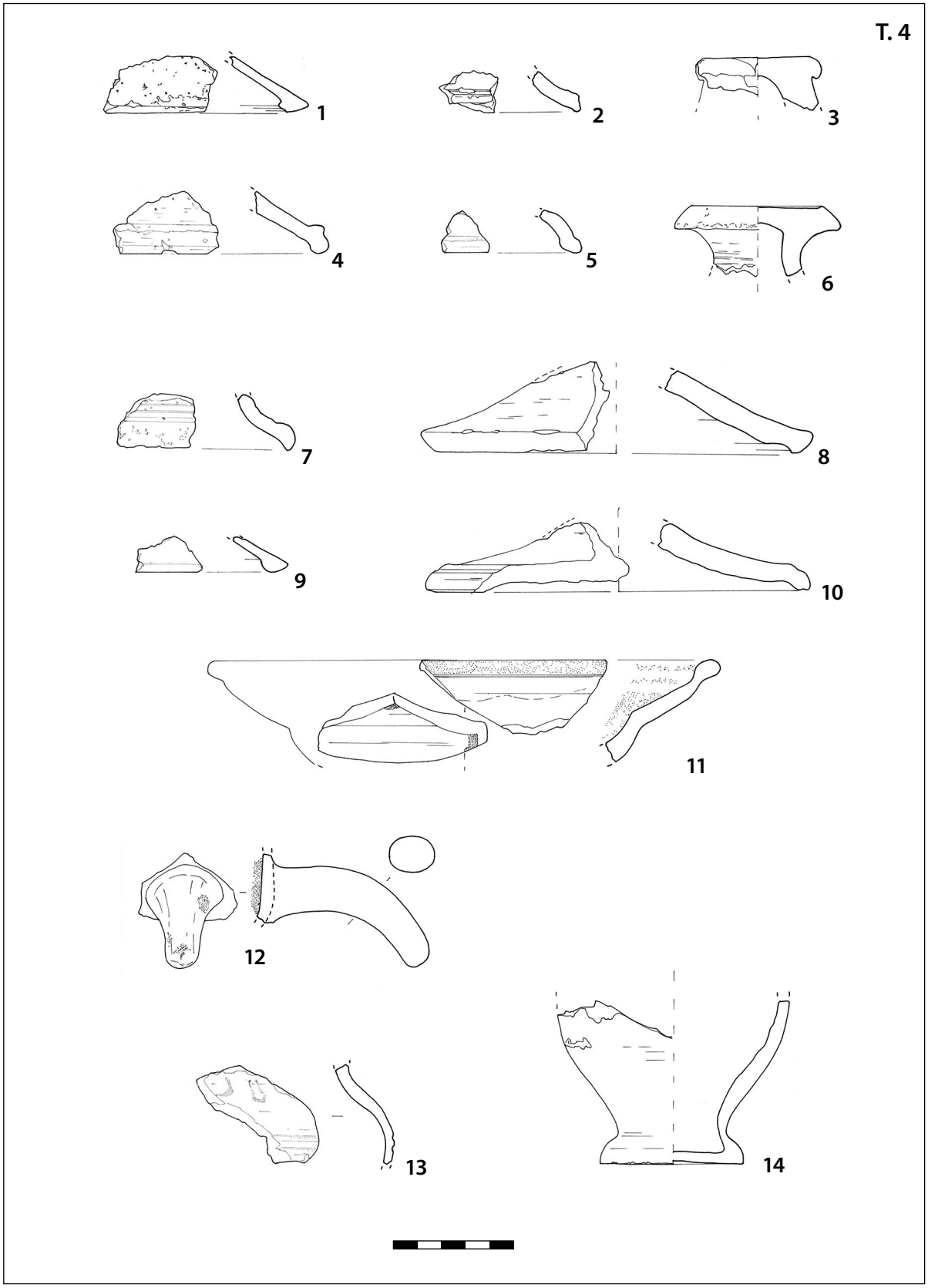


Tabla 4. *Poklopci: kasni srednji / novi vijek: 1–5, novi vijek) 6–10; tanjur: novi vijek: 11; tripod: novi vijek: 12; vrč: kasni srednji / novi vijek: 13; vrč: novi vijek: 14* (izradila: S. Čule)
Plate 4 *Lids: 1–5 Late Middle Ages / modern era, 6–10 modern era; plate: 11 modern era; tripod: 12 modern era; pitcher: 13 Late Middle Ages / modern era; pitcher: 14 modern era* (made by S. Čule)

PRILOG POZNAVANJU KASNOSREDNJOVJEKOVNE I NOVOVJEKOVNE KERAMIKE U DALMACIJI – NALAZI SA ZADARSKOG MURAJA*

*A CONTRIBUTION TO THE STUDY OF LATE MEDIEVAL AND EARLY MODERN POTTERY IN DALMATIA – FINDS FROM ZADAR'S MURAJ**

KARLA GUSAR

Sveučilište u Zadru, Odjel za arheologiju
University of Zadar, Department of archaeology
Obala kralja Petra Krešimira IV., br. 2
HR-23000 Zadar
kgusar@unizd.hr

ANA KARAĐOLE

Arheološki muzej u Zadru
Archaeological Museum in Zadar
Trg opatice Čike 1
HR-23000 Zadar
akaradole@gmail.com

UDK: 904:738(497.581.1)"653/654"
DOI: 10.15291/archeo.4716
Izvorni znanstveni članak / Original scientific paper
Primljeno / Received: 2024-6-20
Prihvaćeno / Accepted: 2024-9-15

Ključne riječi:
arheološka istraživanja, Zadar, Muraj, keramika, kasni srednji vijek, novi vijek

U radu se analiziraju nalazi keramike pronađeni prilikom arheoloških istraživanja povijesne jezgre Zadra 2021. godine. Lokalitet se nalazi u neposrednoj blizini gradskih bedema – Muraja. Uz ostale nalaze otkrivena je znatna količina keramike, a ovdje se obrađuju nalazi grube keramike i keramike od pročišćene gline. Navedena keramika kao i ostali nalazi pripadaju razdobljima kasnog srednjeg i novog vijeka.

Key words:
archaeological excavations, Zadar, Muraj, pottery, Late Middle Ages, Early Modern period

This paper analyses pottery finds discovered during archaeological excavations in the historic core of Zadar in 2021, at a site located in the immediate vicinity of the city walls – Muraj. Alongside other finds, a significant quantity of pottery was uncovered, with this study focusing on coarse pottery and purified clay ware. The ceramics, as well as other artefacts, have been dated to the Late Middle Ages and Early Modern period.

* Ovaj rad posvećujemo dragom profesoru i kolegi dr. sc. Brunislavu Marijanoviću, prof. emeritusu.

* We would like to dedicate this paper to our dear professor and colleague Brunislav Marijanović, PhD, prof. emeritus.

UVOD

U sklopu građevinskih radova 2021. godine provedena su zaštitna arheološka istraživanja na prostoru budućeg hotela na Muraju u Zadru koje je provela tvrtka Arheolog iz Ugljana.[1] Navedeni položaj nalazi se na zadarskom poluotoku u Ulici Jurja Barakovića 6, uz gradske bedeme (Bedemi zadarskih pobuna ili Muraj) (sl. 1). Na navedenom mjestu nalazila se zgrada izgrađena za vrijeme talijanske uprave u Zadru, koja je tijekom građevinskih radova uklonjena nakon čega je uslijedilo arheološko istraživanje.[2] Istraživanjima je pronađeno više različitih struktura poput ostataka građevine iz kasnoga srednjeg ili ranoga novog vijeka te slojeva u kojima je otkrivena znatna količina pokretnih arheoloških nalaza od keramike, metala i stakla, kao i novac. Prostor istraživanja nalazi se uz gradske bedeme koji su formirani u 13. stoljeću, a nakon toga veća građevinska djelatnost u fortifikacijskom sustavu uslijedila je tijekom 16. stoljeća, kada se gradi novi sustav sa zidinama i bastionima koji najvećim djelom prati one starije.[3] U blizini lokaliteta u srednjem vijeku nalazila se palača Cedulin koja je krajem 16. stoljeća prenamijenjena u vojnu bolnicu koja se više puta proširivala tijekom 17. i 18. stoljeća, a posljednja veća građevinska intervencija jest pregradnja iz 1751. godine. Vojna bolnica premješta se 1804. godine, pa prostor služi kao civilna bolnica koja djeluje do konca 19. i početka 20. stoljeća.[4] Dio civilne bolnice u 19. stoljeću prekrivao je prostor istraživanja, uz koji je između dvaju svjetskih ratova do ulice J. Barakovića podignuta danas vidljiva zgrada.[5] Najveći dio otkrivenih nala-

[1] Najsrdačnije zahvaljujemo kolegama Domagoju Maurinu, voditelju istraživanja i Damiru Martinovu, vlasniku tvrtke „Arheolog d. o. o" na ustupljenoj dokumentaciji i nalazima koje obrađujemo u ovom članku. Arheološka istraživanja provodila su se od 14. travnja do 15. svibnja 2021. MAURIN 2021.

[2] MAURIN 2021: 5.

[3] KLAIĆ, PETRICIOLI 1976; RAUKAR et al. 1987.

[4] RAUKAR et al. 1987: 538; MAURIN 2021: 7.

[5] MAURIN 2021: 7.

INTRODUCTION

In 2021, protective archaeological excavations were conducted by the Arheolog company from Ugljan, prior to construction works at a site designated for a future hotel next to Muraj, a promenade on the city walls in Zadar.[1] It is on the Zadar peninsula, at Ulica Jurja Barakovića 6, adjacent to the city walls (Bedemi zadarskih pobuna or Muraj) (Fig. 1). A building constructed during the Italian administration in Zadar had occupied the site; following its demolition, archaeological excavations took place.[2] The excavations uncovered various structures, including remains of a building from the late medieval or early modern period, as well as layers containing a significant quantity of small archaeological finds, including pottery, metal, glass and coins. The excavation area is adjacent to the city walls erected in the 13th century. Subsequent large-scale construction activities within the fortification system occurred during the 16th century, when a new system with walls and bastions – largely following the earlier structures – was built.[3] In the medieval period, near the site stood the Cedulin Palace, which was converted into a military hospital during the late 16th century. Over the 17th and 18th centuries, the hospital was expanded on several occasions, with the last major reconstruction being carried out in 1751. In 1804, the military hospital was relocated, and the space repurposed as a civil hospital, which operated until the turn of the 20th century.[4] Part of the 19th-century civil hospital stood over the excavation zone, next to which, during the interwar period, the building that now stands adjacent to Ul-

[1] We extend our heartfelt thanks to our colleagues Domagoj Maurin, excavation leader, and Damir Martinov, owner of Arheolog d.o.o., for providing the documentation and finds processed in this article. The archaeological excavations were conducted from 14 April to 15 May 2021. MAURIN 2021.

[2] MAURIN 2021: 5.

[3] KLAIĆ, PETRICIOLI 1976; RAUKAR et al. 1987.

[4] RAUKAR et al. 1987: 538; MAURIN 2021: 7.

za potječe iz nasipa kasnosrednjovjekovne ili novovjekovne građevine, a pretpostavlja se da je nastao u 18. stoljeću, i to prije izgradnje zgrade mletačkog Arsenala dovršenog 1787. godine koji se nalazi uz lokalitet sa sjeveroistočne strane. S obzirom na položaj i dimenzije zaštitne istraživačke sonde, bez daljnjih arheoloških iskopavanja nije jasan odnos istraženog prostora i bedema uz njega.[6] Usprkos navedenom na osnovi otkrivenih nalaza slojeve iskopa moguće je okvirno datirati u razdoblje od 15. do 18. stoljeća.[7] Zadar je u navedenom razdoblju pod vlašću Mletačke Republike, pod čiju upravu dolazi 1409. godine, nakon čega postaje glavno administrativno središte čitave Dalmacije i sjedište generalnog providura, sve do njezine propasti 1797. godine.[8] Povoljan geografski položaj na jadranskoj obali duž plovne rute prema istoku činio je Zadar važnim mjestom i sigurnom lukom preko koje se odvijala nesmetana razmjena ljudi i dobara između zapada i istoka, pa tako mletački Senat već 1450. navodi Zadar kao najvažniji grad u Dalmaciji i naziva ga ključem Dalmacije.[9] To je za posljedicu imalo i razvijenu trgovačku djelatnost, odnosno uvoz i izvoz robe duž cijelog Jadrana. Navedeno se očituje i na lokalitetu gdje je prikupljena i velika količina glazirane kasnosrednjovjekovne i novovjekovne keramike koja najvećim dijelom potječe iz talijanskih radionica različitih regija, dok su glazirani nalazi ostalih radioničkih produkcija prisutni tek ponekim ulomkom.

No, u ovom ćemo se radu fokusirati na nalaze grube keramike i keramike od pročišćene gline. Objave takve keramike srednjeg i novog vijeka i dalje su, nažalost, rijetkost u hrvatskoj arheološkoj literaturi. Također, s obzirom na same oblike koji su jednostavni i o kojima još uvijek ne znamo dovoljno, a čini se da su duže vremena u upotrebi, te nedo-

ica Jurja Barakovića was constructed.[5] Most of the unearthed finds were recovered from the earthworks for the late medieval or early modern structure that are assumed to have been put in place during the 18th century, prior to the construction of the Venetian Arsenal (completed in 1787), located northeast of the site. Given the location and size of the protective excavation trench, without further archaeological excavations the relationship between the excavated area and the adjacent walls will remain unclear.[6] Nevertheless, on the basis of the finds that were made, the excavated layers can be dated approximately to the 15th–18th century period.[7] During this time, Zadar was under the rule of the Republic of Venice, which took control in 1409, making the city the main administrative centre of Dalmatia and the seat of the General Provveditore until the fall of Venice in 1797.[8] Zadar's favourable location on the Adriatic coast along navigable routes to the East made it a key hub and a safe harbour for the exchange of people and goods between the West and East. Consequently, the Venetian Senate considered Zadar the most important city in Dalmatia, calling it the 'key to Dalmatia' as early as in 1450.[9] This strategic importance led to a thriving trade network, involving the import and export of goods along the Adriatic. This is reflected at the site, where a large quantity of glazed late medieval and early modern pottery was recovered. Most of the pottery originates from Italian workshops across various regions, while finds of glazed ceramics from other workshop centres are represented with occasional fragments. This article will focus on finds of coarse ware and ware made of purified clay. In Croatian archaeological literature, publications on such pottery from the medieval and early modern periods unfortunately remain scarce. The actual forms

6 MAURIN 2021: 16, 24–25.
7 MAURIN 2021: 24–25.
8 RAUKAR et al. 1987.
9 RAUKAR et al. 1987: 36.

5 MAURIN 2021: 7.
6 MAURIN 2021: 16, 24-25.
7 MAURIN 2021: 24-25.
8 RAUKAR et al. 1987.
9 RAUKAR et al. 1987: 36.



Slika 1. *Zadar – Poluotok s označenim položajem nalazišta* (izradio: D. Vujević)
Figure 1 *Zadar – Peninsula with position of the site marked* (author: D. Vujević)

statak precizno determiniranih arheoloških konteksta, ovaj je materijal poprilično nezahvalan za datiranje.

Otkrivene keramičke nalaze iz Zadra prema fakturi, kako je već navedeno, možemo podijeliti na glaziranu keramiku, grubu keramiku i keramiku od pročišćene gline. Kod zadnjih dviju skupina riječ je o nalazima kuhinjske keramike, predmetima svakodnevne uporabe u kućanstvu i građevinskoj keramici. Unutar njih zastupljene su različite forme, veličine predmeta, kao i njihov sastav te vrste ukrasa. Za potrebe ovog rada napravljen je izbor nalaza, a tek se mali broj ulomaka mogao spojiti. Osim ulomaka iz navedenog vremena, pronađena je i manja količina sporadičnih nalaza antičke keramike.

ANALIZA KERAMIČKIH NALAZA

Lonci

Analizu započinjemo s nalazima kuhinjske keramike unutar koje se najčešće javljaju primjerci s debljim, ali prisutni su i oni s tankim stijenkama. U prvu skupinu ubrajamo lonce

are simple and so far, not enough is known about them, although it seems that they were in use over a lengthy period. Moreover, due to a lack of precisely determined archaeological contexts, the material is particularly challenging to date.

On the basis of the pottery fabric, the finds from Zadar can be classified as glazed ware, coarse ware, and ware made of refined clay. The latter two categories comprise kitchen ware, household items, and ceramic building material. These categories feature diverse forms, item sizes, compositions, and types of decoration. For the purposes of this paper, a selection of finds was made; only a small number of fragments could be reassembled. In addition to fragments from the specified periods, a smaller quantity of sporadic finds of Classical Antiquity pottery was also discovered.

ANALYSIS OF POTTERY FINDS

Pots

We begin the analysis with kitchen ware, among which the most common items are pots with thick walls (though thin-walled specimens

koji su osim za kuhanje služili i za čuvanje hrane. Često su izrađeni grubo s brojnim mineralnim primjesama, a svi analizirani primjerci rađeni su na brzorotirajućemu lončarskom kolu. Na temelju njihovih morfoloških značajki možemo reći da je riječ o jajolikim ili češće trbušastim posudama s ravnim dnom i s obodom izvijenim prema van. Pečeni su neujednačeno, a na nekim primjercima moguće je primijetiti tragove gorenja, tj. svakodnevne upotrebe u kuhinji. Na dijelu ulomaka vidljivi su plitki žljebovi na vanjskoj stijenci posude (T. I/1–3; T. III/2, 5). Obodi su im zaobljeni (T. I/1–5; T. II/1), ravno odsječeni (T. I/6) ili profilirani (T. III/1–3). Kao najčešći ukras javlja se valovnica (T. I/1–3, 5; T. II/1–2), i to jednostruka, često neuredna s različitim amplitudama. Ona je na nekim primjercima omeđena dvjema urezanim vodoravnim linijama (T. I/5; T. II/1–2). Javljaju se i utisnuti ovalni motivi (T. I/4; T. III/1) te vodoravne i kose urezane linije (T. I/4). Katkad je sam rub oboda ukrašen utisnutim motivima (T. I/5–6; T. II/1). Osim oboda sačuvani su i ulomci trbuha, donjih dijelova tijela i dna lonaca. Veličine posuda variraju, no kako ni jedan primjerak nije cjelovito sačuvan, podatci nisu potpuni. Općenito, promjer otvora im je od 15 do 28 cm, nisu sačuvani u punoj visini, a očuvani promjeri dna iznose 10 cm. Prema veličini otvora nalazimo nekoliko varijanti s promjerima koji iznose 15 (T. III/1, 3), 18 (T. III/2), 20 (T. I/2, 6) te 28 cm (T. I/5).

Prvi je ulomak gornji dio lonca **T. I/1** (2.5YR 5/4 *reddish brown*[10]) s jednostavnim, zaobljenim obodom izvijenim prema van, ispod čijeg se ruba s vanjske strane nalazi duboko urezana valovnica, a na ramenu su vidljive vodoravne linije. Slična koncepcija ukrasa javlja se i kod idućih dvaju ulomaka **T. I/2–3** koji imaju lagano izvijen obod te, čini se, jajolik oblik tijela (oba 2.5YR 2.5/1

[10] S obzirom na to da je kod većine ulomaka boja neujednačena i mrljasta, boja navedena prema *Munsell Color Soil Charts* odnosi se na boju presjeka.

are also present). The first group includes pots that were used not only for cooking but also for storing food. They were often of coarse workmanship, with numerous mineral inclusions; all analysed specimens were produced on a fast-turning potter's wheel. According to their morphological features they are ovoid or (more frequently) bellied, with a flat base and a flared rim. Their firing was uneven; some specimens have burn marks, indicating everyday use in the kitchen. The external walls of some fragments have visible shallow grooves (Pl. I/1–3; Pl. III/2, 5). The rims are rounded (Pl. I/1–5; Pl. II/1), sharply cut (Pl. I/6), or profiled (Pl. III/1–3). The most common decoration is wavy lines (Pl. I/1–3, 5; Pl. II/1–2), usually single, often irregular, and with varying amplitudes. The wavy lines in some specimens are bordered by two incised horizontal lines (Pl. I/5; Pl. II/1–2). Impressed oval motifs (Pl. I/4; Pl. III/1) and horizontal and slanted incised lines (Pl. I/4) also occur. Sometimes the rim edges are decorated with impressed motifs (Pl. I/5–6; Pl. II/1). In addition to rims, fragments of pot bellies, lower bodies and bases have been preserved. The vessel sizes vary, but, given that no specimens are fully intact, the data are incomplete. In general, the aperture diameter ranges from 15 to 28 cm, and the bases, where preserved, measure 10 cm in diameter. Based on the aperture size, several variants can be identified, with diameters of 15 cm (Pl. III/1, 3), 18 cm (Pl. III/2), 20 cm (Pl. I/2, 6), and 28 cm (Pl. I/5).

The first fragment is the upper part of a pot **Pl. I/1** (2.5YR 5/4 reddish brown[10]), with a simple, rounded flared rim. Below its edge, on the outside, is a deeply incised wavy line; on the shoulder, horizontal lines are visible. The next two fragments **(Pl. I/2–3)** demonstrate a similar decoration concept: a slightly flared rim and a seemingly ovoid body (both 2.5YR 2.5/1 reddish black). The first fragment has a somewhat

[10] The colour in most fragments is uneven and mottled. Therefore, the stated colour (according to the Munsell Soil Color Charts) refers to that of the cross-section.

reddish black). Prvi ulomak ima nešto pliće izvedenu valovnicu, a kod drugog se valovnica ponavlja i na lagano naglašenom ramenu. Sličan ukras valovnice ispod oboda javlja se na ulomcima lonaca i kotlića iz grada Hvara, Dioklecijanove palače u Splitu i Samostana sv. Nikole u Zadru koji se datiraju od 15. do 18. stoljeća.[11]

Idući ulomak **T. I/4** (2.5YR 5/3 *reddish brown*) koji također ima zaobljen, prema van lagano izvijen obod, ima zanimljivu kombinaciju ukrasa. Ispod oboda se nalaze ovalni, neuredno izvedeni i duboko utisnuti ukrasi, a na vratu i ramenu su urezane linije između kojih su kosi urezi.

Kombinacijom ukrasa izdvajaju se tri lonca. Kod prvog očuvan je samo obod i dio ramena **T. I/5** (2.5YR 5/4 *reddish brown*). Na samom je obodu niz kosih utisnutih linija, a na ramenu je ukras valovnice obrubljen s gornje i donje strane po jednom vodoravnom urezanom linijom. Isti ukras ponavlja se i kod bolje očuvanog primjerka s kratkim vratom i naglašenim trbuhom, no kod njega je valovnica šira i deblja te izlazi izvan okvira tanjih vodoravnih linija **T. II/1** (2.5YR 6/4 *light reddish brown*). Na loncu se vide tri sekundarno probušene kružne rupice, i to jedna na vratu i dvije na trbuhu. Ista valovnica ponavlja se na plitkom loncu kojem nije očuvan obod **T. II/2** (2.5YR 4/8 *red*), no vidljivo je da je bio izvijen. Lonac ima kratki vrat, naglašeno trbušasto tijelo i očuvano ravno dno. Valovnica je na mjestima isprekidana, katkad i izviruje iz okvira, amplitude joj povremeno sliče i na kvačice, a riječ je o motivu koji se često ponavlja na ovom nalazištu. Slično formirana valovnica javlja se na loncu iz Novigrada gdje je kombinirana s drugim motivima[12] te na ulomku lonca iz Zadra koji je okvirno smješten u 16. i 17. stoljeće.[13]

Ulomak gornjeg dijela lonca ima na obodu

[11] GUSAR, VISKOVIĆ 2012: 238, kat. 8; DELONGA 2014: 117, T. XIX/93; BEKIĆ 2017: 132, Sl. 1/1 i 3.
[12] GUSAR, ILKIĆ 2016: T. 1/6.
[13] BEKIĆ 2017: 132, Sl. 1/4, T. 1/4.

shallower wavy line, while in the second, the wavy line is repeated on the slightly pronounced shoulder. A similar wavy line below the rim occurs on fragments of pots and cauldrons from the town of Hvar, Diocletian's Palace in Split, and the Monastery of St. Nicholas in Zadar, dated to the period from the 15th to the 18th centuries.[11]

The next fragment **Pl. I/4** (2.5YR 5/3 reddish brown) also has a rounded, slightly flared rim and an interesting combination of ornaments. Below the rim are oval, irregularly executed and deeply impressed decorations, while the neck and shoulder have incised lines with slanted strokes.

Three pots stand out due to their combination of decorations. In the first, only the rim and part of the shoulder have been preserved **Pl. I/5** (2.5YR 5/4 reddish brown). The rim features a series of slanted impressed lines, while the shoulder has a wavy line bordered above and below by a single horizontal incised line. The same decoration is repeated in a second, better-preserved specimen with a short neck and pronounced belly, although in this specimen, the wavy line is wider and thicker, extending beyond the thinner horizontal lines **Pl. II/1** (2.5YR 6/4 light reddish brown). On the pot, three secondarily perforated round holes are visible: one on the neck and two on the belly. The same wavy line appears on a third, shallow pot with a missing rim **Pl. II/2** (2.5YR 4/8 red), but it is evident that the rim was flared. This pot exhibits a short neck, a pronounced bellied body, and a preserved flat base. The wavy line is interrupted in places, sometimes protruding beyond the border. Its amplitude occasionally resembles check marks, a motif frequently found at this site. A similarly formed wavy line appears on a pot from Novigrad, combined with other motifs[12], and on a pot fragment from Zadar, tentatively dated to the 16th and 17th centuries.[13]

A fragment of the upper part of a pot features

[11] GUSAR, VISKOVIĆ 2012: 238, cat. 8; DELONGA 2014: 117, Pl. XIX/93; BEKIĆ 2017: 132, Fig. 1/1 and 3.
[12] GUSAR, ILKIĆ 2016: Pl. 1/6.
[13] BEKIĆ 2017: 132, Figs. 48/ 1, Pl. 1/4.

kose utisnute poteze **T. I/6** (2.5YR 5/4 *reddish brown*). Na vratu se nalazi vodoravna urezana linija, a podno njega je loše vidljiv žigosan ukras koji se sastoji od kruga oko kojeg je radijalno postavljeno više krakova. Vjerojatno je riječ o stiliziranom prikazu cvijeta ili možda Sunca. Slično oblikovan obod lonca nađen na području Samostana sv. Nikole u Zadru datiran je u 16. –17. stoljeće.[14]

Sljedeći ulomak **T. III/1** (2.5YR 2.5/3 *dark reddish*) ima prema unutra koso odsječeni obod trokutastog presjeka koji je pri vrhu zaobljen. S vanjske strane ispod otvora je niz utisnutih nepravilnih ovalnih motiva ispod kojih je blago naglašeno rebro. Direktne mu usporedbe ne nalazimo, iako su slični utisnuti ukrasi prisutni među nalazima 15. i 16. stoljeća, pa ih tako nalazimo u utvrdi Possert u Istri,[15] burgu Vrbovcu,[16] gradu Ružici[17] te utvrdi Kličevici kod Benkovca.[18]

Idući ulomak **T. III/2** ima izvijeni i naglašeno profilirani obod te plitko izvedene vertikalne kanelure na ramenu. Stijenka je tanka, a u presjeku je crvenkaste boje (2.5YR 6/1 *reddish gray*). Komparativni primjerci pronađeni u burgu Vrbovcu datiraju se u 15. i 16. stoljeće.[19]

Sljedeća dva ulomka odlikuju tanke stijenke i ujednačena tamnosiva, gotovo crna boja vanjštine. Prvi je ulomak **T. III/3** (rubovi 2.5YR 4/1 *dark reddish gray*, sredina 2.5YR 5/1 *reddish gray*) gornji dio lonca s vertikalno raščlanjenim, u presjeku kljunastim obodom, jako izvijenim prema van, kratkim vratom i naglašenom profilacijom ramena. Drugi je dio stijenke lonca **T. III/4** (2.5YR 5/4 *reddish brown*) s naglašenim vodoravnim rebrom trokutastog presjeka. Slični primjerci lonaca tankih stijenki s razvijenim obodima pronađeni na istarskom i riječkom području dati-

slanted impressed strokes on the rim **Pl. I/6** (2.5YR 5/4 reddish brown). An incised horizontal line is present on the neck, and below it is a faintly visible stamped decoration consisting of a circle with radially arranged spokes. Probably this is a stylised depiction of a flower or possibly the Sun. A similarly shaped pot rim, unearthed in the zone of the Monastery of St. Nicholas in Zadar, was dated to the 16th–17th centuries.[14]

The next fragment **Pl. III/1** (2.5YR 2.5/3 dark reddish) has a rim slanted inwards, with a triangular cross-section, rounded near the top. On the external wall below the aperture is a series of irregular impressed oval motifs, with a mildly pronounced rib beneath them. No direct analogies have been found for this piece, although similar impressed decorations are present among 15th–16th-century finds from fortresses/castles at Possert (Istria),[15] Vrbovec,[16] Ružica[17] and Kličevica (near Benkovac).[18]

The next fragment, **T. III/2**, has a flared and prominently profiled rim with shallow vertical cannelures on the shoulder. The wall is thin and, in cross-section, it is of a reddish colour (2.5YR 6/1 reddish grey). Comparable specimens found in Vrbovec Castle date to the 15th and 16th centuries.[19]

The next two fragments are characterised by thin walls and an even dark-grey, almost black, outside surface. The first fragment **Pl. III/3** (edges 2.5YR 4/1 dark reddish grey, centre 2.5YR 5/1 reddish grey) represents the upper part of a pot with a vertically segmented rim, beak-shaped in cross-section, strongly flared, with a short neck and a pronounced shoulder profile. The second fragment is part of the wall of a pot **Pl. III/4** (2.5YR 5/4 reddish brown) with a pronounced horizontal rib, triangular in cross-section. Similar specimens of pots with thin walls and developed rims, found in

[14] BEKIĆ 2017: 131–132, 135, T1/ 5.
[15] VIŠNJIĆ 2013a: T.3/3, T. 4/1.
[16] TKALČEC 2010: 69, kat. 211, 218, T. 10/211, 218.
[17] RADIĆ BOJČIĆ 2004: kat. 110–114, 353, 375–377.
[18] GUSAR, ĆURKOVIĆ, 2011: kat. 14; GUSAR 2012: 47.
[19] TKALČEC 2010: 68–69, 136–137, T. 9/204, T. 11/230, 233.

[14] BEKIĆ 2017: 131–132, 135, Pl. 1/5.
[15] VIŠNJIĆ 2013a: Pl. 3/3, Pl. 4/1.
[16] TKALČEC 2010: 69, cat. 211, 218, Pl. 10/211, 218.
[17] RADIĆ BOJČIĆ 2004: cat. 110–114, 353, 375–377.
[18] GUSAR, ĆURKOVIĆ, 2011: cat. 14; GUSAR 2012: 47.
[19] TKALČEC 2010: 68–69, 136–137, Pl. 9/204, Pl. 11/230, 233.

raju se u 16. stoljeće, a determinirani su kao proizvod srednjoeuropskih radionica.[20]

Slijede donji dijelovi lonaca na ravnom dnu od kojih prvi **T. III/5** (2.5YR 4/4 *reddish brown*) ima izvana niz vodoravnih užlijebljenih linija. Ostala dva nemaju vidljive tragove ukrasa. Jedan ima na dnu sekundarno probušenu rupu **T. III/6** (uz vanjski rub 2.5YR 5/1 *reddish gray*, unutarnji 2.5YR 5/6 *red*), dok je kod drugog **T. IV/1** (2.5YR 4/8 *red*) zamjetno da iako mu je vanjština relativno zaglađena ima dosta usitnjenih primjesa. Posljednji ulomak donji je dio lonca s ravnim dnom izrađen od pročišćene gline crvene boje **T. IV/2** (2.5YR 5/6 *red*). Stijenke su mu tanke, a navedeni tip najčešće ne služi dugotrajnom kuhanju, već podgrijavanju hrane. Javlja se u raznim dimenzijama, i to u varijantama bez glazure i s glazurom te se upotrebljava u dužemu vremenskom rasponu od 14. pa sve do 19. stoljeća,[21] no s obzirom na dataciju nalazišta na Muraju, smještamo ga u period od 15. do 18. stoljeća.

Kotlići

Iduću skupinu čine kotlići koji su na Muraju pronađeni u velikom broju (T. IV/3; T. V/1–5; T. VI/1–5; T. VII/1–6). Kotlići su posude koje su se često upotrebljavale za kuhanje na otvorenoj vatri ili za prijenos vode i hrane (sl. 2, 3).[22] Sastoje se od recipijenta s obodom koji na sebi ima ušice koje su imale rupice za umetanje ručke koja je služila za vješanje posude iznad vatre.[23] Mogli su imati zaobljeno ili ravno dno.[24]

Ovaj oblik posuđa pojavljuje se tijekom dužega vremenskog perioda na istočnoj jadranskoj obali, pa je tako pronađen u kompleksu Samostana sv. Nikole u Zadru,[25] zatim u

[20] VIŠNJIĆ 2013a: 87, T. 5/18–19; 2019: 19.
[21] GELICHI, LIBRENTI 1994: 17.
[22] GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 130.
[23] VIŠNJIĆ 2013a: 88.
[24] GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 130.
[25] BEKIĆ 2017: 131–132, 135, T. 1–4.

Istria and the Rijeka area, were dated to the 16th century and identified as products of Central European workshops.[20]

Next are the lower parts of pots with flat bases. The first **Pl. III/5** (2.5YR 4/4 reddish brown) has a series of horizontal grooved lines on its outside. The other two have no visible traces of decoration. One – **Pl. III/6** (near the outside rim 2.5YR 5/1 reddish grey, inner 2.5YR 5/6 red) – has a secondary perforation on the base, while the other – **Pl. IV/1** (2.5YR 4/8 red) – although with a relatively smoothed outer surface, contains many crushed inclusions. The last fragment is the lower part of a pot with a flat base made of purified red clay, **Pl. IV/2** (2.5YR 5/6 red). Its walls are thin, and this type was not typically used for prolonged cooking but rather for reheating food. It appears in various dimensions, both with and without glaze, and was used over an extended period from the 14th to the 19th century.[21] However, considering the chronology of the Muraj site, it has been dated to the period from the 15th to the 18th century.

Cauldrons

The next group are cauldrons, which were found in large numbers at the Muraj site (Pl. IV/3; Pl. V/1–5; Pl. VI/1–5; Pl. VII/1–6). Cauldrons were vessels frequently used for cooking over an open fire or for carrying water and food (Figs. 2–3).[22] Their bodies had a rim featuring lugs, which had holes for attaching a handle used to suspend the vessel over a fire.[23] They could have either a rounded or a flat base.[24]

This type of vessel was in use on the eastern Adriatic coast over an extended period. Finds have been made at the following sites (among others) in Dalmatia: the complex of the Mon-

[20] VIŠNJIĆ 2013a: 87, Pl. 5/18-19; 2019: 19.
[21] GELICHI, LIBRENTI 1994: 17.
[22] GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 130.
[23] VIŠNJIĆ 2013a: 88.
[24] GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 130.



Slika 2. *Prikaz kuhinje s detaljem kotlića u rukopisu Tacuinum Sanitatis, 14. stoljeće* (Tacuinum Sanitatis, 2024a)
Figure 2 *A depiction of a kitchen with a cauldron detail, from the 14th-century Tacuinum Sanitatis manuscript* (Tacuinum Sanitatis, 2024a)



Slika 3. *Prikaz izrade i konzumacije sira s detaljem kotlića sa zaobljenim dnom u rukopisu Tacuinum Sanitatis, 14. stoljeće* (Tacuinum Sanitatis, 2024b)
Figure 3 *A depiction of cheese making and consumption, with a detail of a cauldron featuring a rounded base, from the 14th-century Tacuinum Sanitatis manuscript* (Tacuinum Sanitatis, 2024b)

utvrdama u Zemuniku[26] i Kličevici,[27] na Crkvini u Galovcu,[28] u pećini Čelinjaku na Dugom otoku,[29] u Dioklecijanovoj palači[30] i na Hvaru.[31] Osim u Dalmaciji, nalazimo ih i na istarskom poluotoku u Piranu i Sv. Ivanu kod Umaga,[32] Veštru,[33] Rovinju,[34] utvrdi Possert[35] i Puli.[36] Također su pronađeni u Crnoj Gori u istraživanjima Starog Bara.[37] Kronološki su problematični jer se javljaju u dužem vremenskom periodu, pa se uglavnom datiraju na osnovi ostalih nalaza, i to najčešće od 15. do 18. stoljeća. Na području Veneta u Italiji standar-

astery of St. Nicholas in Zadar,[25] the Zemunik[26] and Kličevica fortresses,[27] Crkvina in Galovac,[28] the Čelinjak cave on Dugi Otok,[29] Diocletian's Palace,[30] and on Hvar.[31] Outside Dalmatia, they have also been found on the Istrian Peninsula: in Piran, Sveti Ivan near Umag,[32] Veštar,[33] Rovinj,[34] Possert Fortress[35] and Pula.[36] Finds have also been recorded in Montenegro during excavations at Stari Bar.[37] They are hard to chronologically determine because of their use over a lengthy time period. Hence, they are generally dated on the basis of associated finds,

26 GUSAR, VUJEVIĆ 2016: 64, T. 3/4.
27 GUSAR, ĆURKOVIĆ 2011: 19, kat. 6.
28 BELOŠEVIĆ 1993: 140–141, T. L/2, T. L/4.
29 BODRUŽIĆ, KARAĐOLE 2024: T. 8, 9; T. 9, 1–2.
30 DELONGA 2014: 118–121, 145–150, kat. 97–117.
31 GUSAR, VISKOVIĆ 2012: 238, kat. 3–5.
32 CUNJA 2004: 73–74.
33 SURIĆ, VIŠNJIĆ 2014: 212, kat. 1–8.
34 BRADARA, SACCARDO 2007: kat. 1–2.
35 VIŠNJIĆ 2013a: 88, 119, 139, T. 7/5.
36 BRADARA, KRNJAK 2016: 116–118, kat. 29.
37 GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 13–134, kat. 176–177.

25 BEKIĆ 2017: 131-132, 135, Pl. 1-4.
26 GUSAR, VUJEVIĆ 2016: 64, Pl. 3/4.
27 GUSAR, ĆURKOVIĆ 2011: 19, cat. 6.
28 BELOŠEVIĆ 1993: 140-141, Pl. L/2, Pl. L/4.
29 BODRUŽIĆ, KARAĐOLE 2024: Pl. 8, 9; Pl. 9, 1-2.
30 DELONGA 2014: 118–121, 145–150, cat. 97-117.
31 GUSAR, VISKOVIĆ 2012: 238, cat. 3-5.
32 CUNJA 2004: 73-74.
33 SURIĆ, VIŠNJIĆ 2014: 212, cat. 1-8.
34 BRADARA, SACCARDO 2007: cat. 1-2.
35 VIŠNJIĆ 2013a: 88, 119, 139, Pl. /5.
36 BRADARA, KRNJAK 2016: 116-118, cat. 29.
37 GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 13-134, cat. 176-177.

dnim inventarom postaju krajem 13. stoljeća i zadržavaju se u upotrebi do 18. stoljeća.[38]

Kao i lonci, kotlići su također raznih dimenzija, pa im veličina otvora varira od 16 (T. V/4), 22,5 (T. VI/5), 23 (T. VII/5), 24 (T. VII/2) do 30 (T. V/5) cm. Najjednostavnije primjere predstavljaju gornji dijelovi kotlića T. IV/3; T. V/1–5; T. VI/1 sa zaobljenim obodom iz kojeg se lagano dižu trokutaste ušice s rupom za nasad drške, a ispod oboda javlja im se urezana valovnica. Prvom ulomku nedostaje dio ušice **T. IV/3** (2.5YR 5/6 *red*), a valovnica mu se, osim ispod oboda, ponavlja i na ramenu. Drugi je ulomak bolje očuvan **T. V/1** (rubovi 2.5YR 6/4 *light reddish brown*, sredina 2.5YR 5/1 *reddish gray*), Oba primjerka, čini se, imala su loptasto tijelo. Treći primjerak **T. V/2** (2.5YR 4/6 *red*) za razliku od prethodnih dvaju oksidacijski je pečen. Sljedeći primjerci malo se razlikuju od prethodnih jer osim valovnice ispod otvora imaju tri urezane linije **T. V/3** (2.5YR 3/3 *dark reddish brown*), odnosno pliće vodoravne kanelure na ramenu i trbuhu kod ulomaka **T. V/4** (2.5YR 4/4 *reddish brown*) i **T. V/5** (2.5YR 6/6 *light red*). Dekoracija primjeraka na **T. IV/3** i **T. V/1–5** identična je onima na loncima **T. I/1–3** pa ih smještamo u isti vremenski okvir od 15. do 18. stoljeća.[39] Vrlo im je sličan dio kvalitetno izrađenog kotlića **T. VI/1** (2.5YR 4/4 *reddish brown*) koji predstavlja stilski najupečatljiviji primjerak na ovom lokalitetu. Riječ je o većem ulomku s očuvanom ušicom s rupom i valovnicom ispod otvora podno koje je urezana linija. Na dnu vrata nalazi se ukras izveden žigosanjem, a motiv su kružnice s križem unutar njih.[40] Ispod njih nalazi se ukras u obliku slova V koji je izveden urezivanjem, a trbuh mu je ukrašen vodoravnim plitkim kanelurama.

[38] COZZA 1988: 190–194, kat. 2-6; GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 132; CUNJA 2004: 74.

[39] Vidi bilješku 5.

[40] Žigosane kružnice s križem identične su i kod ulomka na T. XI/1.

most commonly to the 15th–18th centuries. In the Veneto region of Italy, they became standard inventory items in the late 13th century and remained in use until the 18th century.[38]

Like pots, cauldrons also come in various dimensions; their aperture sizes range from 16 cm (Pl. V/4), 22.5 cm (Pl. VI/5), 23 cm (Pl. VII/5), 24 cm (Pl. VII/2), to 30 cm (Pl. V/5). The simplest specimens are represented by upper parts of cauldrons Pl. IV/3; Pl. V/1–5; Pl. VI/1, which have a rounded rim, from which triangular lugs with holes for attaching handles slightly rise. Below the rim is an incised wavy line. In the first fragment **Pl. IV/3** (2.5YR 5/6 red), a part of the lug is missing, and the wavy line pattern is repeated on the shoulder. The second fragment **Pl. V/1** (edges 2.5YR 6/4 light reddish brown, centre 2.5YR 5/1 reddish grey) is better preserved. Both specimens seem to have had globular bodies. Unlike the previous two, the third specimen **Pl. V/2** (2.5YR 4/6 red) was oxidation-fired. Subsequent specimens slightly differ from the first three: in addition to the wavy line below the aperture, they have three incised lines **Pl. V/3** (2.5YR 3/3 dark reddish brown) or shallow horizontal grooves on the shoulder and body, as seen in fragments **Pl. V/4** (2.5YR 4/4 reddish brown) and **Pl. V/5** (2.5YR 6/6 light red). The decoration on fragments **Pl. IV/3** and **Pl. V/1–5** is identical to that on pots **Pl. I/1–3**, dating them to the same chronological range: from the 15th to the 18th centuries.[39] Markedly similar is **Pl. VI/1** (2.5YR 4/4 reddish brown), a finely worked cauldron fragment that is, in terms of style, the most prominent specimen from the site. It is a rather large fragment with a preserved lug with a hole, featuring a wavy line below the aperture, under which is an incised line. At the base of the neck is a stamped decoration consisting of circles with a cross inside.[40] Below them is a V-shaped

[38] COZZA 1988: 190–194, cat. 2–6; GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 132; CUNJA 2004: 74.

[39] See note 5.

[40] The stamped circles with a cross are identical to those on fragment Pl. XI/1.



Slika 4. *Detalj ukrasa ulomka T. VI/3* (foto: A. Karađole)
Figure 4 *Detail of the decoration on fragment Pl. VI/3* (photo: A. Karađole)

Zanimljiva su dva ulomka sa sličnim ukrasom **T. VI/4** (2.5YR 6/1 *reddish gray*) i **T. VI/5** (2.5YR 6/6 *light red*) koji s vanjske strane oboda imaju kose zareze, a prvi na ramenu ima još jednu urezanu liniju.

Ulomak **T. VI/2** (2.5YR 7/2 *pale red*) bolje je sačuvan pa tako kod njega vidimo uzdignutu ušicu s rupicom u sredini i dio trbušastog tijela ukrašenog dvama očuvanim nizovima jednostrukih valovnica.

Nadalje, ulomak **T. VI/3** (2.5YR 8/4 *pink*) predstavlja dio oboda kotlića koji ima trokutasto ispupčenje u vidu „roščića" (sl. 4). Rame mu je ukrašeno vodoravnim urezanim linijama ispod i preko kojih se nalazi niz utisnutih kružnih, a ispod njih koso položenih ovalnih motiva. Pandane za ovakvo oblikovanje oboda posude za sada ne nalazimo u dostupnoj literaturi.

Kod ulomka **T. VII/1** (2.5YR 6/1 *reddish gray*) sama ušica nije sačuvana, iako je vidljivo uzdizanje oboda te ostatci rupe. Kod tog je primjera riječ o dosta tankoj stijenci čije je

incised decoration, while the body is adorned with shallow horizontal grooves.

Interesting are two fragments with a similar decoration **Pl. VI/4** (2.5YR 6/1 reddish grey) and **Pl. VI/5** (2.5YR 6/6 light red), which have slanted notches on the rim exterior. The first also has an additional incised line on the shoulder.

Fragment **Pl. VI/2** (2.5YR 7/2 pale red) has been better preserved; it shows a raised lug with a hole in the centre and part of the globular body decorated with two preserved rows of single wavy lines.

Furthermore, fragment **Pl. VI/3** (2.5YR 8/4 pink) represents a part of a cauldron rim featuring a triangular protrusion resembling a small horn (Fig. 4). Its shoulder is decorated with horizontal incised lines, above and below which are rows of impressed circular motifs over slanted oval ones. No parallels for this type of rim decoration have been found in the available literature.

In fragment **Pl. VII/1** (2.5YR 6/1 reddish grey), the lug itself is not preserved, though

rame ukrašeno valovnicom iznad koje su vidljive dvije urezane linije.

Kod ulomka **T. VII/3** (2.5YR 3.2 *dusky red*) s našeg lokaliteta riječ je o sačuvanoj blago izvijenoj i uzdignutoj ušici te rebru iznutra koje služi za nasad poklopca, a također mu je očuvan dio recipijenta. Kotlić ima naglašeno tanke stijenke, a tragova dekoracije nema. Slično oblikovane, ali bolje očuvane primjerke s loptastim tijelom i trima koničnim nožicama na dnu nalazimo u Puli gdje su datirani u 17. stoljeće i pripisani radionicama talijanske pokrajine Veneto.[41]

Ulomak ušice sačuvan je i kod primjera **T. VII/4** (2.5YR 6/6 *light red*), a zanimljiv je jer se podno rupe nalazi slabo vidljiv ukras plitkih vodoravnih linija između kojih je valovnica. Ispod same rupe su okomito postavljeni potezi rađeni prstima koji na tom dijelu poništavaju spomenuti ukras.

Ulomak **T. VII/2** (2.5YR 5/2 *weak red*) zaobljenog oboda izvijenog prema van ima s unutarnje strane rebro za nasad poklopca i tanku stijenku. S vanjske su mu strane vidljive vodoravne linije nastale zaglađivanjem posude.

Presjekom sličan ulomak je i **T. VII/5** (2.5YR 4/1 *dark reddish gray*) s izvijenim, zaobljenim obodom i utorom za poklopac. Vrat je ukrašen vodoravnim nizom nepravilnih ovalnih utisnutih motiva, a sama se stijenka dosta stanjuje u odnosu na obod. Sličan oblik i dekoracija javlja se i na ulomku **T. VII/6** (2.5YR 4/4 *reddish brown*) koji karakterizira deblja, nepotpuno sačuvana ušica i dosta tanja stijenka. Utisnuti ovalni ukrasi javljaju se u vodoravnom pojasu ispod ušice, a isti se motiv javlja i na samoj ušici. Dekoracija je vrlo slična onoj na loncu s **T. III/1**, pa na osnovi spomenutog kao i komparativnih primjeraka s drugih lokaliteta u Hrvatskoj ove kotliće smještamo u 15. i 16. stoljeće.[42]

[41] BRADARA, KRNJAK 2016: 117–118, kat. 29.
[42] Vidi bilješke 9–12.

the rise of the rim and traces of a hole are visible. In this specimen, the wall is quite thin, and the shoulder is decorated with a wavy line above which two incised lines are visible.

Fragment **Pl. VII/3** (2.5YR 3.2 dusky red) from the Muraj site preserves a slightly flared and raised lug with an internal rib to support a lid. A part of its vessel body has also been preserved. The cauldron had noticeably thin walls and no traces of decoration. Similarly shaped but better-preserved specimens with globular bodies and three conical legs at the base were found in Pula, dated to the 17th century and attributed to workshops from the Italian region of Veneto.[41]

A lug fragment has also been preserved on specimen **Pl. VII/4** (2.5YR 6/6 light red). It is interesting because of the faintly visible decoration below the hole featuring shallow horizontal lines with a wavy line between them. Vertically placed finger-made strokes below the hole break the pattern of the decoration.

Fragment **Pl. VII/2** (2.5YR 5/2 weak red) has a flared, rounded rim with an inside rib for fitting a lid, and thin walls. Horizontal lines created by smoothing the vessel are visible on the exterior.

Fragment **Pl. VII/5** (2.5YR 4/1 dark reddish grey) has a similar cross-section with a flared, rounded rim and a groove for the lid. The neck is decorated with a horizontal series of irregular impressed oval motifs, and the wall is significantly thinner compared to the rim. Similar shaping and decoration are found on fragment **Pl. VII/6** (2.5YR 4/4 reddish brown), characterised by a thicker, partially preserved lug and considerably thinner walls. Impressed oval motifs appear in a horizontal band below the lug, and the same motif is also present on the lug. The decoration is very similar to that on pot **Pl. III/1**. On the basis of this and comparable specimens from other sites in Croatia, these cauldrons have been dated to the 15th and 16th centuries.[42]

[41] BRADARA, KRNJAK 2016: 117-118, cat. 29.
[42] See notes 9-12.

Poklopci

Iduću skupinu čine poklopci (T. VIII/1–5). Tri poklopca stožastog oblika pripadaju keramici grube fakture (T. VIII/1–3**)**. Prvom ulomku **T. VIII/1** (rubovi 2.5YR 5/1 *reddish gray*, sredina 2.5YR 6/6 *light red*) sačuvan je donji dio tijela s otvorom promjera 18 cm čiji je rub zaobljen, dok je od drugoga očuvan gornji dio tijela s čepastom drškom **T. VIII/2** (2.5YR 6/6 *light red*). Navedeni je tip dugo u upotrebi te se javlja u gruboj i pročišćenoj varijanti, kao i glaziranoj. Čest je i među nalazima kasnog srednjeg i ranog novog vijeka, pa dobro očuvane primjerke u Hrvatskoj nalazimo u Istri,[43] Velikom Taboru,[44] Čanjevu,[45] Bariloviću,[46] Ružici[47], ali i na širem prostoru u Sloveniji,[48] Italiji,[49] Mađarskoj[50] i Srbiji.[51] Grube fakture je i ulomak **T. VIII/3** (2.5YR 4/6 *red*) koji ima poluloptast oblik i očuvan otvor promjera 25 cm i dio stijenke. Na rubu otvora je niz utisnutih motiva, a ukrašen je i izvana širom urezanom valovnicom i ravnom linijom, iznad kojih se nalaze plitki i gusti vodoravni žljebovi. Slične primjere ne nalazimo, a s obzirom na njegovu fragmentarnost treba upozoriti na mogućnost da bi ulomak mogao pripadati poklopcu, ali i zdjeli. Primjerak **T. VIII/4** (2.5YR 3/3 *dark reddish brown*) dio je stijenke poklopca te je ukrašen kosim urezima po sredini ulomka. Posljednji ulomak **T. VIII/5** (2.5YR 5/8 *red*) rađen je od dobro pročišćene gline te je sive boje s obje strane. Oblikom je nešto drugačiji od prethodnih, a očuvao mu se obrubni dio promjera 10 cm sa zaobljenim obodom izvijenim prema gore.

43 CUNJA 2004: 72, kat. 20, 76, kat. 45–49.
44 ŠKILJAN 2007: 80, kat. 20.
45 ČIMIN 2009: 124, sl. 9, T. 9.
46 KRMPOTIĆ 2014: 90, T. 50/604–605, 607–611, 613.
47 RADIĆ, BOJČIĆ 2004: kat. 320–334.
48 LAMUT 1997: 93, sl. 3/1, 103; TOMANIČ-JEVREMOV 1997: 128, kat. 37, T. 7/37.
49 CINNI et al. 1985: 182, cat. 83; GELICHI, LIBRENTI 1998: 25, Tav. 4/1–2.
50 KOVÁCS 1998: 179, Fig. 9/3–11; Fig. 10/1; 2001: 202, Fig. 7/2–3.
51 BIKIĆ 2003: 58–59, Tip IV/2.

Lids

The next group consists of lids (Pl. VIII/1–5). Three conical lids belong to coarse-textured pottery (Pl. VIII/1–3). The first fragment **Pl. VIII/1** (edges 2.5YR 5/1 reddish grey, centre 2.5YR 6/6 light red) has a preserved lower part of the body with an aperture diameter of 18 cm, the edge of which is rounded. The second has a preserved upper part of the body with a stopper-like handle **Pl. VIII/2** (2.5YR 6/6 light red). This type was in use for a long time and occurs in both coarse and refined variants, as well as glazed ones. It is common among finds from the late medieval and early modern periods, with well-preserved specimens in Croatia found in Istria,[43] Veliki Tabor,[44] Čanjevo,[45] Barilović,[46] Ružica,[47] as well as over a wider area covering Slovenia,[48] Italy,[49] Hungary[50] and Serbia.[51] The third fragment **Pl. VIII/3** (2.5YR 4/6 red) also has a coarse texture. Its shape is semi-globular, and it has a preserved aperture with a 25-cm diameter, and a part of the wall. The aperture edge features a series of impressed motifs, and the exterior is decorated with a wide incised wavy line and a straight line above which there are shallow and dense horizontal grooves. No similar specimens have been found. However, considering its fragmentary nature, it might have been part of either a lid or a bowl. The specimen **Pl. VIII/4** (2.5YR 3/3 dark reddish brown) is part of a lid wall and is decorated with slanted incisions along the middle of the fragment. The last fragment, **Pl. VIII/5** (2.5YR 5/8 red), is made of purified clay and is grey on both sides. Its shape is somewhat different

43 CUNJA 2004: 72, cat. 20, 76, cat. 45-49.
44 ŠKILJAN 2007: 80, cat. 20.
45 ČIMIN 2009: 124, Fig. 9, Pl. 9.
46 KRMPOTIĆ 2014: 90, Pl. 50/604-605, 607-611, 613.
47 RADIĆ, BOJČIĆ 2004: cat. 320-334.
48 LAMUT 1997: 93, Fig. 3/1, 103; TOMANIČ-JEVREMOV 1997: 128, cat. 37, Pl. 7/37.
49 CINNI et al. 1985: 182, cat. 83; GELICHI, LIBRENTI 1998: 25, Tav. 4/1-2.
50 KOVÁCS 1998: 179, Fig. 9/3-11; Fig. 10/1; 2001: 202, Fig. 7/2-3.
51 BIKIĆ 2003: 58–59, Type IV/2.

Prepostavljamo da se radi o tipu poklopca u obliku tanjurića s ravnim ili koničnim stijenkama kojem su vanjski rubovi uzdignuti, a po sredini se nalazila dugmetasta drška kako to pokazuju primjerci datirani od 14. do 16. stoljeća otkriveni na tlu susjedne Italije na više nalazišta u Laciju[52] i Emiliji Romanji.[53] S obzirom na njegovu fragmentarnost, treba spomenuti i mogućnost da je riječ o drukčijoj formi, npr. o donjem dijelu svjetiljke koja se sastoji od tanjurića na donjem dijelu iz kojeg se po sredini diže poluloptasti ili bikonični recipijent za ulje, a oba su dijela povezana ručkom. Navedeni primjeri poznati su s prostora Italije gdje se javljaju u olovno glaziranoj varijanti od 14. stoljeća i proizvod su venetskih (padovanskih) radionica.[54] U Beogradu su nađeni slični primjeri svjetiljki, no tu je riječ o svijećnjacima koji na donjem dijelu imaju slično formiran tanjurić, a na gornjem je dijelu konični dio za umetanje svijeće. I oni na sebi imaju sloj glazure, a datiraju se u 16. i 17. stoljeće.[55]

Peke

Slijede nalazi peka, odnosno poklopaca peka (T. IX/1–3) koje se u domaćoj literaturi još uvijek ne spominju često, a riječ je o zvonolikim posudama većih dimenzija. Upravo ta njihova robusnost, oblik i način korištenja omogućavali su dugotrajniju upotrebu.[56] Većinom su se rabile na otvorenom ognjištu,[57] a na tijelu im se obično nalazi rupa ili rupe za odvod pare. Zanimljivo je da se navedeni oblik posuđa na ovim prostorima upotrebljava od prapovijesti do danas.[58] Na području Italije u kasnorepublikansko i

[52] CASSOCAVALLO, PATILLI 2006: 193, Tav. IV/5–10; ROMAGNOLI et al. 2019: 241, Fig 12/15–16.
[53] NEPOTI 1992: 297, Fig. 3/12–13; CESARETTI 2021a: 187, Fig. 1/3, 241, Fig. 52/2.
[54] COZZA 1988: 182, 184, Fig. 12, cat. 46–47; MUNARINI 1992: 36, Fig. 6/c–d, cat. 29–31.
[55] BIKIĆ 2003: 86, Tip XV/2.
[56] BUNČIĆ 2010: 77.
[57] BUNČIĆ 2010: 77.
[58] BATOVIĆ 1987: 372, T. XXXV/14; MIHOVILIĆ 2001: 48, 260–261, 400, Tab. 102/1, 401, Tab. 103/1.

from the previous ones, with a preserved part of a rounded, flared rim of 10 cm in diameter. Presumably it belonged to a lid type shaped like a small plate with straight or conical walls and raised outer edges, with a knob-shaped handle in the centre, as shown by specimens dated to the 14th–16th centuries discovered at several sites in Lazio[52] and Emilia-Romagna in neighbouring Italy.[53] Given its fragmentary nature, it is worth mentioning that it might represent a different form, possibly the lower part of a lamp consisting of a plate-shaped base from which a semi-globular or biconical oil container rose in the centre, with both parts connected by a handle. Such specimens are known from Italy, where they appear in lead-glazed variants from the 14th century, produced by Venetian (Paduan) workshops.[54] Similar lamp specimens have been found in Belgrade, though these are candlesticks with a similarly shaped small plate at the base and a conical upper part for inserting a candle. These also feature a layer of glaze and are dated to the 16th and 17th centuries.[55]

Baking Bells

The next finds are baking bells, or baking bell lids (Pl. IX/1–3), which are still rarely mentioned in domestic literature. These are bell-shaped vessels of larger dimensions. Their robustness, shape and operation allowed for prolonged use.[56] They were mostly used on open hearths,[57] and their bodies usually feature one or more holes for steam release. Interestingly, this type of vessel has been used in the region from prehistory to the present day.[58] During the Late-Republican and Imperial periods in

[52] CASSOCAVALLO, PATILLI 2006: 193, Tav. IV/5-10; ROMAGNOLI et al. 2019: 241, Figs. 12/15-16.
[53] NEPOTI 1992: 297, Fig. 3/12-13; CESARETTI 2021a: 187, Fig. 1/3, 241, Fig. 52/2.
[54] COZZA 1988: 182, 184, Fig. 12, cat. 46-47; MUNARINI 1992: 36, Fig. 6/c-d, cat. 29-31.
[55] BIKIĆ 2003: 86, Type XV/2.
[56] BUNČIĆ 2010: 77.
[57] BUNČIĆ 2010: 77.
[58] BATOVIĆ 1987: 372, Pl. XXXV/14; MIHOVILIĆ 2001: 48, 260–261, 400, T. 102 /1, 401, T. 103/1.

carsko vrijeme peke imaju istaknut i izbačen, pojačan otvor i istaknuto vodoravno rebro preko cijelog recipijenta koje se u doba kasne antike gubi.[59] Tada se pojavljuje i ručka na vrhu, a zadržavaju se rupe na recipijentu. U kasnoj se antici pojavljuju u većim količinama na području sjeverne Italije i Albanije,[60] te se pretpostavlja da se na prijelazu u kasnu antiku i rani srednji vijek napušta masovna proizvodnja kruha i dolazi do pojedinačnog domaćeg pečenja na području Italije i Balkana.[61] No, povijesni izvori na području Carigrada u 10. stoljeću navode isključivo privatne pekare,[62] što vjerojatno znači da situacija nije svugdje bila podjednaka. Osnovna im je funkcija u srednjem vijeku bila pečenje kruha, što potvrđuju i eksperimenti provedeni u Sloveniji kojima je ustanovljeno da je za pečenje kruha bila dovoljna ili peć ili samo peka.[63] Mogle su biti izrađene od keramike ili metala, a srednjovjekovni recepti navode i detaljne upute za njihovo korištenje, pa se tako za metalne navodi da ih je dovoljno okružiti manjom količinom žara, dok je za keramičke potrebna veća količina.[64] U kasnijim periodima osim pečenja kruha služe i za izradu kompliciranijih jela, pa se, primjerice, i danas u njima peku razna mesna i riblja jela, povrće te određene vrste kolača. Na zadarskom području nađene su u relativno maloj količini, kao pojedinačni primjerci u Zadru,[65] utvrdama u Zemuniku Donjem[66] i Kličevici[67] te na otoku Istu.[68] Od ostalih lokaliteta u Dalmaciji nađene su u palači Jakša u Hvaru,[69] u utvrdi Nutjak kod Trilja,[70] dok je veća količina peka otkrivena

59 GELICHI 2022: 136, Fig 1, 137, Fig. 2, 138.
60 GELICHI 2022: 139.
61 VROOM 2008: 303.
62 VROOM 2008: 304.
63 PLETERSKI 2008: 38, 46–47, 51–52, 63–64, 77.
64 VROOM 2008: 304.
65 BEKIĆ 2017: 134, kat. 17–18, 20–22, T. 1/20, T. 2/22.
66 GUSAR, VUJEVIĆ 2016: 26, T.3/1, 3.
67 GUSAR, ĆURKOVIĆ 2011: 19, kat. 11.
68 DOMINES PETER 2023: 96, T.2/12.
69 GUSAR, VISKOVIĆ 2012: 238, kat. 1.
70 ALDUK, TABAK, PETRIČEVIĆ 2010: 432–433, Sl. 16.

Italy, baking bells featured a pronounced and protruding reinforced opening and a prominent horizontal rib around the entire body, but these ceased to appear during Late Antiquity.[59] At that time, a handle was added at the top, while holes remained on the body. In Late Antiquity, they appeared in larger quantities in northern Italy and Albania,[60] and it is assumed that during the transition to Late Antiquity and the Early Middle Ages, mass bread production ceased, and individual domestic baking became common in Italy and the Balkans.[61] Historical sources from 10th-century Constantinople, however, mention only private bakeries,[62] suggesting the situation was not uniform everywhere. Their primary function in the Middle Ages was baking bread, as confirmed by experiments conducted in Slovenia, which established that either an oven or just a baking bell sufficed for bread baking.[63] They were made of ceramics or metal, and medieval recipes also include detailed instructions for their use. For instance, it was noted that the metal ones required only a small amount of embers around them, while the ceramic ones required more.[64] In later periods, in addition to bread baking, they were also used for preparing more complex dishes, such as various meat and fish dishes, vegetables, and certain types of cakes – a tradition that has been preserved into the present day. In the Zadar area, relatively few finds have been discovered, such as individual specimens in Zadar,[65] the fortresses at Zemunik Donji[66] and Kličevica,[67] and on the island of Ist.[68] At other sites in Dalmatia, baking bells have been found at the Jakša Palace in Hvar,[69] the Nutjak Fortress

59 GELICHI 2022: 136, Fig. 1, 137, Fig. 2, 138.
60 GELICHI 2022: 139.
61 VROOM 2008: 303.
62 VROOM 2008: 304.
63 PLETERSKI 2008: 38, 46-47, 51–52, 63-64, 77.
64 VROOM 2008: 304.
65 BEKIĆ 2017: 134, cat. 17-18, 20-22, Pl. 1/20, Pl. 2/22.
66 GUSAR, VUJEVIĆ 2016: 26, Pl. 3/1, 3.
67 GUSAR, ĆURKOVIĆ 2011: 19, cat. 11.
68 DOMINES PETER 2023: 96, Pl. 2/12.
69 GUSAR, VISKOVIĆ 2012: 238, cat. 1.

u Dioklecijanovoj palači te je datirana od 14. do 16. stoljeća.[71] Peke se inače pronalaze na većini kasnosrednjovjekovnih lokaliteta, međutim slabo se objavljuju.[72] Na području kontinentalne Hrvatske nađene su u Starim Perkovcima[73] i Stenjevcu[74] gdje se datiraju u 14. stoljeće, zatim u Čanjevu[75] i Donjem Miholjcu[76] gdje se smještaju od 15. do 17. stoljeća, Vrbovcu[77] te u Ružici gdje su datirane u 16. i 17. stoljeće.[78] Pronađene su na još nekoliko lokaliteta na istočnoj obali Jadrana, na istarskom poluotoku u Piranu i Sv. Ivanu kod Umaga gdje se na temelju analogija iz obližnje Italije datiraju u razdoblje od 15. do 17. stoljeća,[79] kao i u Starom Baru u Crnoj Gori.[80] Na navedenim lokalitetima u Hrvatskoj uglavnom je riječ o nalazima poklopaca peka, dok pekači ili pladnjevi koji idu ispod njih nedostaju, a jedinu iznimku predstavlja Ružica gdje su pronađeni samo pekači, ali ne i poklopci peka.[81] Posve je drukčija situacija zabilježena u Srbiji i Crnoj Gori gdje su pronađene peke koje se sastoje od poklopca (vršnik), kao i pladnja (crepulja).[82] U Italiji u kasnosrednjovjekovnim i novovjekovnim arheološkim slojevima peke, i to njezina oba dijela, javljaju se vrlo često, i to na području Lacija, Umbrije, Emilije Romanje, Kampanije i Kalabrije, dok na području Toskane nisu bile toliko popularne.[83]

Na Muraju su pronađeni dijelovi poklopaca triju peka. Prvi je najbolje očuvan, a vidljiv

71 DELONGA 2014: 122–124, kat. 126–127, 130–136.
72 BUNČIĆ 2010: 78.
73 JANEŠ, HIRSCHLER MARIĆ, AZINOVIĆ BEBEK 2017: 351, 382, T.3/40–41.
74 BUNČIĆ 2010: 77–78, 109, T. 18, 89.
75 ČIMIN 2008: 130–131, Sl. 21; KARAĐOLE 2024.
76 VIŠNJIĆ 2013b: 68, 76, T. 3/5.
77 TKALČEC 2010: 74, 75, kat. 329–330.
78 RADIĆ, BOJČIĆ 2004: 182–183, kat. 347–348.
79 CUNJA 2004: 73, Sl. 21, 74.
80 GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 134, 136, 140, Sl. 183–184.
81 RADIĆ, BOJČIĆ 2004: 182–183, kat. 347–348.
82 BIKIĆ 2003: 75–77, 98–101; GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 134, 136, Sl. 178–185.
83 GRASSI 2007: 252; NEPOTI 2006: 104–107, Fig. 1–4; NEPOTI, GUARNIERI 2006: 118, Fig. 1, 119, 129, Fig. 3.

near Trilj[70], and in larger quantities in Diocletian's Palace, where they have been dated to the 14th–16th centuries.[71] Baking bells are generally found at most late medieval sites, but they are rarely published.[72] In continental Croatia, they have been found in Stari Perkovci[73] and Stenjevec[74], where they were dated to the 14th century; in Čanjevo[75] and Donji Miholjac,[76] where they were dated to the 15th–17th centuries; and in Vrbovec[77] and Ružica, where they were dated to the 16th–17th centuries.[78] They have also been found at several sites along the eastern Adriatic coast, on the Istrian peninsula in Piran, Slovenia and in Sveti Ivan near Umag, where, based on analogies from nearby Italy, they were dated to the 15th–17th centuries,[79] as well as in Stari Bar, Montenegro.[80] Of the sites mentioned, at those in Croatia, the finds predominantly comprised baking bell lids, while the trays or plates that went underneath them were absent. The only exception is Ružica, where the trays were found, but not the lids.[81] A completely different situation has been recorded in Serbia and Montenegro, with finds of baking bells consisting of a lid (*vršnik*) and a tray (*crepulja*).[82] In Italy, baking bells with both parts frequently appear in late medieval and early modern archaeological layers in Lazio, Umbria, Emilia-Romagna, Campania and Calabria, though they were evidently less popular in Tuscany.[83]

At Muraj, parts of the lids of three baking bells were found. The first is the best-pre-

70 ALDUK, TABAK, PETRIČEVIĆ 2010: 432-433, Fig. 16.
71 DELONGA 2014: 122-124, cat. 126-127, 130-136.
72 BUNČIĆ 2010: 78.
73 JANEŠ, HIRSCHLER MARIĆ, AZINOVIĆ BEBEK 2017: 351, 382, Pl. 3/40-41.
74 BUNČIĆ 2010: 77-78, 109, Pl. 18, 89.
75 ČIMIN 2008: 130-131, Fig. 21; KARAĐOLE 2024.
76 VIŠNJIĆ 2013b: 68, 76, Pl. 3/5.
77 TKALČEC 2010: 74, 75, cat. 329-330.
78 RADIĆ, BOJČIĆ 2004: 182-183, cat. 347-348.
79 CUNJA 2004: 73, Fig. 21, 74.
80 GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 134, 136, 140, Fig. 183-184.
81 RADIĆ, BOJČIĆ 2004: 182-183, cat. 347-348.
82 BIKIĆ 2003: 75-77, 98-101; GUŠTIN, BIKIĆ, MILEUSNIĆ 2008: 134, 136, Fig. 178-185.
83 GRASSI 2007: 252; NEPOTI 2006: 104-107, Figs. 1-4; NEPOTI, GUARNIERI 2006: 118, Figs. 1, 119, 129, Fig. 3.



Slika 5. *Unutrašnjost ulomka T. IX/2* (foto: A. Karađole)
Figure 5 *Interior of fragment Pl. IX/2* (photo: A. Karađole)

mu je otvor promjera 40 cm i dio stijenke **T. IX/1** (2.5YR 5/6 *red*). Obod na rubu ima lagano udubljenje, a izvana iznad njega nalazi se reljefna valovita traka iznad koje su valovnica i vodoravna linija urezane širom alatkom.

Idući ulomak **T. IX/2** (2.5YR 5/6 *red*) ima jezičastu dršku pravokutnog presjeka koja se spušta prema dolje. Ulomak je dosta zanimljiv jer je ukrašen samo s unutarnje strane urezanom valovnicom i linijom ispod nje (sl. 5), a slično ukrašen ulomak u unutrašnjosti posude je pronađen u obližnjem Novigradu i okvirno datiran u kasni srednji i rani novi vijek.[84] I kod fragmenta **T. IX/3** (2.5YR 4/6 *red*) radi se o sličnom primjeru s tim da je ovaj ulomak veći, a riječ je o plićoj posudi.

served, with a visible opening diameter of 40 cm and a part of the wall **Pl. IX/1** (2.5YR 5/6 red). The edge has a slight indentation, and on the outside above it is a raised wavy band, above which are a wavy line and a horizontal line, incised with a wider tool.

The next fragment **Pl. IX/2** (2.5YR 5/6 red) has a downward sloped tongue-shaped handle with a rectangular cross-section. This fragment is particularly interesting: only its inside is decorated, with an incised wavy line and a line beneath it (Fig. 5). A similar fragment of a vessel with a decorated interior was found in nearby Novigrad and tentatively dated to the late medieval and early modern period.[84] A third fragment **Pl. IX/3** (2.5YR 4/6 red) is similar, but larger and belonging to a shallower vessel. The

[84] GUSAR, ILKIĆ 2016: 234, 242, T. 1/7a-b. Navedeni ulomak ukrašen je s obiju strana posude.

[84] GUSAR, ILKIĆ 2016: 234, 242, Pl. 1/7a-b. This last fragment is decorated on both sides of the vessel.

Ručka nije u potpunosti sačuvana, ali su vidljivi njeni ostaci. Vanjska površina posude dosta je oštećena i na njoj nisu vidljivi tragovi ukrašavanja. Ukras u unutrašnjosti je bogatiji od prethodnog primjerka, a radi se o kombinaciji urezanih linija te utisnutih nizova točkica i kosih poteza (sl. 6). Zanimljive usporedbe u koncepciji ukrasa s obje strane posude, ali ne u identičnim dekoracijama nalazimo u talijanskoj Ferrari gdje otkriveni su primjeri poklopaca peka datirani u 15. i 16. stoljeće.[85]

Ostalo posuđe

Otvorenim formama, pripadaju ulomci **T. IX/4** (2.5YR 5/6 *red*) i **T. IX/5** (2.5YR 6/3 *light reddish brown*). Kod prve se radi o plićoj posudi koničnog oblika od koje se očuvao blago udubljen obod na vrhu, dio stijenke i čini se početak dna. S obzirom na formu, visinu posude i promjer otvora od 15 cm.

Vjerojatno je riječ o plitkoj zdjelici. Na dnu s vanjske strane nalazi se vrlo mala mrlja glazure koja je vjerojatno rezultat prislanjanja na glaziranu posudu prilikom procesa pečenja. Slični oblici srednjovjekovnih posuda otkriveni su u Rimu,[86] a s identično oblikovanim obodom datirani su u 15. stoljeće.[87] Od druge posude očuvao se ravan obod s nizom kosih ureza na vrhu i dio zaobljene stijenke s ostatcima kružne rupe rađene u svježoj glini. Ukrašena je dvjema urezanim linijama na gornjem dijelu ulomka i plitkim vodoravnim kanelurama na donjem dijelu. Prema obliku posude, moglo bi se pretpostaviti da je i ovdje riječ o zdjeli, no na gornjem dijelu stijenke nalazi se jedna rupa, a moguće je da ih je bilo još. S obzirom na male dimenzije ulomka, nije moguće utvrditi je li riječ o nekoj vrsti cjediljke[88] ili posudi za

[85] NEPOTI 1992, 294, Fig. 1/3; NEPOTI, GUARNIERI 2006: 117, 119, cat. 11–12, Fig. 3/1–2.
[86] CINI et al. 1985: 174–175, cat. 46–48, Tav. VII/46–48.
[87] CINI et al. 1985: 175, cat. 48, Tav. VII/48.
[88] Primjerice, posude za izradu sira također imaju niz rupa na plaštu, što je vidljivo i na Sl. 3 gdje se na stolu nalazi takva konična posuda.

handle has not been completely preserved, but its remains are visible. The outside surface of the vessel is significantly damaged, with no traces of decoration visible. The inside decoration is more elaborate than in the previous specimen, consisting of a combination of incised lines, impressed rows of dots, and slanted strokes (Fig. 6). Interesting analogies to the concept of decoration on both sides of the vessel, though not in identical patterns, are found in Ferrara, Italy, where baking bell lids were discovered and dated to the 15th and 16th centuries.[85]

Other Vessels

Open forms include fragments **Pl. IX/4** (2.5YR 5/6 red) and **Pl. IX/5** (2.5YR 6/3 light reddish brown). The first is a shallow conical vessel, with a preserved slightly indented rim at the top, part of the wall, and what appears to be the commencement of the base. Its form, height, and aperture diameter of 15 cm suggest a shallow bowl. On the outside of the base is a very small glaze spot, most likely resulting from contact with a glazed vessel during the firing process. Similar forms of medieval vessels with identically designed rims have been discovered in Rome[86] and dated to the 15th century.[87] The second vessel has a preserved flat rim with a series of slanted notches at the top and a part of a rounded wall with the remains of a circular hole made in the fresh clay. It is decorated with two incised lines on the upper part of the fragment and shallow horizontal grooves on the lower part. Although the vessel shape suggests a bowl, the upper wall has a hole, and there may have been more of them. Due to the fragment's small size, it is not possible to determine whether it was some sort of colander[88], or possibly a flowerpot, such

[85] NEPOTI 1992, 294, Fig. 1/3; NEPOTI, GUARNIERI 2006: 117, 119, cat. 11-12, Fig. 3/1-2.
[86] CINI et al. 1985: 174-175, cat. 46-48, Tav. VII/46-48.
[87] CINI et al. 1985: 175, cat. 48, Tav. VII/48.
[88] For instance, cheese-making vessels also have rows of holes on their wall, as shown in Fig. 3, where such a conical vessel is depicted on a table.



Slika 6. *Unutrašnjost ulomka T. IX/3* (foto: A. Karađole)
Figure 6 *The inside surface of fragment Pl. IX/3* (photo: A. Karađole)

cvijeće, kakve su, primjerice, nađene u Samostanu San Antonio in Polesine u Ferrari. One su rađene od pročišćene gline, a uz gornji rub imaju vodoravni niz rupa i datirane su od 15. do 18. stoljeća.[89] Moguće je da je riječ i o posudi neke druge namjene kojoj su takve rupe služile za vješanje.

Kategoriji stolnog posuđa pripadaju idući ulomci koji vjerojatno predstavljaju dijelove vrčeva, a rađeni su od pročišćene gline **T. X/1** i **T. X/2**. Kod prvog ulomka riječ je o donjem dijelu recipijenta vrča na diskastom dnu (2.5YR 7/4 *light reddish brown*), dok je potonji **T. X/2** (rubovi 2.5YR 6/6 *light red*, sredina 6/1 *reddish gray*) ulomak ručke trakastog presjeka. Čini se da ovoj kategoriji možemo pripisati i ulomak **T. X/4** (2.5YR 6/8 *light red*) grube fakture kod kojeg je riječ o donjem dijelu recipijenta s diskastim dnom. S vanjske strane iznad ruba dna ima ukras kojeg čini niz nastao blagim utiskivanjem prstiju, a po sredini dna mu je sekundarno probušena rupa. Direktne mu usporedbe ne nalazimo, no slični ukrasi na donjem dijelu plašta posuda javljaju na posu-

[89] LIBRENTI, VALLINI 2006: 199, cat. 21, Fig. 7/21.

as those found in the San Antonio in Polesine Monastery in Ferrara. These were made of purified clay, featured a horizontal row of holes near the upper edge, and were dated to the 15th–18th centuries.[89] It might also have belonged to a vessel with another function, the holes serving for its suspension.

Fragments **Pl. X/1** and **Pl. X/2**, possibly parts of jugs made of purified clay, can be classified as tableware. The former is the lower part of a jug body with a disc-shaped base (2.5YR 7/4 light reddish brown), while the latter (rim: 2.5YR 6/6 light red, centre: 6/1 reddish grey) is a fragment of a handle with a ridged cross-section. It seems that this category also includes fragment **Pl. X/4** (2.5YR 6/8 light red), a coarse-textured piece representing the lower part of a vessel with a disc-shaped base. On the outside, above the base edge, is a decoration consisting of a series of finger-made impressions and a secondary hole pierced through the base centre. No direct analogies have been identified, although similar decorations on the lower part of the vessel

[89] LIBRENTI, VALLINI 2006, 199, cat. 21, Fig. 7/21.

dama za cvijeće iz Ferrare koje se datiraju od 15. do 18. stoljeća, među kojima se osobito oblikom ističe vrč koji je sekundarno iskorišten za tu namjenu.[90]

Za iduće ulomke nismo sigurni predstavljaju li dosad analizirane tipove posuda, ali možemo reći da je riječ o grupi koju karakterizira gruba faktura. Prvi ulomak **T. X/3** (unutarnji rub 2.5YR 6/6 *light red*, vanjski rub 4.2 YR 5/8 *weak red*) dio je trbuha posude nejasne forme koji je ukrašen širokim plitkim žljebovima. Iduću skupinu karakterizira bogat i zanimljiv ukras izveden žigosanjem (T. XI/1–4). Kod ulomaka **T. XI/1–2** radi se o ulomcima tijela posuda. Kod prve **T. XI/1** je (2.5YR 5/4 *reddish brown*) sačuvan tek dio ukrasa koji je osim žigosanjem izveden i ubadanjem. Centralni je motiv višelatična rozeta uokolo koje se nalaze kružnice s križevima, a njih okružuje više malih kružnica. Osim navedenog ukrasa, na cijeloj vanjskoj površini posude vidljivi su loše očuvani ostatci premaza crvene boje, što također predstavlja još jednu neobičnost. I sljedeći ulomak vrata, ramena i dijela trbuha posude **T. XI/2** (2.5YR 5/4 *reddish brown*) bogato je ukrašen. Uz gornji rub ulomka ukras se sastoji od točkica izvedenih tupim predmetom koje su vjerojatno sačinjavale trokute ili izlomljenu traku. Ispod je vidljiva urezana linija podno koje se nalaze kosi urezi omeđeni još jednom linijom. Posebno je zanimljiv ostatak, a riječ je o ukrasu koji je sačinjen od dviju urezanih palmeta postavljenih u obliku slova V između kojih se nalazi žigosana rozeta. Ulomak dna konične posude **T. XI/3** (2.5YR 5/6 *red*) ima sličan, iako ponešto drukčiji ukras. Rađen je kombinacijom ubadanja i žigosanja. Sama stopa ukrašena je urezivanjem kosih linija iznad kojih se nalazi deblja horizontalna linija. Povrh su žigosane rozete koje su omeđene ubadanjem točkica koje tvore trokutasti motiv. Na samome gornjem rubu sačuvanog ulomka vidljiva je

[90] LIBRENTI, VALLINI 2006: 197, cat. 16, 199, cat. 17–18, Fig. 6, Fig. 7/16–18, 218, cat, 125, Fig. 20/125.

walls appear on flowerpots from Ferrara, dated to the 15th–18th centuries, in particular a repurposed jug of a distinctive shape.[90]

The following fragments are characterised by a coarse texture; it is uncertain whether they belong to any of the previously analysed vessel types. The first fragment **Pl. X/3** (interior edge: 2.5YR 6/6 light red, exterior edge: 4.2 YR 5/8 weak red), is part of the body of a vessel of undefined form, decorated with wide shallow grooves. The following group is characterised by rich and interesting stamped decoration (Pl. XI/1–4). Fragments **Pl. XI/1–2** are vessel body sherds. In the first fragment **Pl. XI/1** (2.5YR 5/4 reddish brown), only a part of the decoration worked both by stamping and dotting has been preserved. The central motif is a multi-petalled rosette surrounded by circles with crosses, further encircled by multiple small circles. In addition to this decoration, poorly preserved remains of a red coating are visible on the entire exterior surface of the vessel, which also represents an unusual feature. The next fragment, comprising the neck, shoulder, and part of the belly of a vessel, **Pl. XI/2** (2.5YR 5/4 reddish brown), is richly decorated. Along the upper edge of the fragment, the decoration consists of dots made with a blunt tool, probably forming triangles or a zigzag band. Below, there is an incised line, beneath which slanted incisions are visible, bordered by another line. Particularly interesting is a decorative element composed of two incised palmettes arranged in a V shape, with a stamped rosette positioned between them. The base fragment of a conical vessel **Pl. XI/3** (2.5YR 5/6 red) has a similar (though slightly different) decoration, executed with a combination of dotting and stamping. The foot itself is decorated with incised slanted lines, above which is a thicker horizontal line. Above these, stamped rosettes are bordered a by dotted triangular motif. On the upper edge of the preserved fragment, an irregular wavy line is visible. Specimens showing the

[90] LIBRENTI, VALLINI 2006: 197, cat. 16, 199, cat. 17-18, Fig. 6, Fig. 7/16-18, 218, cat. 125, Fig. 20/125.

neuredna valovnica. Uporaba žigosanog ukrasa rozete na području Dalmacije u kasnome srednjem i novom vijeku još uvijek je rijedak nalaz, osobito na posuđu grube fakture, a jedan od lokaliteta na kojem je pronađena jest tvrđava Fortica u Novigradu.[91] Takav način ukrašavanja pronalazimo i na širem području, npr. u Ružici gdje se datira od 14. do 16. stoljeća.[92] Na obama lokalitetima riječ je o grubim loncima kojima također treba pridružiti već spomenute nalaze lonca **T. I/6** i kotlića **T. VI/1** koji je ukrašen identičnim kružnicama unutar kojih je križ kao i ulomak **T. XI/1**. Također, nekoliko primjera stolnog posuđa, i to čaša ukrašenih žigosanom rozetom, pronađeno je u burgu Vrbovcu u sloju s kraja 15. i početka 16. stoljeća i pretpostavlja se da su na njih utjecale čaše iz Celja i one s područja Mađarske,[93] gdje se otprilike u isto vrijeme javljaju slične žigosane rozete, s tim da su te čaše uglavnom glazirane.[94] Pretpostavlja se da se tehnika žigosanja u kasnome srednjem vijeku na prostor Mađarske proširila iz Austrije.[95] Najraniji mađarski primjerci datiraju se u 14. stoljeće, a tehnika se osobito širi tijekom druge polovice 15. stoljeća i traje do sredine 16. stoljeća te se javlja na grubom i glaziranom posuđu.[96] Žigosani ukrasi na grubom posuđu, i to višelatičnih rozeta javljaju se na pekama iz Ferrare u Emiliji Romanji i Vellana u Toskani gdje se datiraju u 15. i početak 16. stoljeća.[97]

Posude za cvijeće

Jedan od zanimljivijih ulomaka jest donji dio posude **T. XI/4** (2.5YR 5/8 *red*) koja po sredini dna ima rupu probijenu u svježoj

[91] GUSAR, ILKIĆ 2016: 234, 242, T. 1/6.
[92] RADIĆ, BOJČIĆ 2004: 165, kat. 313.
[93] TKALČEC 2010: 71–72, sl. kat. br. 287; 139–140, kat. 260, 264, 279-281, 287; 171–172, T. 13–14.
[94] GUŠTIN 2001: 146–154; HOLL 2005: 371, Abb. 41–43.
[95] KOVÁCS 2021: 250.
[96] KOVÁCS 2021: 251, 273.
[97] NEPOTI 1992: 294, Fig. 1/3; NEPOTI, GUARNIERI 2006: 117, 119, cat. 11–12, Fig. 3/1–2; MILANESE 1994: 109, Fig. 16.

use of stamped rosette decorations in Dalmatia during the late medieval and early modern periods remain rare, especially on coarse-textured vessels. One of the sites where it has been found is the Fortica Fortress in Novigrad.[91] This decorative technique is also found over a broader area, for example in Ružica, where it is dated to the 14th–16th centuries.[92] Both sites feature coarse pots akin to the mentioned finds of a pot **Pl. I/6** and a cauldron **Pl. VI/1**, the latter being decorated with circles containing crosses identical to those in fragment **Pl. XI/1**. Additionally, several tableware specimens, specifically beakers decorated with a stamped rosette, were found in Vrbovec Castle in a layer dated to the late 15th and early 16th centuries. It is assumed that they were influenced by beakers from Celje and Hungary,[93] where similar stamped rosettes appeared around the same time, mostly on glazed beakers.[94] It is believed that the stamping technique spread to Hungary from Austria during the late medieval period.[95] The earliest Hungarian specimens are dated to the 14th century; the technique became widespread in the second half of the 15th century, continuing until the mid-16th century, appearing on both coarse and glazed ware.[96] In coarse ware, stamped decorations with multi-petalled rosettes appear on baking bells from Ferrara in Emilia-Romagna and Vellano in Tuscany, where they were dated to the 15th and early 16th centuries.[97]

Flowerpots

An interesting fragment is the lower part of a vessel **Pl. XI/4** (2.5YR 5/8 red), which has a hole, pierced in the fresh clay, at the centre of

[91] GUSAR, ILKIĆ 2016: 234, 242, Pl. 1/6.
[92] RADIĆ, BOJČIĆ 2004: 165, cat. 313.
[93] TKALČEC 2010: 71-72, Fig. cat. No. 287; 139-140, cat. 260, 264, 279-281, 287; 171-172, Pl. 13-14.
[94] GUŠTIN 2001: 146-154; HOLL 2005: 371, Abb. 41-43.
[95] KOVÁCS 2021: 250.
[96] KOVÁCS 2021: 251, 273.
[97] NEPOTI 1992: 294, Fig. 1/3; NEPOTI, GUARNIERI 2006: 117, 119, cat. 11-12, Fig. 3/1-2; MILANESE 1994: 109, Fig. 16.

glini. Posuda je ukrašena nizom žigosanih cvjetića ili rozeta u trakastom rasporedu, omeđenih kratkim kosim urezima. Posuda je gotovo istog oblika kao i prethodno spomenuta **T. XI/3**, no bolje je očuvana. Moguće je da je u obama slučajevima riječ o loncu za cvijeće. Naime, na području Italije otkriven je velik broj posuda koje se nazivaju *vasi di fiore* ili *fioriere*, dakle posude za cvijeće. Najčešće su rađene od pročišćene gline. Velika količina ovih posuda pronađena je u Ferrrari, a jedan od najbogatijih lokaliteta je Samostan San Antonio in Polesine.[98] Na području Dalmacije nisu za sada često opisivani u literaturi, a svakako je zanimljivo navesti da je u istraživanjima obližnjeg samostanskog kompleksa sv. Nikole u Zadru pronađeno više ulomaka lonca za cvijeće koji je restauriran[99] kao i u Dioklecijanovoj palači,[100] dok je jedan glaziran primjerak otkriven u Istri, u Puli.[101]

Posude za cvijeće na tlu Italije javljaju se u pisanim i likovnim izvorima već od 13. stoljeća, a tijekom 15. i 16. stoljeća obično se izrađuju od keramike. Čest su nalaz u samostanskim zajednicama, ali i privatnim kućama. Služile su kao lonci za sadnju ne samo cvijeća već i različitog bilja, poput začinskog ili agruma, a na dnu posude ili na stijenkama obično imaju jednu ili više rupa. Postavljale su se u kuće, balkone, dvorišta i vrtove.[102] Upravo nam likovni izvori prikazuju kako su za tu namjenu katkad korišteni i neki drugi oblici posuđa poput kuhinjskog lonca.[103] Različitih su veličina i oblika, no najčešći su konični i zvonoliki primjerci.

Prvi ulomak **T. XII/1** (7.5YR 8/3 *pink*) dio je naglašenog i zadebljanog oboda izvijenog prema van, ispod kojeg se nalazi blago naglašeno rebro i dio stijenke. Slično oblikova-

its base. The vessel is decorated with a series of stamped floral motifs or rosettes in a banded arrangement, bordered by short slanted incisions. The vessel shape is almost identical to **Pl. XI/3**, but better preserved. It is possible that both are flowerpots. In Italy, a large number of vessels referred to as *vasi di fiore* or *fioriere* (flowerpots) have been discovered. Most often they were made of purified clay. A significant quantity of these vessels has been found in Ferrara, with one of the most plentiful sites being the San Antonio in Polesine Monastery.[98] In Dalmatia, such vessels have not been widely described in the literature. However, it is worth noting that excavations in the nearby monastic complex of St. Nicholas in Zadar uncovered several fragments of a flowerpot (which was restored).[99] The same happened in Diocletian's Palace,[100] while one glazed specimen was found in Pula, Istria.[101]

Flowerpots are noted in written and visual sources in Italy as early as the 13th century, while during the 15th and 16th centuries they were commonly made of ceramics. They are a frequent find in monastic communities and also in private households. They served not only for planting flowers but also for various herbs, such as spices or citrus plants, and typically had one or more holes in the base or walls. They were placed in houses, on balconies, in courtyards and in gardens.[102] Visual sources show that other types of vessels, such as kitchen pots, were sometimes used for this purpose as well.[103] They come in various shapes and sizes, though the most common are conical and bell-shaped specimens.

The first fragment **Pl. XII/1** (7.5YR 8/3 pink) is part of a prominent, thickened, flared rim, beneath which there is a slightly pronounced rib and part of the wall. Similarly shaped spec-

98 LIBRENTI, VALLINI 2006: 198–199, Fig. 5–6.
99 BEKIĆ 2017: 133–134, Sl. 3.
100 DELONGA 2014: 142, Tab.XVII. (K., gr.), 87.
101 BRADARA, KRNJAK 2016: 90, kat. 20.
102 LIBRENTI, VALLINI 2006: 193–194.
103 LIBRENTI, VALLINI 2006: Fig. 2.

98 LIBRENTI, VALLINI 2006: 198-199, Figs. 5- 6.
99 BEKIĆ 2017: 133-134, Fig. 3.
100 DELONGA 2014: 142, T. XVII. (K., gr.), 87.
101 BRADARA, KRNJAK 2016: 90, cat. 20.
102 LIBRENTI, VALLINI 2006: 193-194.
103 LIBRENTI, VALLINI 2006: Fig. 2.

ne primjerke nalazimo na lokalitetu Crypta Balbi u Rimu među posudama koje se datiraju od sredine 16. do početka 17. stoljeća.[104] Primjerci **T. XII/3–4** (oba 7.5YR 8/3 *pink*) pripadaju istoj posudi većih dimenzija s promjerom otvora od 36 cm. Obod im je malo zaravnjeniji s gornje strane u odnosu na prethodni ulomak, ali je zadebljan i uvlači se s unutarnje strane, dok je s vanjske strane ispupčen. Na vanjskoj su stijenci vidljivi tragovi višestruke češljaste valovnice. Identičan primjerak nađen je u sklopu Samostana Santa Caterina u Crypti Balbi u Rimu i datiran je u 17. i 18. stoljeće.[105] Ulomak posude **T. XII/2** (2.5YR 6/6 *light red*) s izvučenim obodom ima unutarnji i vanjski rub otvora ukrašen utiskivanjem prsta, a sličan ukras nalazi se i na stijenci pri čemu otisci prstiju tvore valoviti plašt. Usporedbe mu nalazimo u Samostanu San Antonio in Polesine među nalazima koji se okvirno smještaju od 15. do 18. stoljeća.[106] Finu fakturu ima i ulomak **T. XII/5** (7.5YR 8/3 *pink*). Promjer otvora posude iznosi 14,3 cm. Obod je s gornje strane zaravnjen, a s vanjske strane profiliran i ukrašen štipanjem prstima. Od stijenke se očuvao mali dio na kojem nisu vidljivi tragovi dekoracije. Analogije mu nalazimo u Rimu gdje se takva posuda datira od 1630. do 1700. godine te u Paviji među više primjeraka datiranim u kraj 17. i 18. stoljeće.[107] Slijede dva donja dijela lonaca za cvijeće od kojih prvi **T. XIII/1** (2.5 YR 6/8 *light red*) ima dio očuvane konične stijenke i ravnog dna promjera 20,5 cm, a slične je forme i drugi **T. XIII/2** (2.5 YR 8/4 *pink*), no promjer mu je nešto veći, pa iznosi 22 cm. Za obje posude analogije nalazimo u Ferrari među nalazima koji se datiraju od

imens were found at the Crypta Balbi site in Rome among vessels dated to the mid-16th to early 17th centuries.[104] Fragments **Pl. XII/3–4** (both 7.5YR 8/3 pink) belong to the same larger vessel with an aperture diameter of 36 cm. The rim is slightly flatter on the upper side compared to the first fragment, but it is thickened, curving inward on the interior and bulging outward on the exterior. Traces of multiple combed wavy lines are visible on the exterior wall. An identical specimen was found at the Santa Caterina Monastery in Crypta Balbi in Rome and dated to the 17th and 18th centuries.[105] The vessel fragment **Pl. XII/2** (2.5YR 6/6 light red) with a drawn-out rim has both its inner and outer edges decorated with fingertip impressions, and a similar decoration is found also on the wall, where the impressions create a wavy mantle. Analogies were found at the San Antonio in Polesine Monastery among finds tentatively dated to the 15th–18th centuries.[106] A finely textured fragment is **Pl. XII/5** (7.5YR 8/3 pink), with an opening diameter of 14.3 cm. The rim is flattened on the upper side, profiled on the exterior, and decorated with pinching impressions. Only a small portion of the wall has been preserved, without visible decoration. Analogies for this type of vessel have been found in Rome, where such vessels are dated to between 1630 and 1700, and in Pavia, among several specimens dated to the late 17th and 18th centuries. [107] The next two fragments represent the lower parts of flowerpots. The first, **Pl. XIII/1** (2.5YR 6/8 light red), preserves part of the conical wall and a flat base with a diameter of 20.5 cm. The second, **Pl. XIII/2** (2.5YR 8/4 pink), is similar in form but slightly larger, with a diameter of 22 cm. Analogies for both vessels were found in Ferrara, among finds dated to the period from the 15th to the 18th

[104] GABUCCI, TESSEI 1989: 174, cat. 257, 258, 261, Tav. XXXVII/257, 258, 261.
[105] GABUCCI 1985: 504, 506, cat. 833, Tav. LXXII/833.
[106] LIBRENTI, VALLINI 2006: 199, Fig, 6, Fig. 7/17, Fig. 26/17.
[107] GABUCCI 1984: 521, cat. T. LXXX/521; NEPOTI 1978: 173, Fig. 42/1-3.

[104] GABUCCI, TESSEI 1989: 174, cat. 257, 258, 261, Tav. XXXVII/257, 258, 261.
[105] GABUCCI 1985: 504, 506, cat. 833, Tav. LXXII/833.
[106] LIBRENTI, VALLINI 2006: 199, Fig. 6, Fig. 7/17, Fig. 26/17.
[107] GABUCCI 1984: 521, cat. T. LXXX/521; NEPOTI 1978: 173, Fig. 42/1-3.

15. do 18. stoljeća.[108]

Iduća tri nalaza također imaju fakturu od pročišćene gline, no namjena im nije posve sigurna. Prvi je dio stijenke **T. XIII/3** (7.5YR 7/3 *pink*) na kojem je urezano više vodoravnih linja od kojih su donje prekinute kružnim ukrasima nastalim utiskivanjem prstiju. Ista kombinacija ukrasa javlja se na loncima za cvijeće iz Ferrare, ali u glaziranoj varijanti među nalazima 15. – 18. stoljeća,[109] pa je moguće da je tu također riječ o istom tipu posude. Sljedeći ulomak dio je oboda i ručke posude **T. XIII/4** (rubovi 2.5YR 7/6 *light red*, sredina 7.5YR 7/3 *pink*) kojem su vanjski rub oboda i ručka ukrašeni utiskivanjem prstiju. Ručka ima okomito postavljene tragove ukrasa dva prsta. Nalaz je dosta neobičan i vrlo je teško utvrditi kojem točno obliku pripada. U Zadru su pronađeni ulomci ovako ukrašenog oboda bez ukrasa ručke te još jedan kojem je ukrašena ručka, ali ne i obod te su smješteni u 18. i 19. stoljeće.[110] U Crypti Balbi u Rimu utiskivanje prstom dosta je često među nalazima posuda za cvijeće koje su također mogle imati ručke u 17./18. stoljeću, ali i na visokoj koničnoj posudi nepoznate namjene kod koje se ukras jednostrukih otisaka prsta javlja na ručkama, a datiran je u 18. stoljeće.[111]

Ulomak stijenke posude **T. XIV/2** (2.5YR 5/8 *red*) uz gornji i donji rub ima niz kosih ureza između kojih su duže lagano savijene urezane linije koje se križaju i tvore neku vrstu nepravilne mreže. Na posudi je očuvana rupica u glini kroz koju prolazi komad korodiranog željeza vidljiv i na površini. Usporedbe ovoj posudi ne nalazimo, no s obzirom na dimenzije ulomka, riječ je o posudi većih dimenzija, možda skladišne namjene.

[108] LIBRENTI, VALLINI 2006: 233, Fig. 27/11–13.
[109] LIBRENTI, VALLINI 2006: 218, cat. 114, Fig. 19/114, Fig. 26/114.
[110] BEKIĆ 2017: 133, Sl. 1/8, T. 2/ 8, 24.
[111] GABUCCI 1985: 306–307, cat. 833, T. LXXIV/833, 529-530, cat. 899, T. LXXXIV/899.

centuries.[108]

The texture of the following three finds is also of purified clay, though their function is not entirely certain. The first, **Pl. XIII/3** (7.5YR 7/3 pink) is part of a wall fragment, which features several horizontal incised lines, with the lower ones interrupted by circular decorations created by fingertip impressions. The same combination of decorations appears on flowerpots from Ferrara, but in a glazed version, among finds dated to the 15th–18th centuries,[109] suggesting the same vessel type. The next fragment, **Pl. XIII/4** (edges: 2.5YR 7/6 light red, centre: 7.5YR 7/3 pink), is part of the rim and handle of a vessel, with the outer rim and handle decorated with fingertip impressions. The handle features vertically placed impressions applied with two fingers. This find is quite unusual, and it is very difficult to determine its exact form. In Zadar, fragments of rims with similar decorations but with undecorated handles were found, as well as another fragment with a decorated handle but an undecorated rim, dated to the 18th and 19th centuries.[110] At Crypta Balbi in Rome, fingertip impressions are common among flowerpot finds, which might also have had handles, dating to the 17th and 18th centuries. They also appear on a tall conical vessel dated to the 18th century, of unknown function and with handles decorated with single fingertip impressions.[111]

The vessel wall fragment **Pl. XIV/2** (2.5YR 5/8 red) has a series of slanted incisions along the upper and lower edges, between which longer, slightly curved incised lines intersect to form an irregular mesh pattern. The vessel has a preserved hole in the clay; a piece of corroded iron passing through it is also visible on the surface. No direct analogies for this vessel are known, but given the fragment size, it may have belonged to a larger vessel, possibly used for storage.

[108] LIBRENTI, VALLINI 2006: 233, Fig. 27/11-13.
[109] LIBRENTI, VALLINI 2006: 218, cat. 114, Fig. 19/114, Fig. 26/114.
[110] BEKIĆ 2017: 133, Fig. 1/8, Pl. 2/8, 24.
[111] GABUCCI 1985: 306–307, cat. 833, T. LXXIV/833, 529–530, cat. 899, T. LXXXIV/899.

Predmeti za pečenje keramičkih posuda

Posebnu pozornost zaslužuju dva zanimljiva keramička predmeta koji pripadaju pomagalima koja su se rabila pri pečenju posuda. Naime, riječ je o ulomcima keramičkih predmeta u obliku diska **T. XIV/1** (2.5YR 4/6 *red*) i **T. XIV/3** (2.5YR 4/6 *red*). Na jednoj su strani izrazito grubi, puni mineralnih primjesa, a na drugoj su im strani vidljive linije nastale pri radu na kolu, s tim da prvi ulomak ima vidljive nešto dublje urezane linije. Promjer im iznosi 21 (T. XIV/3) i 23 cm (T. XIV/1), a debljina 1,1 (T. XIV/3) i 1,2 (T. XIV/1) cm. Sličan primjerak koji potječe iz Svetog Ivana kod Umaga i danas se čuva u Zbirci Gajšek u Piranu, ima promjer 16 cm, a kao i naši primjerci, grube je fakture i više je puta pečen.[112] Kružne ploče bez ili s jednom središnjom kružnom rupom u srednjem i novom vijeku upotrebljavale su se kao pomoćni predmeti tijekom pečenja glaziranih keramičkih posuda jer su se na njih slagale posude koje su se na taj način odvajale jedna od druge da se ne bi međusobno zalijepile te su se tako formirale etaže unutar peći za keramiku da bi se prostor što više ispunio posudama.[113] Slični primjerci ploča u obliku kruga ili segmenta prisutni su još od prapovijesti s time da im je površina bila prekrivena kružnim perforacijama, a postavljale su se na dno peći.[114] Nalazi prošupljenih i punih ploča uglavnom su otkriveni na lokalitetima gdje je potvrđena proizvodnja keramičkih posuda, i to nalazima peći *in situ* ili među nalazima radioničkog otpada, alatki i raznih pomagala.

Navedeni primjerak iz okolice Umaga datira se u 16. stoljeće i povezuje s djelatnošću radionice za proizvodnju glazirane keramike potvrđene nalazima radioničkog otpada i raznim pomagalima u izradi.[115] Na lokalitetu Veštar kod Rovinja također je otkriven ulomak keramičkog diska s rupicama koji se smješta u razdoblje od 16. do 18. stoljeća, a

[112] GUŠTIN 2004: 57–58, kat. 576.
[113] GUŠTIN 2004: 57.
[114] MILO 2008: 29–33, Fig. 14-15, Tav. 8-9.
[115] GUŠTIN 2004: 57–58, 200.

Implements for Kitchenware Firing

Of particular interest are two ceramic items associated with utensils used during the firing of vessels. These are fragments of disc-shaped ceramic artefacts **Pl. XIV/1** (2.5YR 4/6 red) and **Pl. XIV/3** (2.5YR 4/6 red). On one side they are extremely rough, full of mineral inclusions, while the other side shows lines formed during work on a potter's wheel. The first fragment has somewhat deeper incised lines. Their diameters are 21 cm (Pl. XIV/3) and 23 cm (Pl. XIV/1), with thicknesses of 1.1 cm (Pl. XIV/3) and 1.2 cm (Pl. XIV/1). A similar specimen from Sveti Ivan near Umag, now housed in the Gajšek Collection in Piran, Slovenia, has a diameter of 16 cm and, like the mentioned specimens from Croatia, has a coarse texture and was fired multiple times.[112] Circular plates, with or without a central circular hole, were used during the medieval and early modern periods as auxiliary tools during the firing of glazed ceramic vessels. They were stacked with vessels to prevent them from sticking together and to create layers within kilns, maximising the use of space.[113] Similar circular or segmented plates have been present since prehistory, often perforated, and were placed at the base of kilns.[114] Finds of perforated and solid plates have mainly been made at sites with confirmed ceramic production, evidenced by the presence of *in situ* kilns or among workshop debris, tools, and other aids.

The mentioned specimen from near Umag was dated to the 16th century and linked to a workshop producing glazed ceramics, evidenced by workshop debris and various production aids.[115] At the Veštar site near Rovinj, a ceramic disc fragment with holes was also found and dated to the 16th–18th centuries. At this site, the existence of a ceramic work-

[112] GUŠTIN 2004: 57-58, cat. 576.
[113] GUŠTIN 2004: 57.
[114] MILO 2008: 29-33, Fig. 14-15, Tav. 8-9.
[115] GUŠTIN 2004: 57-58, 200.

na navedenom se lokalitetu također pretpostavlja postojanje keramičke radionice.[116] Na području Italije, komparativni primjerci koji su služili za distanciranje posuda pri njihovu pečenju otkriveni su u Venetu u Padovi i datiraju se od druge polovice 15. stoljeća do sredine 18. stoljeća,[117] a nađeni su i u Emiliji Romagni u Argenti gdje su datirani u 17. stoljeće[118] i Ferrari.[119] Kako u Zadru za sada ne poznajemo dokaze o postojanju keramičkih radionica, pitanje pojave ovih predmeta za sada ostavljamo otvorenim.

Građevinska keramika

Zadnji ulomak **T. XIV/4** (rubovi 2.5YR 4/8 *red*, sredina 2.5YR 4/1 *dark reddish gray*) pripada građevinskoj keramici i rađen je od pročišćene narančastocrvene keramike, a koničnog je oblika s jednom zaravnjenom stranom. To je dio keramičke konične cijevi koja se lagano širi prema dnu, a pri vrhu se sužava i ispod otvora obično ima reljefno rebro.[120] Obično su izrađene od pročišćene gline, i to na brzome lončarskom kolu što se vidi po linijama s unutarnje strane, a uži gornji dio cijevi umetao se u drugu cijev sve do rebra.[121] Kod našeg primjerka riječ je o fragmentu donjega proširenog dijela s rubom promjera 13 cm. Takve cijevi u srednjem i novom vijeku upotrebljavale su se za odvod otpadnih voda ili za prijenos vode.[122] Keramičke cijevi pronađene su u Italiji na različitim nalazištima poput Padove,[123] Pise[124], Ferrare[125] i Bashop is also assumed.[116] In Italy, comparable specimens used for separating vessels during firing were found in Veneto (in Padua) and dated to the period from the second half of the 15th century to the mid-18th century,[117] as well as in Emilia-Romagna (Argenta), where they were dated to the 17th century,[118] and in Ferrara.[119] Since no evidence of ceramic workshops has yet been identified in Zadar, the question of the origin of these objects remains open.

Ceramic Building Material

The last fragment **Pl. XIV/4** (edges: 2.5YR 4/8 red, centre: 2.5YR 4/1 dark reddish grey) belongs to ceramic building material and is made of purified orange-red clay. It is conical in shape with one flattened side. This is part of a type of ceramic conical pipe that slightly widens toward the base and narrows at the top, usually featuring a relief rib below the aperture.[120] Such pipes were typically made of purified clay on a fast-turning potter's wheel, as evidenced by the lines visible on the interior. The narrower upper part of the pipe was inserted into another pipe up to the rib[121]; this specimen represents the lower expanded part with a rim diameter of 13 cm. Such pipes were used during the medieval and early modern periods for wastewater drainage or water transport.[122] Ceramic pipes have been found in Italy at various sites, such as Padua,[123] Pisa,[124] Ferrara,[125] and

116 SURIĆ, VIŠNJIĆ 2014: 212, kat. 9.
117 COZZA 2020: 119, tav. 14/b, 125, 126, tav. 22/c, 244, fig. 360, 245, fig. 362.
118 BRUNETTI 1992: 87–88, Tav. XIX/10-12.
119 GUARNIERI 2006: 123, Fig. 44/7-8. Bez pobliže datacije.
120 COZZA 1989: 70, fig. 90.
121 GIORGIO 2014: 229.
122 GUARNIERI, CESARETTI 2021a: 166.
123 COZZA 1989: 70, Fig. 90.
124 GATTIGLIA, GIORGIO 2012; GIORGIO 2014.
125 NEPOTI 1992: 284–285, Fig. 17/1; GUARNIERI 2006: 122, Fig. 41/16–17; LIBRENTI, VALLINI 2006: 203, cat. 34, Fig. 8/3; GUARNIERI, CESARETTI 2021: 166–169, Fig. 7.

116 SURIĆ, VIŠNJIĆ 2014: 212, cat. 9.
117 COZZA 2020: 119, tav. 14/b, 125, 126, tav. 22/c, 244, fig. 360, 245, fig. 362.
118 BRUNETTI 1992: 87–88, Tav. XIX/10-12.
119 GUARNIERI 2006: 123, Fig. 44/7-8. No closer dating is available.
120 COZZA 1989: 70, fig. 90.
121 GIORGIO 2014: 229.
122 GUARNIERI, CESARETTI 2021a: 166.
123 COZZA 1989: 70, Fig. 90.
124 GATTIGLIA, GIORGIO 2012; GIORGIO 2014.
125 NEPOTI 1992: 284-285, Fig. 17/1; GUARNIERI 2006: 122, Fig. 41/16-17; LIBRENTI, VALLINI 2006: 203, cat. 34, Fig. 8/3; GUARNIERI, CESARETTI 2021: 166-169, Fig. 7.



Slika 7. *Unutrašnjost ulomka cijevi T. XIV/4* (foto: A. Karađole)
Figure 7 *Inside of pipe fragment Pl. XIV/4* (photo: A. Karađole)

gnare di Romagna,[126] a javljaju se u varijanti bez glazure i s njom. U Pisi se javljaju već u drugoj polovini 12. i rabe se do 20. stoljeća, dok su u Ferrari datirani od 15. do 18. stoljeća.[127] U Pisi su *in situ* očuvana dva primjera na kojima je vidljivo da su takve cijevi mogle biti postavljene okomito u zidovima gdje su se vjerojatno spajale u sistem kanalizacije ili su mogle biti postavljene u zidove vodoravno s otvorom prema van, pa su se vjerojatno upotrebljavale za odvod kišnice kao oluci.[128] S unutarnje strane takvih cijevi nalazi se sloj kalcifikata čija boja indicira jesu li korištene za čiste ili tamne (otpadne) vode.[129] Kod našeg ulomka iznutra se nalazi svijetli sloj kalcifikata što vjerojatno znači da se cijev rabila za čistu vodu (sl. 7). Nekoliko je cijevi od pročišćene gline, kao i onih sa slojem glazure pronađeno na istarskom poluotoku u Sv. Ivanu kod Umaga i Piranu te u Puli, a datiraju se

[126] CESARETTI 2021b: 236–237, Fig.7/1.
[127] GIORGIO 2014: 233–234, Fig. 7-8; NEPOTI 1992: 284–285, Fig. 17/1; GUARNIERI 2006: 122, Fig. 41/16-17; LIBRENTI, VALLINI 2006: 203, cat. 34, Fig. 8/3; GUARNIERI, CESARETTI 2021: 167.
[128] GIORGIO 2014: 233–234, Fig. 7-8.
[129] GIORGIO 2014: 235, Fig. 4.

Bagnara di Romagna,[126] and they appear in glazed and unglazed variants. In Pisa, they are documented from the second half of the 12th century and were used until the 20th century, while in Ferrara, they are dated to the 15th–18th centuries.[127] In Pisa, two *in situ* specimens have been preserved, demonstrating that such pipes could be installed vertically within walls, likely connecting to a sewage system, or horizontally with an opening facing outward, possibly used as rainwater drains.[128] The inside of such pipes often contains a calcified layer, the colour of which indicates whether they were used for clean water or wastewater.[129] On this fragment, a light layer of calcification is visible on the interior, indicating that the pipe was most likely used for clean water (Fig. 7). Several pipes made of purified clay, as well as glazed ones, were found on the Istrian peninsula in Sveti

[126] CESARETTI 2021b: 236-237, Fig. 7/1.
[127] GIORGIO 2014: 233–234, Fig. 7–8; NEPOTI 1992: 284-285, Fig. 17/1; GUARNIERI 2006: 122, Fig. 41/16-17; LIBRENTI, VALLINI 2006: 203, cat. 34, Fig. 8/3; GUARNIERI, CESARETTI 2021: 167.
[128] GIORGIO 2014: 233-234, Fig. 7-8.
[129] GIORGIO 2014: 235, Fig. 4.

od 16. do 18. stoljeća.[130] Neglazirani primjerci iz Istre smještaju se u razdoblje od sredine 16. do 18. stoljeća. Također treba spomenuti nalaze cijevi od pročišćene gline iz Bagnare di Romagne koje prema veličini možemo usporediti s našim ulomkom, a datiraju se u 17. i 18. stoljeće.[131] Na osnovi navedenih analogija naš ulomak možemo smjestiti u period od 16. do 18. stoljeća.

ZAKLJUČNA RAZMATRANJA

Kako je vidljivo iz navedenog, na zadarskom Muraju pronađena je keramika raznih namjena, oblika i faktura. Veći dio nalaza odnosi se na primjerke brojne kuhinjske i rjeđe stolne keramike među kojima se javljaju lonci, kotlići, peke, poklopci te pokoja zdjela i vrč. Slijede keramički nalazi svakodnevne upotrebe u kućanstvu gdje se u znatnom broju javljaju posude za cvijeće. Tu su i dosad u Dalmaciji jedini zabilježeni nalazi pomagala pri procesu pečenja keramike, kao i građevinska keramika, tj. dio keramičke cijevi. Dobar dio nalaza nije bilo moguće pripisati pojedinim oblicima zbog njihove fragmentarnosti.

No, ono što se svakako da primijetiti jest to da nalaze prema fakturi možemo podijeliti na dvije skupine od kojih je prva zastupljena u dvije različite varijante. U skupini grube keramike kao prva varijanta javljaju se predmeti debelih, grubih stijenki s dosta mineralnih primjesa (sl. 8, a i b). Tu pripadaju nalazi većine oblika kuhinjskog posuđa i diskovi za pečenje keramike (T. I/1–6; T. II/1–2; T. III/2, 5–6; T. IV/1, 3; T. V/1–5; T. VI/1–5; T. VII/1, 4, 6; T. VIII/1–4; T. IX/1–5; T. X/3; T. XI/1–4; T. XIV/1, 3).

Varijantu grube keramike čini i ona koja ima dosta primjesa, no stijenke su im vrlo tanke,

[130] CUNJA 2004: 63–64, kat. 52-53, 138-145; BRADARA, KRNJAK 2016: 100, kat. 22.

[131] CESARETTI 2021b: 236–237, Fig. 7/1.

Ivan near Umag, as well as in Piran and Pula, and dated to between the 16th and 18th centuries.[130] Unglazed specimens from Istria are dated to the period from the mid-16th to the 18th centuries. Mention should also be made of pipes made of refined clay from Bagnara di Romagna, which, based on their size, can be compared to our fragment and are dated to the 17th and 18th centuries.[131] On the basis of these analogies, this fragment can be placed within the period from the 16th to the 18th centuries.

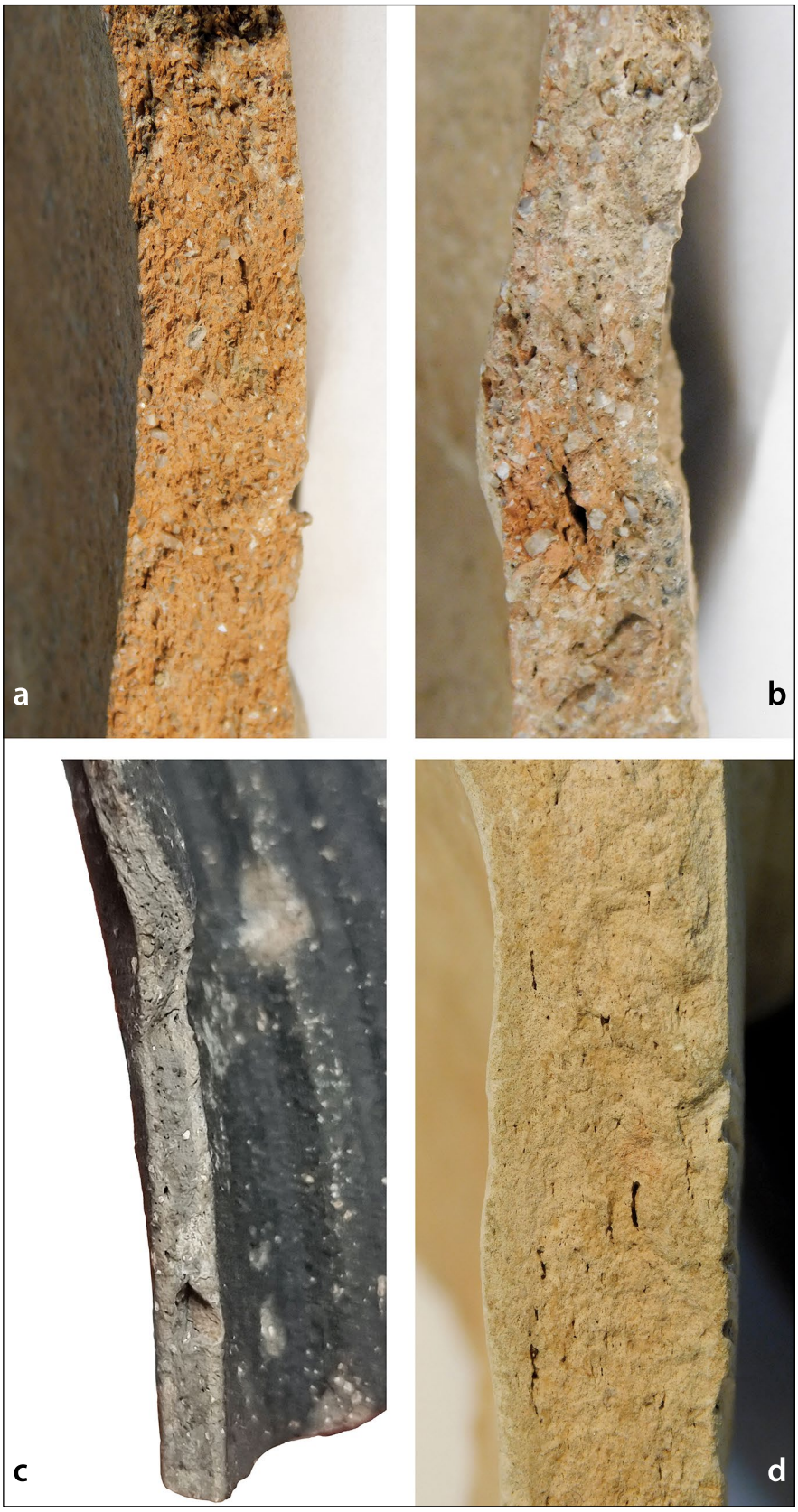
CONCLUDING REMARKS

It can be seen that various types, forms, and textures of ceramics were discovered at the Zadar Muraj site. The majority of the finds pertain to numerous specimens of kitchenware and, less frequently, tableware, including pots, cauldrons, baking bells, lids, as well as occasional bowls or jugs. These are followed by ceramic finds for everyday household use, with a significant number of flowerpots. Additionally, finds unique to Dalmatia include aids used in the ceramic firing process, as well as ceramic building material, such as part of a ceramic pipe. A significant portion of the finds could not be attributed to specific forms due to their fragmentary state.

However, it can be observed that the finds can be divided into two groups, on the basis of their texture, with the first group represented in two distinct variants. The coarse pottery group includes items with thick, rough walls and numerous mineral inclusions (Fig. 8, a and b). This group includes most kitchenware forms and the pottery firing discs (Pl. I/1–6; Pl. II/1–2; Pl. III/2, 5–6; Pl. IV/1, 3; Pl. V/1–5; Pl. VI/1–5; Pl. VII/1, 4, 6; Pl. VIII/1–4; Pl.

[130] CUNJA 2004: 63-64, cat. 52–53, 138-145; BRADARA, KRNJAK 2016: 100, cat. 22.

[131] CESARETTI 2021b: 236-237, Fig. 7/1.



Slika 8. *Presjek ulomaka a (T. IX/1), b (T. XI/2), c (T. III/3), d (T. XII/4)* (foto: A. Karađole, K. Gusar)
Figure 8 *Cross-sections of fragments: a (Pl. IX/1), b (Pl. XI/2), c (Pl. III/3), d (Pl. XII/4)* (photo: A. Karađole, K. Gusar)

a struktura im je vrlo čvrsta (sl. 8c). Riječ je o ulomcima lonaca i kotlića (T. III/1, 3, 4; T. VI/2; T. VII/2, 3, 5).

Drugu skupinu čini keramika od pročišćene gline kod koje također nalazimo primjese, no u mnogo manjoj količini, a površine posuda dosta su glatke s obiju strana (sl. 8d). Među ovom grupom nalazimo lonac, poklopac, vrč, posude za cvijeće, ulomke nejasne forme te keramičku cijev (T. IV/2; T. VIII/5; T. X/1–2; T. XII/1–5; T. XIII/1–4; T. XIV/2, 4).

Kada je riječ o tehnikama ukrašavanja, kako je već navedeno, javljaju se urezivanje, žlijebljenje, utiskivanje prstima ili raznim alatkama te žigosanje. Od dekorativnih motiva najčešća je valovnica, i to jednostruka ili rijetko višestruka češljasta, zatim vodoravne linije, kosi potezi rađeni utiskivanjem ili urezivanjem, kružni ubodi, žigosani krugovi i višelatične rozete, a kod većine posuda zamjetno je i kombiniranje raznih dekorativnih motiva, ali i tehnika. Naravno, na dijelu nalaza nisu vidljivi ukrasi, što ne mora nužno značiti da ih izvorno nije bilo, jer su svi nalazi očuvani fragmentarno.

S obzirom na to da su takvi nalazi iz navedenih perioda vrlo rijetko publicirani, točno vremensko opredjeljenje svih ulomaka s Muraja također nije bilo moguće, no okvirnu dataciju nalazišta od 15. do 18. stoljeća potvrđuju i keramički nalazi. Na osnovi nalaza koje je bilo moguće uže preciznije datirati može se primijetiti da je kasnosrednjovjekovnih nalaza manje u odnosu na novovjekovne. Primjerice, kod grube keramike, i to osobito lonaca uz nekoliko iznimaka, nedostaju profilirani obodi tipični za kasni srednji vijek te se njihovi oblici pojednostavnjuju i uglavnom nalazimo zaobljene i koso odrezane. Također, na gruboj keramici nedostaje i tipična dekoracija reljefnih traka najčešće ukrašena kosim urezima, utisnutim ukrasima ili štipanjem koja se najčešće javlja na ramenu i trbuhu, što je prisutno kod većine nalazišta zadarskog područja, poput utvrda u Zemuniku Donjem, Novigradu i Kličevici, ali i šire u Splitu, Hvaru, Possertu i IX/1–5; Pl. X/3; Pl. XI/1–4; Pl. XIV/1, 3).

The second variant of coarse ceramics includes items with quite a large share of inclusions but much thinner walls and a very sturdy structure (Fig. 8c). This group comprises fragments of pots and cauldrons (Pl. III/1, 3, 4; Pl. VI/2; Pl. VII/2, 3, 5).

The second group consists of purified clay ware; these also have inclusions but in much smaller quantities. The surfaces of these vessels are quite smooth on both sides (Fig. 8d). This group includes a pot, a lid, a jug, flowerpots, fragments of unclear form, and a ceramic pipe (Pl. IV/2; Pl. VIII/5; Pl. X/1–2; Pl. XII/1–5; Pl. XIII/1–4; Pl. XIV/2, 4).

Decorative techniques include incising, grooving, impressing with fingertips or various tools, and stamping. The most common decorative motif is a single wavy line or, rarely, multiple combed wavy lines, followed by horizontal lines, slanted strokes made by impressing or incising, circular dotting, stamped circles, and multi-petalled rosettes. On most vessels, a combination of different decorative motifs (and also techniques) is evident. Of course, some fragments show no visible decoration, though this does not necessarily mean that they were originally undecorated, as all finds are fragmentary.

Since such finds from the periods mentioned have very rarely been published, it was not possible to precisely date all fragments from the Muraj site. However, the ceramic finds support its approximate dating to the period from the 15th to the 18th centuries. From the datable finds, it can be noted that late medieval finds are fewer compared to early modern ones. Hence, in the case of coarse ware (particularly pots), apart from a few exceptions, profiled rims typical of the late medieval period are largely absent. The forms are simplified, with primarily rounded and slanted-cut rims. Additionally, the coarse ware lacks the typical decoration of relief ribbons (generally adorned with slanted incisions, impressed decorations, or pinching), which most commonly appear

Vrbovcu.[132] Veća količina novovjekovne građe vidi se i među databilnim nalazima keramike od pročišćene gline.

Treba napomenuti da je kod određenog broja posuda vidljivo da su reupotrijebljene, odnosno ponovno iskorištene za neku drugu namjenu. To je ponajprije evidentno na sekundarno probušenim rupama na stijenkama i dnu lonaca, kotlića i vrča (T. II/1; T. III/6; T. V/3–4; T. X/4). Koja je to nova namjena koju su posude dobile, teško je reći, osim možda primjera vrča koji je mogao poslužiti kao lonac za cvijeće kako je to već navedeno.

S obzirom na dekorativne motive koji se ponavljaju na više različitih oblika grube keramike, primjerice jednostruka valovnica urezana odmah ispod oboda koja se javlja na loncima i kotlićima (T. I/1–3; T. IV/3; T. V/1–5; T. VI/1), ili, primjerice, žigosana višelatična rozeta na loncu, kotliću, ulomcima nejasnog oblika ili loncima za cvijeće (T. I/6; T. VI/1; T. XI/1–4), možemo govoriti o proizvodima iste ili istih lončarskih radionica, no pitanje je gdje ih treba locirati. Nedostatak direktnih komparacija s drugim lokalitetima uz iznimku tek nekoliko primjeraka možda možemo objasniti pretpostavkom da je riječ o proizvodima lokalnih radionica, no, bez detaljne arheometrijske analize, njihovo radioničko podrijetlo za sada nije moguće točno utvrditi. U prilog navedenom govori i činjenica da je radi o relativno malom uzorku s obzirom na to da su objave građe iz istog vremena vrlo rijetke, ne samo onih nalaza koji potječu sa zadarskog područja već i iz čitave Dalmacije. Situacija je nešto bolja na prostoru kontinentalne Hrvatske, no usporedbe s našim nalazima samo su općenite te se keramika dosta razlikuje. Usporedbe

[132] GUSAR, VUJEVIĆ 2016: 26, kat. 8–10, kat. 14, T. 1/8, T. 2/1–2, 26; GUSAR, ILKIĆ 2016: 234, kat. 2, 3, 7, T. 1/2–3, 7; GUSAR, ĆURKOVIĆ 2010: kat. 4–5, 7; DELONGA 2014: kat. 72–73, T. XIV/72–73, kat. 99, T. XX/99, kat. 110, T. XXIII/110, kat. 122, T. XXVI/122; GUSAR, VISKOVIĆ 2012: 238, kat. 1; VIŠNJIĆ 2013a: 88, T. 3/1, T. 7/9, 11; TKALČEC 2010: 6970, kat. 145, T. 5/145, kat. 146, 148, T. 6/146, 148, kat. 200-202, T. 9/200–202, kat. 230, T. 11/230, kat. 236, T. 12/236.

on the shoulders and bellies of vessels. This decoration is evident at most sites in the Zadar area, such as the fortresses at Zemunik Donji, Novigrad and Kličevica, as well as further afield in Split, Hvar, Possert and Vrbovec.[132] A greater amount of early modern material is also evident among datable refined clay ceramics.

It is worth noting that some vessels appear to have been reused for different purposes. This is most evident in the secondary perforations on the walls and bases of pots, cauldrons, and jugs (Pl. II/1; Pl. III/6; Pl. V/3–4; Pl. X/4). It is difficult to determine the new purposes of these vessels, except perhaps for jugs, which might have been repurposed as flowerpots.

Given the recurring decorative motifs on various forms of coarse ware – for instance, the single wavy line incised just below the rim, appearing on pots and cauldrons (Pl. I/1–3; Pl. IV/3; Pl. V/1–5; Pl. VI/1), or the stamped multi-petalled rosette on the pot, cauldron, fragments of unclear shape, or flowerpots (Pl. I/6; Pl. VI/1; Pl. XI/1–4) – it is possible to talk about products from the same pottery workshop(s). However, the location of these workshops remains uncertain. The lack of direct analogies at other sites, except for a few specimens, might be explained by assuming local workshop production. However, their workshop origin cannot be precisely determined without a detailed archaeometric analysis. This is additionally supported by the fact that the sample is relatively small, given that publications of material from the same period – not only from the Zadar area but also from the whole of Dalmatia – are very rare. The situation is somewhat better in continental Croatia, but analogies with the analysed finds are

[132] GUSAR, VUJEVIĆ 2016: 26, cat. 8-10, cat. 14, Pl. 1/8, Pl. 2/1-2, 26; GUSAR, ILKIĆ 2016: 234, cat. 2, 3,7, Pl. 1/2-3, 7; GUSAR, ĆURKOVIĆ 2010: cat. 45, 7; DELONGA 2014: cat. 72-73, Pl. XIV/72-73, cat. 99, Pl. XX/99, cat. 110, Pl. XXIII/110, cat. 122, Pl. XXVI/122; GUSAR, VISKOVIĆ 2012: 238, cat-1; VIŠNJIĆ 2013a: 88, Pl. 3/1, Pl. 7/9, 11; TKALČEC 2010: 69-70, cat. 145, Pl. 5/145, cat. 146, 148, Pl. 6/146, 148, cat. 200-202, Pl. 9/200-202, cat. 230, Pl. 11/230, cat. 236, Pl. 12/236.

u određenoj mjeri nalazimo na području Istre što bi se možda moglo objasniti sličnim povijesnim i kulturnim zbivanjima, no kao i u Dalmaciji, s obradom grube keramike u Istri tek se započelo. Iako je ovdje vjerojatno riječ o lokalnim proizvodima, usporedbe kod pojedinih primjeraka prema nekim detaljima oblikovanja i ukrasa možemo naći u Italiji, što ne iznenađuje s obzirom na to da je ovaj prostor pod utjecajem toga kulturnog kruga.

Radionice grube keramike tijekom novog vijeka u sjevernoj Dalmaciji potvrđene su na obližnjem otoku Ižu, u mjestu Velom Ižu gdje se u povijesnim izvorima prvi lončar spominje 1743. godine te u Erveniku u Bukovici.[133] Međutim, riječ je o proizvodima izrađenim na ručnom spororotirajućem kolu,[134] stoga se navedeni nalazi s Muraja ne mogu povezati s njihovom djelatnošću, no svakako u budućnosti analize keramičkih arheoloških nalaza iz kasnoga novog vijeka trebaju voditi računa i o tim proizvodima s kojima se arheološka literatura do sada nije pozabavila. Kod nalaza od pročišćene gline zamjetno je da se najviše usporedbi nalazi među keramikom iz susjedne Italije, što vjerojatno upućuje na to da je riječ o proizvodima talijanskih radionica različitih regija ili možda nekih na tlu Hrvatske koje su izrađivale predmete pod njihovim utjecajem. Također, na kraju treba istaknuti nalaze keramičkih diskova koji su za sada jedini takav nalaz ne samo u Zadru nego i čitavoj Dalmaciji, o čijoj keramičkoj proizvodnji tijekom kasnoga srednjeg, a osobito novog vijeka za sada vrlo malo znamo, što će se, nadamo se, promijeniti u što skorijoj budućnosti.

only general, as the ceramics differ significantly. To some extent, analogies have been found in Istria, which might possibly be a result of similar historical and cultural developments. However, the study of coarse ceramics in Istria is still, as in Dalmatia, in its early stages. Although the products are probably local, some specimens and details of design and decorations are comparable to examples in Italy, which is not surprising given the influence of the Italian cultural sphere on the region.

Workshops producing coarse ceramics during the early modern period in northern Dalmatia have been confirmed on the nearby island of Iž, in Veli Iž, where historical sources mention the first potter in 1743, as well as in Ervenik (Bukovica).[133] However, these products were made on a manually operated slow-turning wheel.[134] Therefore, the finds from the Muraj site cannot be linked to their production. Nonetheless, future analyses of late modern archaeological ceramic finds should take these products into account as well, as they have not yet been addressed in archaeological literature. Among the purified ware, it is evident that most analogies have been found among ceramics from neighbouring Italy, suggesting that these may be products of Italian workshops from various regions or possibly some workshops in the territory of Croatia producing items under their influence. Finally, the ceramic disc finds should be highlighted, as they are currently the only such finds not only in Zadar but also in the whole of Dalmatia. Little is known about ceramic production during the late medieval and especially the early modern period in this region, but hopefully this will change in the near future.

Translation and proof-reading:
ETNOtrend d.o.o.

[133] OŠTRIĆ 2005: 226.
[134] OŠTRIĆ 2005: 227, 231.

[133] OŠTRIĆ 2005: 226.
[134] OŠTRIĆ 2005: 227, 231.

Literatura / References

ALDUK, I., TABAK, A., PETRIČEVIĆ, D. 2010, Utvrda Nutjak, u/in: *Zbornik radova Stjepan Gunjača i hrvatska srednjovjekovna baština 1*, Zbornik radova sa Znanstvenog skupa „Stjepan Gunjača i hrvatska srednjovjekovna baština" u povodu 100. obljetnice rođenja akademika Stjepana Gunjače, Split, 3. – 6. studenog 2009., Šeparović, T. (ur./ed.), Split: Muzej hrvatskih arheoloških spomenika, 425–439.

BATOVIĆ, Š. 1987, Liburnska grupa, *Praistorija jugoslavenskih zemalja, V, Željezno doba*, Sarajevo: Akademija nauka i umjetnosti Bosne i Hercegovine, Centar za balkanološka ispitivanja, 339–390.

BELOŠEVIĆ, J. 1993, Ishodi pete, završne kampanje istraživanja lokaliteta Crkvina u selu Galovcu kod Zadra, *Radovi Filozofskog fakulteta u Zadru. Razdio povijesnih znanosti*, 31 (18), 121–142.

BEKIĆ, L. 2017, Necakljena keramika novog vijeka iz okoliša crkve sv. Nikole u Zadru, u/in: *Sveti Nikola u Zadru - Saint Nicholas in Zadar, 1 dio/Part 1, Arheološko iskopavanje u samostanskom sklopu sv. Nikola u Zadru 2014-2016 / Archaeological Exavations at Zadar's St Nicholas Monastery Complex 2014-2016*, Bekić, L., Vrkić, Š., Pešić, M., Surić, R., Zadar: Međunarodni centar za podvodnu arheologiju u Zadru / International Centre for Underwater Archaeology in Zadar, 131–136.

BIKIĆ, V. 2003, *Gradska keramika Beograda (16-17. vek) / Belgrade ceramics in the 16th-17th century*, Beograd: Arheološki institut Beograd.

BODRUŽIĆ, M., KARAĐOLE, A. 2024, Arheologija pećina Dugog otoka, *Arheologija pećina na zadarskom području – recentna istraživanja. Povodom 120 godina arheoloških istraživanja u speleološkim objektima na zadarskom području*, Dubolnić Glavan, M., Vujević, D. (ur./eds), Zadar: HAZU, Zavod za povijesne znanosti u Zadru, Sveučilište u Zadru (u tisku / in press).

BRADARA, T., KRNJAK, O. 2016, *Temporis signa. Arheološka svjedočanstva istarskog novovjekovlja / Testimonianze archeologiche dell'età moderna in Istria / Archaeological Evidence of the Istrian Modern Era*, Monografije i katalozi, 26, Pula: Arheološki muzej Istre.

BRADARA, T., SACCARDO, F. 2007, *Keramički nalazi iz Rovinja – uvala Valdibora i otok Sv. Katarina / Ritrovamenti di ceramiche a Rovigno – Valdibora e isola S. Caterina*, Rovinj: Zavičajni muzej grada Rovinja.

BRUNETTI, V. 1992, La produzione di ceramica ad Argenta nel XVII secolo. Il recupero dell'area ex Corona, u/in: *La produzione ceramica in Argenta nel XVII secolo*, Gelichi, S. (ur./ed.), Richerche di archeologia altomedievale e medievale, 18, Firenze: Edizioni all'Insegna dell Giglio, 43–93.

BUNČIĆ, M. 2010, Naseobinski pokazatelji kasnog srednjeg vijeka zagrebačkog nalazišta Stenjevec / Late Mediaeval settlement characteristics of the Stenjevec site in Zagreb, *Vjesnik Arheološkog muzeja u Zagrebu*, XLIII, 69–110.

CASSOCAVALLO, B., PATILLI, T. 2006, Le caramiche acrome da fuoco tra XI e XV secolo nel Lazio settentrionale, *Atti del XXXIX Convegno Internazionale della ceramica*, „La ceramica da fuoco e da dispensa nel bassomedioevo e nella prima eta moderna", Albisola: Centro Ligure per la Storia della Ceramica, 191–201.

CESARETTI, G. 2021a, 3. 2. Le cermiche depurate, invetriate, ingobiatte, smaltate e pietra ollare (US 1050, US 10006 e altre unità stratigrafiche), u/in: *Ferrara al tempo de Ercole I D'Este. Scavi archeologici, restauri e riqualificazione urbana nel centro storico della città*, Guarinieri, C. (ur./ed.), Quaderni di Archaeologia dell'Emiglia Romagna, 38, Firenze: Edizione All'Insegna del Giglio, 187–265.

CESARETTI, G. 2021b, Ordinary tables. Post-medieval pottery from the Ravenna countryside as

an archaeological and social indicator: new evidence from the castle of Bagnara di Romagna (circa 16th-18th century) / Taules ordinàries. La ceràmica postmedieval del camp de Ravenna com a indicador arqueològic i social: nous testimonis del castell de Bagnara di Romagna (al voltant dels segles XVI-XVIII), *Rodis. Journal of Medieval and Post-Medieval Archaeology*, 04, Girona: Universitat de Girona, 227–252.

CINI, S., MOLINARI, A., PALAZZO, P., PAROLI, L. 1985, Reperti residuali di età medievale, u/in: *Archeologia urbana a Roma: il progetto della Crypta Balbi, 3. Il Giardino del Conservatorio di S. Caterina della Rossa*, Manacorda, d. (ur./ed.), Firenze: Edizioni All'Insegna del Giglio, 173–302.

CUNJA, R. 2004, Zbirka / Colezzione Gajšek, u/in: *Srednjevška in novoveška keramika/Ceramiche medievali e postmedievali de Pirano e San Giovanni / Srednjovjekovna i novovjekovna keramika iz Pirana i svetog Ivana*, Guštin, M. (ur./ed.), Koper: Pomorski muzej „Sergej Mašera", 68–203.

COZZA, F. 1988, Ritrovamento di ceramiche e vetri dei secoli XIV-XV nel Palazzo già Dondi dell´Orologio a Padova, *Archeologia Veneta*, XI, Padova: Società archeologica Veneta, 171–239.

COZZA, F. 2020, *Le ceramiche graffite Padovane. Corpus delle attestazioni storiche e archeologiche dal XII al XVIII secolo*, Archeologia Veneta XLII-2019, Padova: Società archeologica Veneta-ODV-Padova.

ČIMIN, R. 2008, Keramički nalazi s utvrde Čanjevo, u/in: *Utvrda Čanjevo, istraživanja 2003.-2007. / Fort Čanjevo, researches 2003-2007.*, Bekić, L. (ur./ed.), Visoko, 121–189.

DELONGA, V. 2014, Gruba keramika i keramika od pročišćene gline, u/in: V. Delonga i suradnici, *Prije sjećanja: Arheološka istraživanja u jugoistočnom dijelu Dioklecijanove palače u Splitu, 1992. godine, II. dio*, Split: Muzej hrvatskih arheoloških spomenika, 103–154.

DOMINES PETER, P. 2023, Arheologija otoka Ista: Otočni krajolik i dinamika naseljenosti u svjetlu preliminarnih rezultata terenskog pregleda / Archaeology of the island of Ist: Insular landscape and settlement dynamics in the light od preliminary results of the field survey, *Archaeologia Adriatica*, 17, 55–102.

GABUCCI, A. 1985, Ceramica acroma rinascimentale e moderna, u/in: *Archeologia urbana a Roma: il progetto della Crypta Balbi, 3. Il Giardino del Conservatorio di S. Caterina della Rossa*, Manacorda, d. (ur./ed.), Firenze: Edizioni All'Insegna del Giglio, 499–536.

GABUCCI, A., TESSEI, L. 1989, Ceramica acroma rinascimentale e moderna, u/in: *Archeologia urbana a Roma: il progetto della Crypta Balbi, 4. Il Giardino del Conservatorio di S. Caterina della Rossa. Supplemento*, Gabucci, A., Tessei, L. (ur./eds.), Firenze: Edizioni All'Insegna del Giglio, 174–180.

GATTIGLIA, G., GIORGIO, M. 2012, L'uso dei tubi fittili nella Pisa medievale e postmedievale, *Atti del IX Congresso Internazionale sulla Ceramica Medievale nel Mediterraneo (Venezia, 23-27 novembre 2009)*, Gelichi. S. (ur./ed.), Firenze: Edizioni All'Insegna del Giglio, 546–548.

GELICHI, S. 2022, Baking Bread in Italy in the Early Middle Ages: Some Notes on Portable Ovens, u/in: *Pottery function and use: A diachronic perspective*, Vuković, J., Bikić, V. (ur./eds.), Belgrade: University of Belgrade-Faculty of Philosophy, Institute of Archaeology, 133–142.

GELICHI, S., LIBRENTI, M. 1994, La ceramica postmedievale in Emilia Romagna: un primo bilancio, *Atti del XXVII Convegno internazionale della ceramica*, „La ceramica postmedievale in Italia. Il contributi dell'archeologia", Albisola: Centro Ligure per la Storia della Ceramica, 13–27.

GELICHI, S., LIBRENTI, M. 1998, *Senza immensa dote. Le Clarisse a Finale Emilia tra archeologia e storia*, Firenze: Edizioni All'Insegna del Giglio.

GIORGIO, M. 2014, Uso e diffusione dei tubi fittili a Pisa dal medioevo all'eta contemporanea,

Atti del XLVI Convegno Internazionale della ceramica, „Ceramica e architettura", Albisola: Centro Ligure per la Storia della Ceramica, 223–237.

GRASSI, F. 2007, Il bassomedioevo: X-XIV secolo, u/in: *Introduzione allo studio della ceramica in archeologia*, Strumenti per la didattica, 1, Siena: Collana Università degli Studi di Siena, 251–262.

GUARNIERI, C. 2006, 3. 3. 1. Scarti di cottura e materiali per l'infornamento, u/in: *Il Chiozzino di Ferrara, Scavo di un'area ai margini della città*, Guarnieri, C. (ur./ed.), Ferrara: Cinelli & Zanirato Editore, 122–123.

GUARNIERI, C., CESARETTI, G. 2021, 2. 4. Elementi achitettonici di rivestimento e di arredo, u/in: *Ferrara al tempo de Ercole I D'Este. Scavi archeologici, restauri e riqualificazione urbana nel centro storico della città*, Guarinieri, C. (ur./ed.), Quaderni di Archaeologia dell'Emiglia Romagna, 38, Firenze: Edizione All'Insegna del Giglio, 161–168.

GUSAR, K. 2013, Utvrda Kličevica, u/in: *50 godina Odjela za arheologiju Sveučilišta u Zadru*, Uglešić, A., Fadić, I. (ur./eds), Zadar: Sveučilište u Zadru, Muzej antičkog stakla, 46–47.

GUSAR, K., ĆURKOVIĆ, M. 2011, *Utvrda Kličevica – Rezultati arheoloških istraživanja 1990. godine*, Benkovac: Zavičajni muzej Benkovac.

GUSAR, K., VISKOVIĆ, E. 2012, Keramika kasnog srednjeg i ranog novog vijeka s područja grada Hvara / Ceramics from the late middle Ages and early modern era from the area of the town of Hvar, u/in: *Dani Stjepana Gunjače 2.*, Zbornik radova sa Znanstvenog skupa „Dani Stjepana gunjače 2". Hrvatska srednjovjekovna povijesno-arheološka baština / Međunarodne teme, Split, 18. – 21. listopada 2011., Šeparović T. (ur./ed.), Split: Muzej hrvatskih arheoloških spomenika, 237–266.

GUSAR, K., ILKIĆ, M. 2016, Kasnosrednjovjekovni i novovjekovni arheološki nalazi s utvrde Fortica u Novigradu, u/in: *Novigrad nekad i sad*, Kaštela, S. (ur./ed.), Zadar: Sveučilište u Zadru, 230–249, 659.

GUSAR, K., VUJEVIĆ, D. 2016, *Utvrda u Zemuniku Donjem u srednjem i novom vijeku. Rezultati arheoloških istraživanja 2014. godine*, Zadar: Sveučilište u Zadru.

GUŠTIN, M. 2001, Celjske čaše, Srednjeveške in zgodnjenovoveške lončene čaše na Slovenskem / Die Tonbecher vom Celje, Mittelalterliche und frühneuzeitliche Tonbecher in Slowenien, u/in: *Srednjeveško Celje*, Guštin., M. (ur./ed.), Arhaeologia historica Slovenica, 3, Ljubljana: Filozofska fakulteta, Oddelek za arheologijo, 139–193.

GUŠTIN, M. 2004, Lončarske delavnice / Le Botteghe vasaie / Keramičarske radionice, u/in: *Srednjevška in novoveška keramika / Ceramiche medievali e postmedievali de Pirano e San Giovanni / Srednjovjekovna i novovjekovna keramika iz Pirana i svetog Ivana*, Guštin, M. (ur./ed.), Koper: Pomorski muzej „Sergej Mašera", 53–65.

GUŠTIN, M., BIKIĆ, V., MILEUSNIĆ, Z. 2008, *Ottoman times; the story of Stari Bar, Montenegro / Osmanska vremena: priča o Starom Baru, Crna Gora*, Koper: Univerza na Primorskem, Znanstveno-raziskovalno središče, Založba Annales.

HOLL, I. 2005, Tischgerät im spätmittelalterlichen Buda (Archäologische angaben und deren Schranken), *Acta Archaeologica Academiae Scientiarum Hungaricae*, 56, 311–384.

JANEŠ, A., HIRSCHLER MARIĆ, I., AZINOVIĆ BEBEK, A. 2017, Stari Perkovci–Sela, ruralno naselje 14. stoljeća, u/in: *Srednjovjekovna naselja u svjetlu arheoloških izvora / Mediaeval settlements in the light of archaeological sources*, Sekelj Ivančan, T., Tkalčec, T., Krznar, S., Belaj, J. (ur./eds.), Zbornik Instituta za arheologiju, Knjiga 6, Zagreb: Institut za arheologiju, 337–388.

KARAĐOLE, A. 2024, Grubi keramički nalazi s utvrde Čanjevo, *Utvrda Čanjevo, istraživanja 2008.-2018. / Fort Čanjevo, researches 2008. – 2018.*, Bekić, L. (ur./ed.) *(*u tisku / in press).

KLAIĆ, N., PETRICIOLI, I. 1987, *Zadar u srednjem vijeku do 1409*, *Prošlost Zadra, 2*, Zadar: Filozofski fakultet u Zadru.

KOVÁCS, G. 1998, A barcsi török palánkvár kerámialeletei, *Communicationes Archaeologicae Hungariae*, Vol. 1998, Budapest, 155–180.

KOVÁCS, G. 2001, Ceramic finds from the Bajcsa fort (1578–1600), *Acta Archaeologica Academiae Scientiarum Hungaricae*, 52, Budapest, 195–221.

KOVÁCS, B. G. 2021, Late medieval ceramics with stamped decoration from Central Transdanubia, *Antaeus: Communicationes ex Instituto Archaeologico Academiae Scientiarum Hungaricae,* 37, 249–282.

KRMPOTIĆ, M. 2014, Kasnosrednjovjekovno i novovjekovno keramičko posuđe, u/in: *Stari grad Barilović, 10 godina arheoloških istraživanja*, Azinović Bebek, A. Krmpotić, M. (ur./eds.), Zagreb: Hrvatski restauratorski zavod, 76–92.

LAMUT, B. 1997, K začetkom visokosrednjeveškega Ptuja / Zu den Anfängen der Hochmittelalterlichen Stadt Ptuj, u/in: *Drobci nekega vsakdana / Bruchstüke eines Alltags*, Guštin, M., Predovnik, K. (ur./eds.), Archaeologia Historica Slovenica, 2, Ljubljana: Filozofska fakulteta, Oddelek za arheologijo, 89–106.

LIBRENTI, M., VALLINI, C. 2006, 4. Periodo II, Fase 2 (XV-prima metà XVI secolo), Periodo III (seconda metà XVI-XVIII secolo) 4. 1. Le ceramiche, u/in: *S. Antonio in Polesine, Archeologia e storia di un monastero estense*, Guarnieri, C. (ur./ed), Firenze: All'Insegna del Giglio, 193–233.

MAURIN, D. 2021, *Stručno izvješće o provedenom zaštitnom arheološkom istraživanju: Zadar, Muraj – hotel 2020., k. č. 10406/1*, Zadar.

MILANESE, M. 1994, La ceramica postmedievale in Toscana: centri di produzione e manufatti alla luce delle fonti archeologiche, *Atti del XXVII Convegno internazionale della ceramica*, „La ceramica postmedievale in Italia. Il contributi dell'archeologia", Albisola: Centro Ligure per la Storia della Ceramica, 79–111.

MILO, L. 2008, Le strutture con „vespaio" fittile da piazza Castello a Padova, tra l'VIII e la metà del V secolo a. C., *Archeologia Veneta*, XXIX-XXX (2006-2007), Padova, 6–77.

MUNARINI, M. 1992, *Ceramiche medievali dai Musei Civici di Padova*, Padova: Edizioni Zielo – La Galiverna.

MIHOVILIĆ, K. 2001, *Nezakcij, Prapovijesni nalazi 1900.-1953. / Nesactium, Prehistoric finds 1900-1953*, Monografije i katalozi, 11, Pula: Arheološki muzej Istre.

NEPOTI, S. 1978, 5. Le ceramiche postmedievali rinvenute negli scavi nella Torre Civica di Pavia, Scavi nella Torre Civica di Pavia, Ward-Perkins, B., Blake, H., Nepoti, S., Casttelletti, G., Barker, G., Wheeler, A., Mannoni, T., *Archeologia Medievale*, V, 171–218.

NEPOTI, S. 1992, Le ceramiche a Ferrara nel Rinascimento: i reperti da corso della Giovecca, u/in: *Ferrara prima e dopo il Castello*, Gelichi S. (ur./ed), Ferrara: Spazio libri editori, 289–366.

NEPOTI, S. 2006, 2. Periodo I (XIV secolo) 2. 1. Le ceramiche, u/in: *S. Antonio in Polesine, Archeologia e storia di un monastero estense*, Guarnieri, C. (ur./ed), Firenze: All'Insegna del Giglio, 91–113.

NEPOTI, S., GUARNIERI, C. 2006, 3. Periodo II, Fase 1 (XV secolo), 3. 1. Le ceramiche, u/in: *S. Antonio in Polesine, Archeologia e storia di un monastero estense*, Guarnieri, C. (ur./ed), Firenze: All'Insegna del Giglio, 117–192.

OŠTRIĆ, O. 2005, Narodno lončarstvo u sjevernoj Dalmaciji, u/in: *Zbornik radova Olge Oštrić*, Travirka, A. (ur./ed.), Zadar: Narodni muzej, 226–235.

PLETERSKI, A. 2008, *Kuhinjska kultura u zgodnjem srednjem vijeku, S prispevkom Helene Gorjup / Küchenkultur im frühen Mittelalter, Mit Beitrag von Helena Gorjup*, Ljubljana: ZRC SAZU

Inštitut za arheologijo.
RADIĆ, M., BOJČIĆ, Z. 2004, *Srednjovjekovni grad Ružica*, Osijek: Muzej Slavonije Osijek.
RAUKAR, T., PETRICIOLI, I., ŠVELEC, F., PERIČIĆ, Š. 1987, *Zadar pod mletačkom upravom, 1409 – 1979, Prošlost Zadra*, 3, Zadar: Narodni list, Filozofski fakultet Zadar.
ROMAGNOLI, G., ALHAIQUE, F., BRANCAZI, L., MARANI, F., PIERMARTINI, L. 2019, Smaltimento e gestioni dei rifuti in una residenza signorile medievale. Lo scavo dei scarichi domestici del Castello Baglioni di Graffignano (VT), *Archeologia Medievale*, XLVI, 233–255.
SURIĆ, R., VIŠNJIĆ, J. 2014, Novovjekovna keramika i potencijalna radionica u Veštru / Neuzeitliche Keramik und die Existenz einer potentiellen Töpferwerkstatt in Veštar, u/in: *Luka Veštar. Podvodno arheološko istraživanja u uvali Veštar kod Rovinja, Hrvatska, 2008. – 2014. / Der Hafen von Veštar. Unterwasserarchäologische Untersuchung in der Bucht von Veštar bei Rovinj, Kroatien, 2008-2014*, Bekić, L. (ur./ed.), Zadar: Međunarodni centar za podvodnu arheologiju u Zadru, Bavarsko društvo za podvodnu arheologiju, 211–242.
ŠKILJAN, I. 2007, Veliki Tabor u svjetlu arheoloških otkrića / Veliki Tabor in the light of archaeological discovery, u/in*: Veliki Tabor u svjetlu otkrića / Veliki Tabor in the light of discovery*, Horjan, G. (ur./ed.), Gornja Stubica: Muzej Hrvatskog zagorja, 35–121.
TACINUM SANITATIS, 2024a, Tacinum sanitatis (XIV century), Wikimedia Commons.
https://commons.wikimedia.org/wiki/File:17-alimenti,_umido,Taccuino_Sanitatis,_Casanatense_4182..jpg (27. 7. 2024.).
TACINUM SANITATIS, 2024b, Tacinum sanitatis (XIV century), Wikimedia Commons.
https://commons.wikimedia.org/wiki/Image:9-
alimenti,_formaggi,Taccuino_Sanitatis,_Casanatense_4182..jpg?uselang=it (27. 7. 2024.).
TOMANIČ-JEVREMOV, M. 1997, Ormož, u/in: *Drobci nekega vsakdana / Bruchstüke eines Alltags*, Guštin, M., Predovnik, K. (ur./eds.), *Archaeologia Historica Slovenica*, 2, Ljubljana: Filozofska fakulteta, Oddelek za arheologijo, 107–139.
TKALČEC, T. 2010, *Burg Vrbovec u Klenovcu Humskome*, *Deset sezona arheoloških istraživanja*, Zagreb: Muzeji Hrvatskog Zagorja, Institut za arheologiju.
VIŠNJIĆ, J. 2013a, Srednjovjekovna utvrda *Possert*, Šest godina arheoloških radova i konzervatorsko-restauratorskih zahvata na sačuvanim arhitektonskim strukturama / The Medieval Fort of *Possert*, Six years of archaeological works and conservation-restoration interventions on the preserved architectonic structures, *Histria archaeologica*, 43, 67–154.
VIŠNJIĆ, J. 2013b, Donji Miholjac – Farkaševci, Otpadna jama SJ 169/170 – tragovi naselja iz vremena osmanske vladavine, u/in: *Nove arheološke spoznaje o Donjoj Podravini. Zaštitna arheološka istraživanja na magistralnom plinovodu Slobodnica – Donji Miholjac / New archaeological insight into lower Podravina. Rescue Arhaeology Research of the Slobodnica – Donji Miholjac Natural Gas Tank Pipeline*, Višnjić, J. (ur./ed.), Zagreb: Hrvatski restauratorski zavod, 65–81.
VIŠNJIĆ, J. 2019, Petrapilosa paradigmatski primjer razvoja istarske srednjovjekovne feudalne utvrde u/in: *Notabile castrum / Castello ben munito e ornato.* Kašteli Petrapilosa i San Vincenti u povijesnom i građevinskom kontekstu, Višnjić, J. (ur./ed.), Svetvinčenat: Općina Svetvičenat, 12–35.
VROOM, J. 2008, Dishing up history: early medieval ceramic finds from the Triconch Palace in Butrint, *Mélanges de l´Ecole française de Rome, Les destinées de l´Illycum méridional pendant le haut Moyen Âge*, 120-2, 291–305.

T. 1



T. 1-8 (crteži i foto: A. Karađole; izrada: D. Vujević)
Pl. 1-8 (drawings and photo by A. Karađole; made by D. Vujević)

T. 2



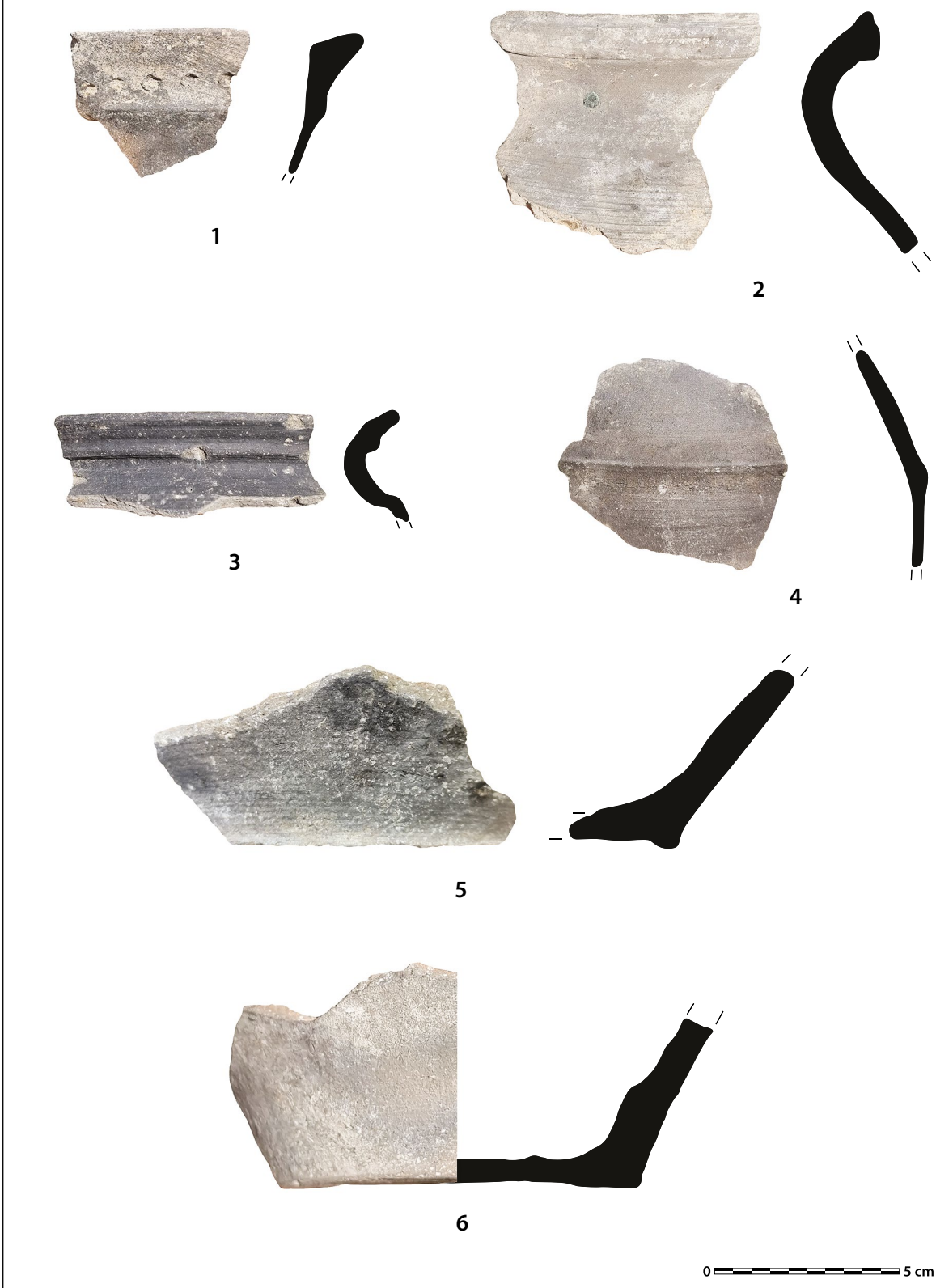
1



2

0 5 cm

T. 3



T. 4



1



2



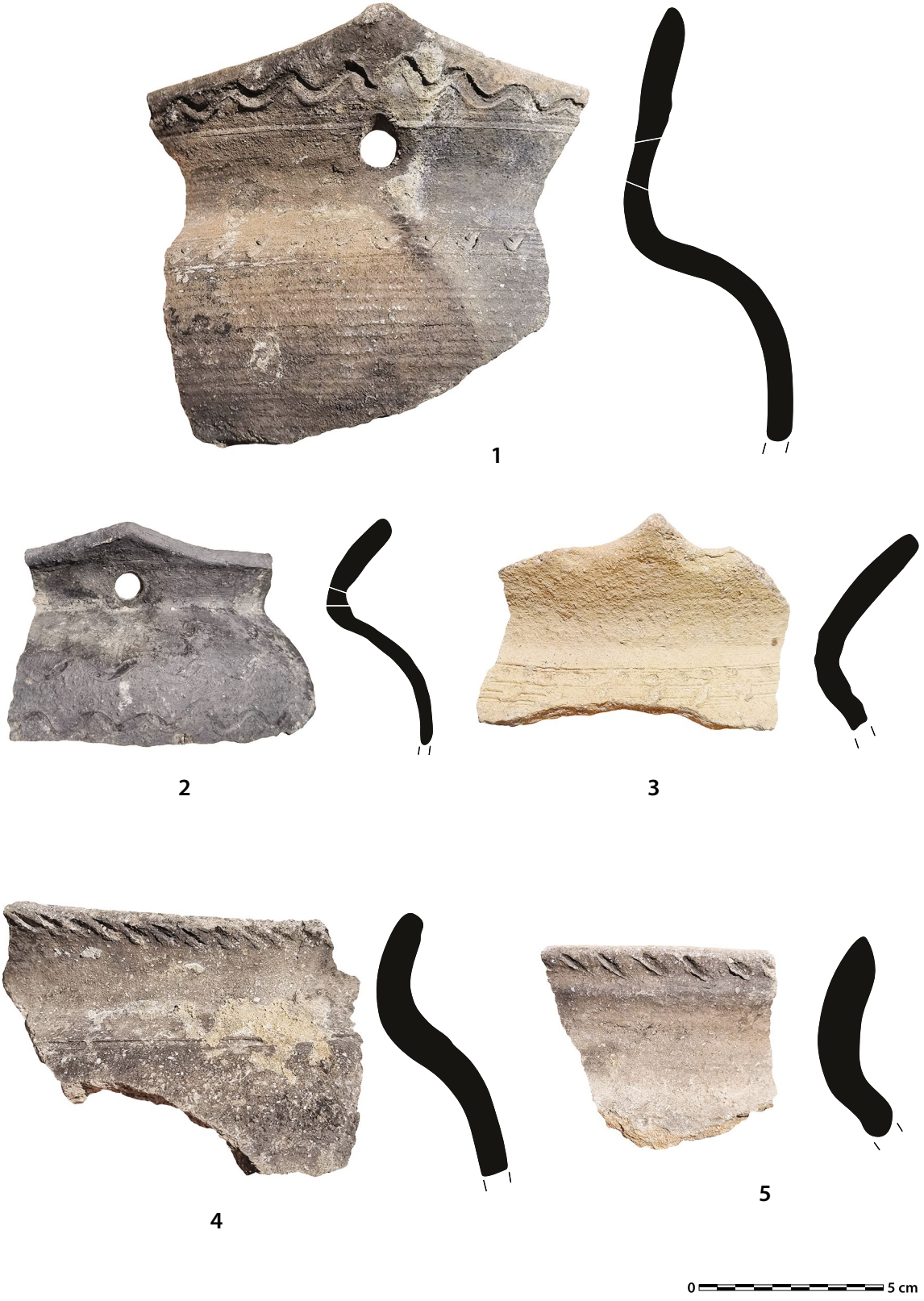
3

0 5 cm

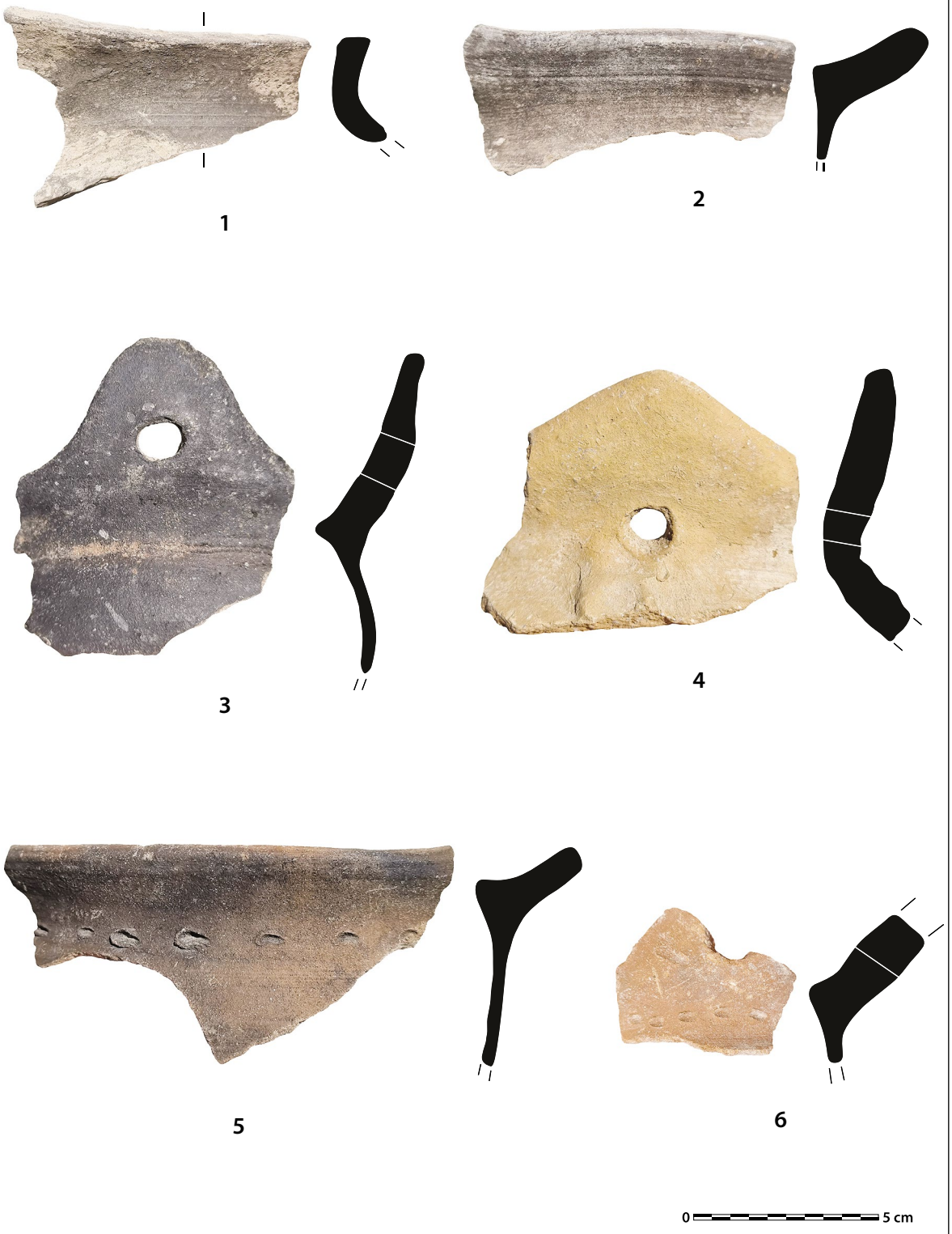
T. 5



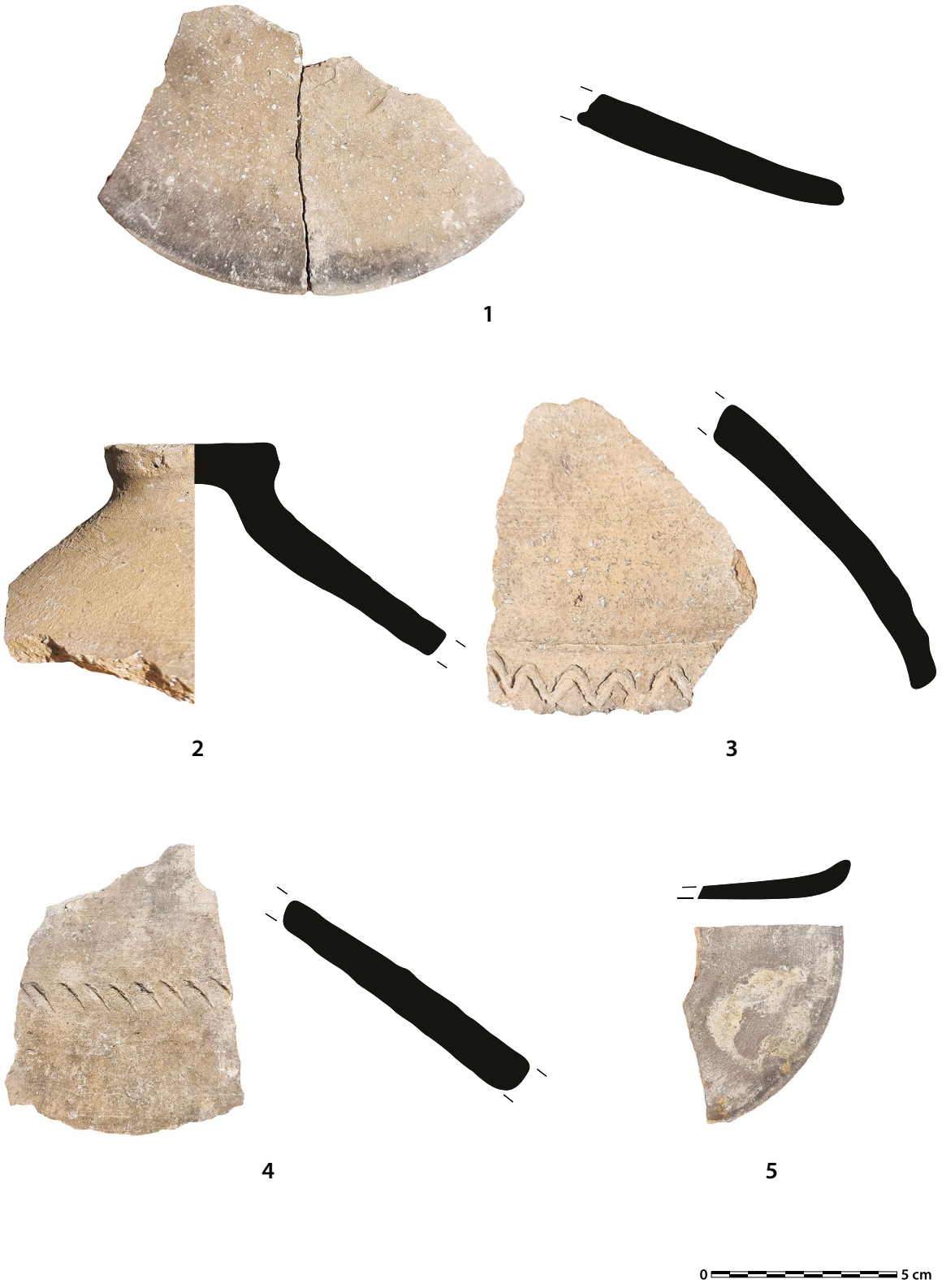
T. 6



T. 7



T. 8



T. 9



1



2



3



4



5

0 5 cm

T. 10



1



2

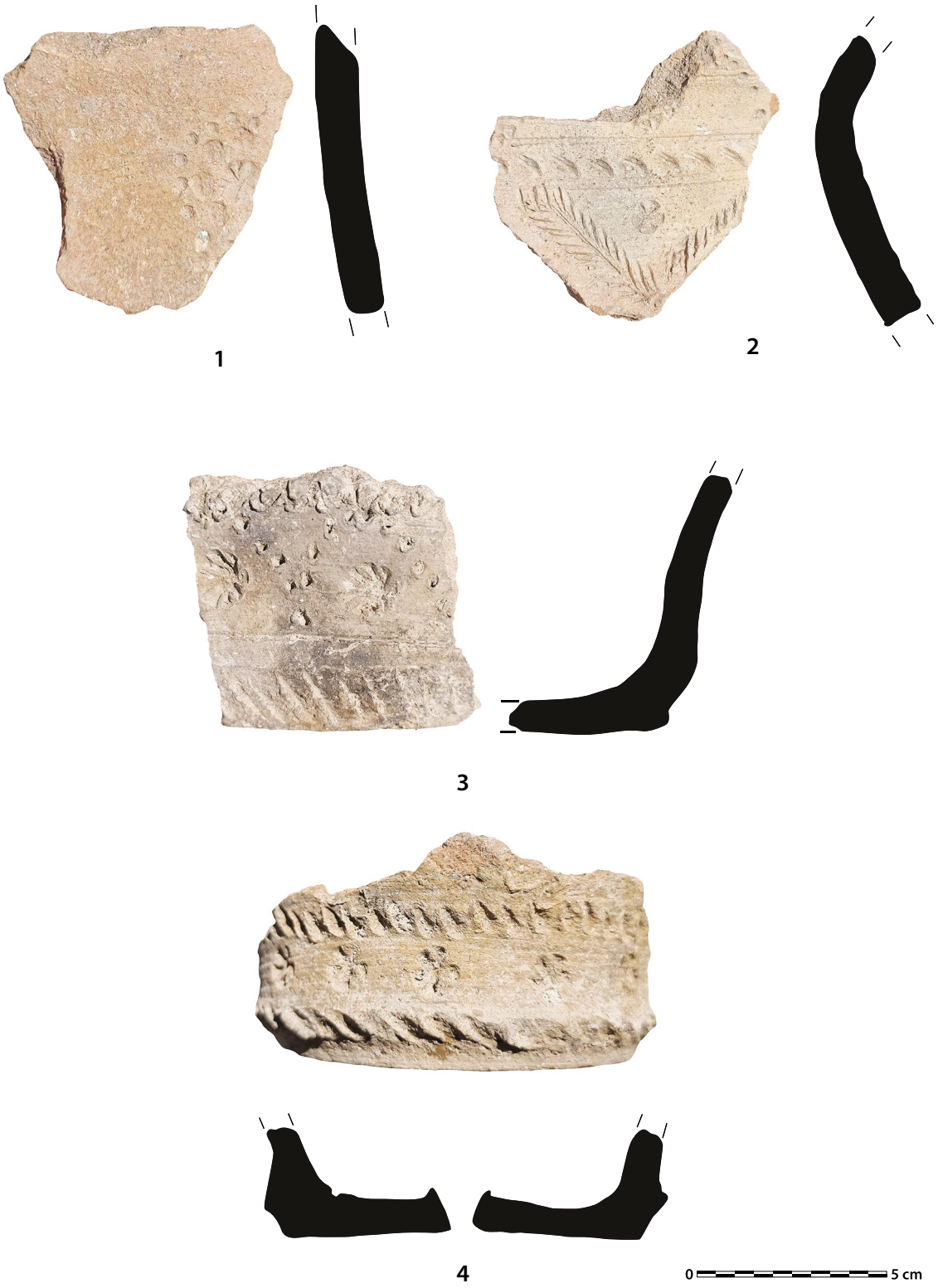
3

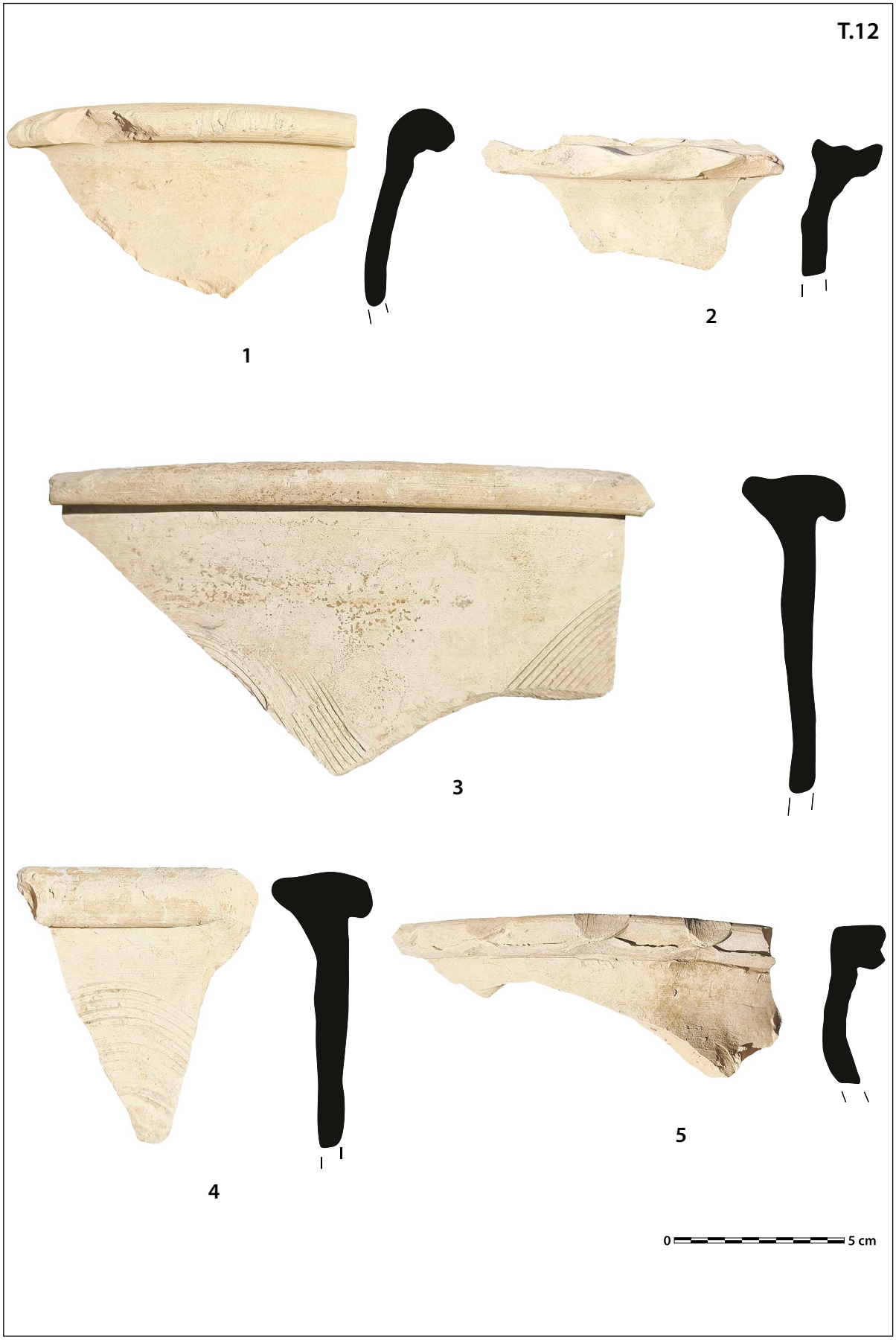


4

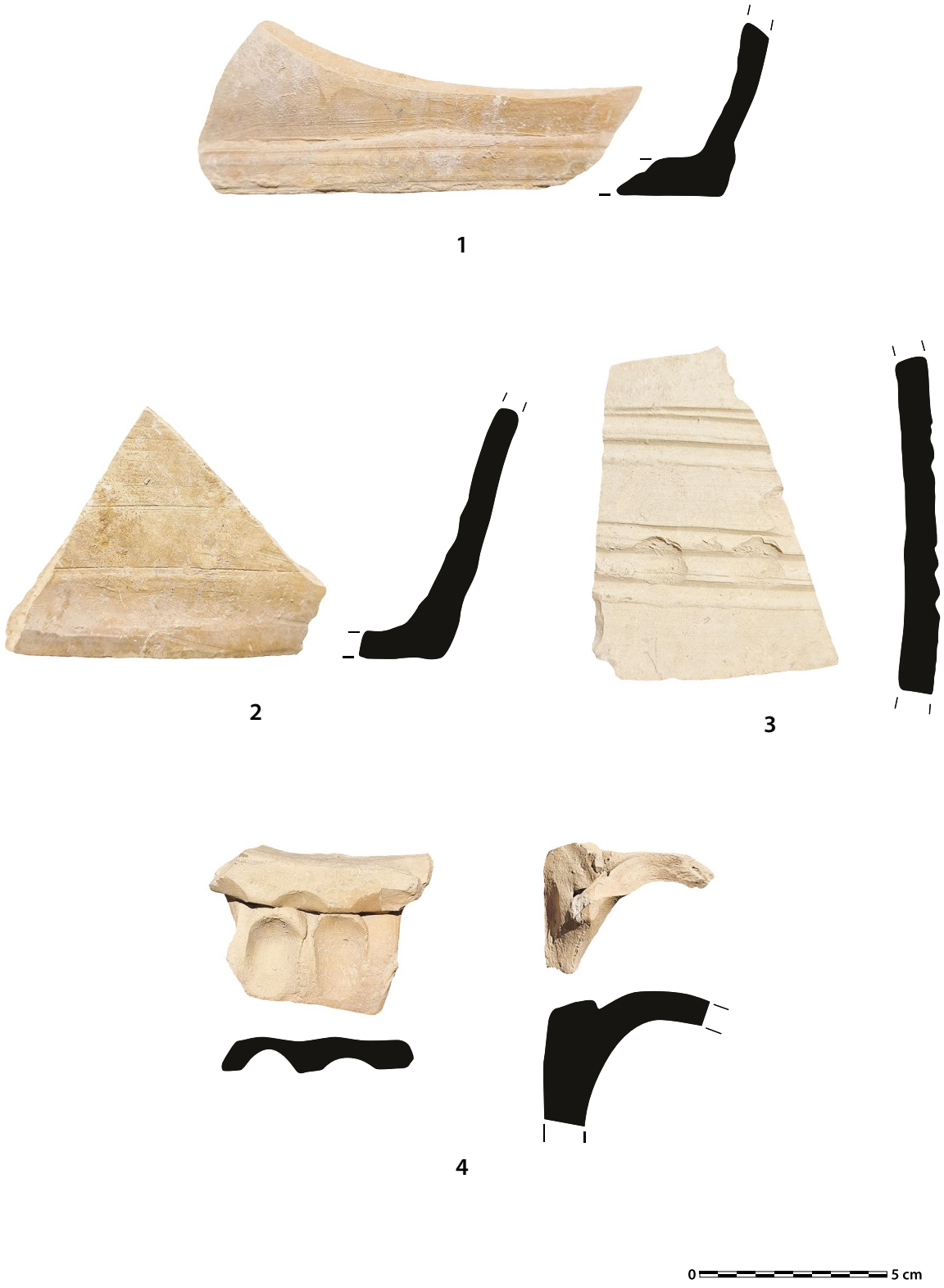
0 5 cm

T. 11




T.12
1
2
3
4
5
0
5 cm

T. 13



T. 14



UPUTE AUTORIMA

U časopisu *Archaeologia Adriatica* Odjela za arheologiju Sveučilišta u Zadru objavljuju se znanstveni prilozi iz arheologije i srodnih znanstvenih područja.

Časopis izlazi jednom godišnje.

Prilozi se dostavljaju Uredništvu tijekom čitave godine u digitalnom obliku na e-mail adresu: **archaeologia.adriatica@unizd.hr**, ili, po potrebi, snimljeni na CD ili DVD na adresu: Odjel za arheologiju Sveučilišta u Zadru, Obala kralja Petra Krešimira IV., 2, 23000 Zadar.

Nakon recenzentskog postupka prihvaćeni i znanstveno kategorizirani članci objavljuju se u prvom sljedećem svesku. Uredništvo odlučuje kojim će recenzentima pristigli rad biti poslan na ocjenjivanje – svaki će biti poslan na najmanje dvije recenzije. Svi članci prolaze tzv. dvostruku slijepu recenziju (engl. *double-blind review*) kojom se ne otkriva identitet ni autora ni recenzenta. U slučaju različitih ocjena rukopis se šalje na dodatnu ocjenu. Nakon ocjenjivanja rada autor je dužan unijeti promjene u tekstu prema priloženim recenzijama i uputama urednika ili se očitovati o razlogu njihova neprihvaćanja. Svi pristigli radovi podvrgavaju se provjeri izvornosti putem sustava *Turnitin*. Autori ne snose troškove obrade rada i pripreme za tisak.

Nakon izlaska iz tiska svaki autor dobiva po jedan primjerak časopisa i članak u pdf formatu.

Prilozi se predaju kao MS Word dokument naslovljen prezimenom (su)autora (Uglešić; Miletić, Zaninović; Gusar, Fabijanić, Šućur; Cambi et al.) pisan slogom Times New Roman veličine slova 12 i dvostrukim proredom te se ne formatira. Rukopisi se tiskaju u dvojezičnom obliku. Mogu biti napisani na hrvatskome ili na nekom od stranih jezika u dogovoru s Uredništvom, a Uredništvo preuzima obvezu prijevoda na engleski jezik (ako je predan hrvatski tekst), odnosno hrvatski jezik (ako je predan tekst na nekom od stranih jezika).

U načelu prilozi ne mogu biti veći od 32 kartice teksta (dva autorska arka), a broj priloga (slike, karte, table i sl.) treba biti primjeren opsegu rukopisa. Fotografije trebaju biti oštre, crteži jasni, a legende za slike, karte i sve ostale priloge trebaju biti posebno ispisane. U rukopisu treba naznačiti mjesta na koja bi se trebali smjestiti slikovni prilozi (između dvaju odlomaka) te tu oznaku istaknuti bojom.

Dokument obavezno sadrži:

a) naslov rukopisa

b) podatke o autoru/autorima: ime i prezime autora i akademski stupanj (titula), naziv i adresa ustanove u kojoj radi (ili prebivališta), adresu elektroničke pošte

c) abstrakt (maksimalno 250 riječi)

d) ključne riječi (maksimalno 8 riječi)

e) tekst rukopisa (naslovi i podnaslovi poglavlja se ne numeriraju)

f) popis korištene literature i izvora

g) popis ilustracija i tabli.

Citiranje

Citiranje priloga u tekstu

Autor se u tekstu poziva na priloge u zagradama na sljedeće načine:
(sl. 1), (karta 1), (tab. 1), (T. I), (kat. br. 1).
Ako se autor poziva na jedan od više detalja na nekom prilogu:
(sl. 3/7), (karta 3/1), (T. I/1).
Ako se poziva na više detalja s istog priloga:
(T. I/1, 3, 7–10).

Ako se u tekstu autor poziva na više predmeta s više priloga:
(T. I/1, 3, 7–10; II/7–9, 11).

Citiranje literature

Citiranje literature i dodatne bilješke navode se na dnu stranice. Bilješke se pišu slogom Times New Roman veličine slova 10 i dvostrukim proredom, onim redoslijedom kojim se javljaju u članku. Ako bilješka sadrži tekst nakon kojeg slijedi bibliografski izvor, on se navodi u zagradi.

U bilješci se navodi prezime autora, godina izdanja djela te, prema potrebi, broj stranice na sljedeći način:

BELOŠEVIĆ 1974: 222.
CAMBI 2005: 115, 117–142, 157.

Navod bilješke:
UGLEŠIĆ 2000: 88, bilj. 6.

Više djela istog autora treba poredati kronološki:
KUKOČ 2010: 96; 2012: 112.

Djelo dvaju autora:
MARIJANOVIĆ, HORVAT 2016: 49–53.

Djelo triju autora:
BARBIR, VUKOSAVLJEVIĆ, VUJEVIĆ 2020: 8.

Djelo više od triju autora:
CAMBI et al. 2007: 22, sl. 17.
Svi autori bit će navedeni u popisu literature, na kraju teksta.

Navođenje više bibliografskih jedinica (poredati kronološki, no objediniti djela istog autora):
BRUSIĆ 2000: 14; 2002: 214–216; ČONDIĆ 2010: 28; KUKOČ 2010: 97; 2011: 78; 2017: 99; MARIJANOVIĆ 2012: 24.

Slike, table ili bilješke navode se uz broj stranice na kojoj se nalaze.
SUIĆ 1995: 297, sl. 2.

Citiranje antičkih i srednjovjekovnih izvora

Citirati u skladu s kraticama navedenima u Oxford Classical Dictionary (http://classics.oxfordre.com/fileasset/images/ORECLA/OCD.ABBREVIATIONS.pdf).

Primjer:
Plin., N.h.
Caii Plynii Secundi Naturalis historiae libri tricesimiseptimi etultimi finis impressi. Venetiis: Per Nicolaum Jenson Gallicum, 1472.

Popis literature i izvora

Popis literature i izvora jedinstven je za dvojezični tekst. Literatura se navodi abecednim redom uz kronološko redanje djela istog autora. Djela bez autora ili urednika treba uvrstiti prema naslovu djela. U popisu literature treba izbjegavati kraćenje naslova i naziva časopisa. Naslov i podnaslov monografije ili zbornika te naziv časopisa pišu se u kurzivu. Nakon popisa djela jednog autora slijede djela u kojima je isti prvi od dvaju autora, a nakon toga se prema godini izdanja nabrajaju djela u kojima je prvi od triju ili više autora. Za više djela jednog autora objavljenih u istoj godini potrebno je nakon godine staviti tekuće slovo abecede (BATOVIĆ, Š. 1968a,...; BATOVIĆ, Š. 1968b,...).

Svi ostali relevantni podatci o publikaciji navode se na hrvatskom i engleskom jeziku (npr. u/in, ur./ed. ili eds.) ili uvriježenim latinskim terminima odnosno kraticama (npr. et al.). Ako je rad objavljen dvojezično, navode se obje inačice naslova razdvojene kosom crtom. Ako je riječ o monografiji izdanoj u seriji, potrebno je to napomenuti. Treba navoditi izvorna imena mjesta izdanja (npr. Roma, a ne Rim). U bilješkama i popisu literature navedene stranice u knjizi ili časopisu povezuju se crtom (11–27), a ne crticom (spojnicom) (11-27).

Upute za citiranje

Knjiga

Jedan autor

BRUSIĆ, Z. 1999, *Hellenistic and Roman relief pottery in Liburnia: north-east Adriatic*, *Croatia*, British Achaeological Reports International series 817, Oxford: Archaeopress.

Dva ili više autora

BROGIOLO, G. P., CHAVARRÍA ARNAU, A. 2005, *Aristocrazie e campagne nell'Occidente da Costantino a Carlo Magno*, Firenze: All'insegna del Giglio.

Ako je knjiga objavljena na dvama jezicima, navode se obje inačice naslova razdvojene kosom crtom.

RADIĆ ROSSI, I., BORZIĆ, I. 2022, *Brodolom rimskog trgovačkog broda kod rta Glavata na Mljetu / Shipwreck of a roman merchantman near cape Glavat on the island of Mljet*, Arheologija jadranske plovidbe i brodogradnje / Archaeology of Adriatic Shipbuilding and Seafaring, 3, Zadar: Sveučilište u Zadru.

Urednička izdanja (za jednog urednika koristiti se kraticom ur./ed., a za više ur./eds.)

AURIEMMA, R. (ur./ed.) 2018, *Nel mare dell'intimità. L'archaeologia subacquea racconta l'Adriatico*, Catalogo della mostra (Trieste, ex Pescheria - Salone degli Incanti, 17 dicembre 2017 - 1 maggio 2018), Roma: Gangemi Editore.

FADIĆ, I., ETEROVIĆ BORZIĆ, A. (ur./eds.) 2017, *Grad mrtvih nad poljem života. Nekropola gradinskog naselja Kopila na otoku Korčuli / The city of the dead above the field of life. Necropolis of Kopila hillfort on the island of Korčula*, Zadar: Muzej antičkog stakla u Zadru.

Poglavlje u knjizi s više autora

RADOVČIĆ, D. 2017, Antropološka analiza / Anthropological analysis, u/in: *Grad mrtvih nad poljem života. Nekropola gradinskog naselja Kopila na otoku Korčuli / The city of the dead above the*

field of life. Necropolis of Kopila hillfort on the island of Korčula, Fadić, I., Eterović Borzić, A. (ur./eds.), Zadar: Muzej antičkog stakla u Zadru, 125–137.

Neobjavljeni magistarski ili doktorski rad

ČAČE, S. 1985, *Liburnija u razdoblju od 4. do 1. stoljeća prije nove ere*, neobjavljena disertacija / unpublished PhD thesis, Sveučilište u Splitu, Zadar: Filozofski fakultet u Zadru.

Članak u časopisu

BELOŠEVIĆ, J. 1974, Starohrvatska nekropola uz humak „Materiza" kod Nina, *Diadora*, 6, 221–242.

Ako časopis ima više svezaka:

ZARO, G., GUSAR, K., ČELHAR M. 2020, On the edge of empires. Exploring an Ottoman legacy on the Venetian frontier, *Journal of Field Archaeology*, 45(3), 188–208. doi: 10.1080/00934690.2019.1706141.

Ako je članak u časopisu objavljen na dvama jezicima, navode se obje inačice naslova razdvojene kosom crtom:

BARAKA PERICA, J., UGLEŠIĆ, A. 2021, Ulomak pogrebne mense s lokaliteta Galovac – Crkvina / Fragment of a Funerary Mensa from the Site of Galovac – Crkvina, *Archaeologia Adriatica*, 15, 521–539.

Ako se godište časopisa ne podudara s godinom objave:

BELOŠEVIĆ, J. 1962, Slavenska keramika iz ranosrednjovjekovne nekropole „Materiza" kraj Nina, *Diadora*, 2 (1960–1961), 237–249.

Članak u tisku

KUKOČ, S. 2022, Interpretacija funeranog kôda: Geometrijskog simboličnog prikaza na daunskoj steli iz Arpija / Interpretation of a funerary code: Geometric symbolic depiction on the daunian stela from Arpi, *Asseria*, 15/16 (2019/2020) (u tisku / in press).

Članak u zborniku znanstvenog skupa

PEŠIĆ, M. 2017, Sjevernoafrička tera sigilata s brodoloma kod otočića Babuljaša blizu Pakoštana, u/in: *Rimske keramičarske i staklarske radionice. Proizvodnja i trgovina na jadranskom prostoru*, Zbornik III. Međunarodnog arheološkog kolokvija Crikvenica, 4.–5. studenog 2014., Lipovac Vrkljan G., Šiljeg B., Ožanić Roguljić, I., Konestra, A. (ur./eds.), Institut za arheologiju, Muzej grada Crikvenice, Crikvenica, 419–431.

Novinski članak

BATOVIĆ, Š. 1970, Ostaci života i kulture iz davne prošlosti Ljupča, *Narodni list*, god. XXI(CIX), br. 964, Zadar, 18. travnja, 5.

Elektronički izvori

Osnovni oblik citiranja prati načela koja vrijede i za tiskane medije. Dakle, potrebno je navesti: autora, godinu publikacije, naslov publikacije, izdavača, adresu internetske stranice te, u zagradi, datum posjeta stranici:

SCHMIDTS, T., SEIFERT, M. (eds.) 2022, *New Approaches to Seaborne Commerce in the Roman Empire: Panel 5.17*, Archaeology and Economy in the Ancient World – Proceedings of the 19th International Congress of Classical Archaeology, Cologne/Bonn 2018, Band 24, Propylaeum, Heidelberg. https://doi.org/10.11588/propylaeum.1038 (17. 10. 2022.)

Popis priloga

Na kraju teksta treba se nalaziti popis priloga s kratkim opisom, naznačenim autorstvom (snimio, izradio) i godinom nastanka priloga. Pri opisu slikovnih priloga potrebno je rabiti termine slika, tabla, tablica, karta. Slikom se smatraju crteži, fotografije i dijagrami, a tablicom tablični prilozi koji prate tekst rukopisa. Tablom se smatra slikovni prilog koji dolazi na kraju rukopisa.

Kad je prilog preuzet iz objavljene literature, mora se citirati njegova bibliografska jedinica:

Sl. 1 Palagruža, paljevinski sloj unutar zidova rimske fortifikacije (Kirigin 2012: 91)

Ako je preuzeti prilog dorađen:

Sl. 1 Palagruža, paljevinski sloj unutar zidova rimske fortifikacije (prema Kirigin 2012: 91; doradio: I. Borzić)

Ako prilog prikazuje predmet koji je pohranjen u nekoj instituciji, uz opis mora biti navedena institucija te inventarni broj pod kojim se predmet vodi u toj instituciji:

Sl. 1 Pojasna kopča iz Nadina, Arheološki muzej Zadar, inv. br. 15073 (snimio: I. Čondić)

Slikovni prilozi

Slikovni prilozi predaju se u digitalnom obliku i moraju biti izdvojeni kao zasebne datoteke, naslovljeni imenom autora te rednim brojem pod kojim se u tekstu spominju (Marijanović sl. 1). Rukopisi sa slikovnim prilozima umetnutima u Wordov dokument neće se prihvaćati. Prilozi trebaju biti orijentirani onako kako će biti objavljeni, snimljeni u formatu jpeg (.jpg) ili tiff (.tif), dovoljno kvalitetne rezolucije za tisak. Svaka tabla mora sadržavati nacrtano mjerilo, a redni broj treba joj biti označen rimskim brojevima.

Tablični prilozi i grafikoni

Tablični prilozi i grafikoni predaju se u digitalnom obliku, kao Word ili Excel dokument, naslovljeni imenom autora rukopisa, vrstom priloga te brojem (Marijanović tab 1). Naziv pojedinog priloga stavlja se u potpis, a ne unutar tablice ili grafikona.

Autorska prava

Autori su dužni ishoditi dopuštenje za upotrebu svih ilustracija za koje nemaju autorska prava. Nakon prihvaćanja rukopisa autori su dužni potpisati izjavu o preuzimanju odgovornosti u slučaju eventualnih sporova u vezi s povredom autorskih prava koja će im biti poslana na elektroničku adresu.

INSTRUCTIONS FOR AUTHORS

The *Archaeologia Adriatica* Journal of the Archaeology Department of the University of Zadar publishes scientific articles from archaeological and other related scientific fields.

The journal is published annually.

Articles may be submitted in digital form to the editorial board throughout the year at the following email address: **archaeologia.adriatica@unizd.hr**; alternatively, when necessary, on a CD or DVD and sent to the following address: Archaeology Department of the University of Zadar, Obala kralja Petra Krešimira IV., 2, 23000 Zadar.

Following the review process, the accepted and scientifically classified articles will be published in the next edition. The editorial board decides who the reviewers will be – every article will be reviewed by at least two reviewers. All articles undergo the double-blind peer review process, in which the identity of both author and reviewer is kept hidden. In case of conflicting evaluations of an article, it will undergo an additional review. After the review process, the author is obliged to revise the article according to the attached reviewer comments and editor's instructions or justify his or her decision to disregard the said comments and instructions. All submitted articles undergo an originality check using the *Turnitin* system. The authors do not bear any costs for the article processing and press preparation.

Authors receive a copy of the journal and articles in PDF format after their publication.

Articles are to be submitted as MS Word documents, which should bear the surname of the author/co-authors (e.g., Uglešić; Miletić, Zaninović; Gusar, Fabijanić, Šućur; Cambi et al.) and be written in Times New Roman font in 12-point font size with double spacing and without formatting. The articles are published in bilingual form. They can be written in Croatian or in a foreign language as agreed with the Editorial Board, which undertakes the translation of articles into English (if the submitted article is in Croatian) or into Croatian (if the submitted article is written in a foreign language).

In general, articles should not exceed 32 typeset pages (60,000 characters) and the number of appendices (pictures, maps, plates, etc.) should be proportional to the length of the article. Photographs should be sharp, drawings clear and legends for the pictures, maps, and all other appendices should be attached to the article separately. The approximate positions of the pictures in the article (between two paragraphs) should be marked in colour in the text.

The document must contain:

a) the title of the manuscript

b) information about the author(s): name(s) and surname(s) and their academic level (title), name and address of the institution at which they work (or their residence) and email address

c) an abstract (no more than 250 words)

d) key words (no more than 8 words)

e) the manuscript (headings and subheadings of the chapters are not to be numbered)

f) a list of literature and sources used

g) a list of illustrations and plates.

References

References to the appendices in the text

The author should refer to the appendices in the text using brackets as follows:
(Fig. 1), (Map 1), (Tab. 1), (T. I), (Cat. no. 1).
When reference is made to one of several elements in an appendix:

(Fig. 3/7), (Map 3/1), (T. I/1).
When reference is made to several elements of one appendix:
(T. I/1, 3, 7–10).
When reference is made to several elements of several appendices:
(T. I/1, 3, 7–10; II/7–9, 11).

Literature references

Literature references and additional notes are not indicated at the bottom of the page. The notes are written in Times New Roman font in 10-point font size with double spacing following the order in which they appear in the text. If the note contains a text followed by a bibliographic source, it is given in brackets.

The note should indicate the author's surname, publication year and, where relevant, page number as follows:

BELOŠEVIĆ 1974: 222.
CAMBI 2005: 115, 117–142, 157.

Note reference:
UGLEŠIĆ 2000: 88, bilj. 6.

Several works by the same author should be ordered chronologically:
KUKOČ 2010: 96; 2012: 112.

A work by two authors:
MARIJANOVIĆ, HORVAT 2016: 49–53.

A work by three authors:
BARBIR, VUKOSAVLJEVIĆ, VUJEVIĆ 2020: 8.

A work by more than three authors:
CAMBI et al. 2007: 22, sl. 17.
All the authors should be listed at the end of the article in the literature list.

References to several bibliographical units (listed chronologically but works by one author should be grouped):
BRUSIĆ 2000: 14; 2002: 214–216; ČONDIĆ 2010: 28; KUKOČ 2010: 97; 2011: 78; 2017: 99; MARIJANOVIĆ 2012: 24.

Pictures, plates or notes are listed along with the numbers of the pages on which they appear:
Suić 1995: 297, Fig. 2.

Reference to ancient and mediaeval sources

References should be given in accordance with the Oxford Classical Dictionary (http://classics.oxfordre.com/fileasset/images/ORECLA/OCD.ABBREVIATIONS.pdf).

Example:

Plin., N.h.

Caii Plinii Secundi Naturalis historiae libri tricesimiseptimi et ultimi finis impressi. Venetiis: Per Nicolaum Jenson Gallicum, 1472.

List of literature and sources

The list of literature and sources is the same for both languages. The list of references should be arranged in alphabetical order with works by the same author listed chronologically. Works without names of authors or editors should be listed according to the title. Shortening of the titles and names of journals should be avoided. The titles and subtitles of monographs or proceedings as well as journal names should be italicised. The list of works by one author is followed by works in which the same author is the first of two authors and, after that, according to the year of publication, works in which (s)he is the first of three or more authors listed. When listing several works by the same author published in the course of the same year it is necessary to put consecutive letters of the alphabet after the publication year (e.g., BATOVIĆ, Š. 1968a,.....; BATOVIĆ, Š. 1968b,.....).

All other relevant information about the publication is given in both Croatian and English (e.g., u/in, ur./ed. or eds.) or commonly used Latin terms and abbreviations (e.g., et al). If a piece of work is published in bilingual form, both versions of the title are given, separated by a slash. Should a piece of work be a monograph published as part of a series, it will be duly noted. The original names of the publication places should be used (e.g., "Roma" instead of "Rome"). Pages of books or journals listed in notes or a literature list should be connected by an en dash "11–27" and not by a hyphen "11-27".

Instructions for references

Books

One author

BRUSIĆ, Z. 1999, *Hellenistic and Roman relief pottery in Liburnia: north-east Adriatic*, *Croatia*, British Achaeological Reports International series 817, Oxford: Archaeopress.

Two or more authors

BROGIOLO, G. P., CHAVARRÍA ARNAU, A. 2005, *Aristocrazie e campagne nell'Occidente da Costantino a Carlo Magno*, Firenze: All'insegna del Giglio.

If a book is published in bilingual form, both versions of the title are listed, separated by a slash.

RADIĆ ROSSI, I., BORZIĆ, I. 2022, *Brodolom rimskog trgovačkog broda kod rta Glavata na Mljetu / Shipwreck of a roman merchantman near cape Glavat on the island of Mljet*, Arheologija jadranske plovidbe i brodogradnje / Archaeology of Adriatic Shipbuilding and Seafaring, 3, Zadar: Sveučilište u Zadru.

Edited editions (when there is one editor use the abbreviation "ur./ed."; when there are more, "ur./eds."):

AURIEMMA, R. (ur./ed.) 2018, *Nel mare dell'intimità. L'archaeologia subacquea racconta l'Adriatico*, Catalogo della mostra (Trieste, ex Pescheria - Salone degli Incanti, 17 dicembre 2017 - 1 maggio 2018), Roma: Gangemi Editore.

FADIĆ, I., ETEROVIĆ BORZIĆ, A. (ur./eds.) 2017, *Grad mrtvih nad poljem života. Nekropola gradinskog naselja Kopila na otoku Korčuli / The city of the dead above the field of life. Necropolis of Kopila hillfort on the island of Korčula*, Zadar: Muzej antičkog stakla u Zadru.

A chapter of a book with several authors:

RADOVČIĆ, D. 2017, Antropološka analiza / Anthropological analysis, u/in: *Grad mrtvih nad poljem života. Nekropola gradinskog naselja Kopila na otoku Korčuli / The City of the Dead Above the Field of Life. Necropolis of Kopila Hillfort on the Island of Korčula*, Fadić, I., Eterović Borzić, A. (ur./eds.), Zadar: Muzej antičkog stakla u Zadru, 125–137.

Unpublished master's or PhD thesis

ČAČE, S. 1985, Liburnija u razdoblju od 4. do 1. stoljeća prije nove ere, neobjavljena disertacija / unpublished PhD thesis, Sveučilište u Splitu, Zadar: Filozofski fakultet u Zadru.

Article in a journal

BELOŠEVIĆ, J. 1974, Starohrvatska nekropola uz humak „Materiza" kod Nina, *Diadora*, 6, 221–242.

If the journal has several volumes:

ZARO, G., GUSAR, K., ČELHAR M. 2020, On the edge of empires. Exploring an Ottoman legacy on the Venetian frontier, *Journal of Field Archaeology*, 45(3), 188–208. doi: 10.1080/00934690.2019.1706141.

If an article in a journal is published in bilingual form, both versions of the title are given, separated by a slash:

BARAKA PERICA, J., UGLEŠIĆ, A. 2021, Ulomak pogrebne mense s lokaliteta Galovac – Crkvina / Fragment of a Funerary Mensa from the Site of Galovac – Crkvina, *Archaeologia Adriatica*, 15, 521–539.

If the journal volume is not the same as the year of publication:

BELOŠEVIĆ, J. 1962, Slavenska keramika iz ranosrednjovjekovne nekropole „Materiza" kraj Nina, *Diadora*, 2 (1960–1961), 237–249.

Article in press

KUKOČ, S. 2022, Interpretacija funeranog kôda: Geometrijskog simboličnog prikaza na daunskoj steli iz Arpija / Interpretation of a funerary code: Geometric symbolic depiction on the daunian stela from Arpi, *Asseria*, 15/16 (2019/2020) (u tisku / in press).

Article in conference proceedings

PEŠIĆ, M. 2017, Sjevernoafrička tera sigilata s brodoloma kod otočića Babuljaša blizu Pakoštana, u/in: *Rimske keramičarske i staklarske radionice. Proizvodnja i trgovina na jadranskom prostoru*, Zbornik III. Međunarodnog arheološkog kolokvija Crikvenica, 4.–5. studenog 2014., Lipovac Vrkljan G., Šiljeg B., Ožanić Roguljić, I., Konestra, A. (ur./eds.), Institut za arheologiju, Muzej grada Crikvenice, Crikvenica, 419–431.

Newspaper article

BATOVIĆ, Š. 1970, Ostaci života i kulture iz davne prošlosti Ljupča, *Narodni list*, god. XXI(CIX), br. 964, Zadar, 18. travnja, 5.

Online sources

The general referencing principle is the same as for printed materials. Hence, author, publication year, title of the publication, publisher, web address and, in brackets, access date should be listed:

Schmidts, T., Seifert, M. (eds.) 2022, *New Approaches to Seaborne Commerce in the Roman Empire: Panel 5.17*, Archaeology and Economy in the Ancient World – Proceedings of the 19th International Congress of Classical Archaeology, Cologne/Bonn 2018, Band 24, Propylaeum, Heidelberg. https://doi.org/10.11588/propylaeum.1038 (17 October 2022)

List of appendices

There should be a list of appendices at the end of the article specifying the author (taken or made by) and the year of creation. The terms picture, plate, table, and map should be used when describing the pictorial appendices. Pictures include drawings, photographs and charts, and tables refer to tabular forms accompanying the text of the manuscript. A plate is a pictorial appendix that appears at the end of the manuscript.

If the appendix originates from a published work, its bibliographical unit must be specified:

Fig. 1 Palagruža, cremation layer inside the walls of the Roman fortification (Kirigin 2012: 91)

If the appendix has been edited:

Fig. 1 Palagruža, cremation layer inside the walls of the Roman fortification (according to Kirigin 2012: 91; edited by: I. Borzić)

If the object listed in the appendix is stored in an institution, the institution as well as the inventory number must be specified along with the description:

Fig. 1 Belt buckle from Nadin, Zadar Archaeology Museum, inv. no. 15073 (taken by: I. Čondić)

Pictorial appendices

Pictorial appendices are to be submitted in digital form and must be in separate files, named after the author and the ordinal number under which they appear in the article (e.g., Marijanović Fig. 1). Manuscripts with pictorial appendices inserted in the Word document will not be accepted. The orientation of the appendices should be the same as they appear in the text, they should be saved in jpeg (.jpg) or tiff (.tif) format and the resolution quality should be good enough for printing. Every plate must have a scale, and the ordinal numbers should be given in Roman numerals.

Tabular appendices and charts

Tabular appendices and charts are to be submitted in digital form, as Word or Excel files, with the name indicating the manuscript author, appendix type and number (e.g., Marijanović Tab. 1). Titles of appendices are to be given in headings not within a table or a chart.

Copyright

It is the authors' responsibility to obtain permission to use illustrations for which they do not hold the copyright. After the manuscript has been accepted, the authors are obliged to sign a declaration on assuming responsibility in case of possible disputes regarding copyright infringement, which will be sent to their electronic address.