



Kurilovec-Belinščica Tragom brončanodobnog Turopolja

KURILOVEC – BELINŠČICA
Tracing the Bronze Age Turopolje

ANDREJA KUDELIĆ / FILOMENA SIROVICA

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Autorice / Authors

Andreja Kudelić (Institut za arheologiju / Institute of Archaeology, andreja.kudelic@iarh.hr)
Filomena Sirovica (Arheološki muzej u Zagrebu / Archaeological Museum in Zagreb, fsirovica@amz.hr)

Suradnik / Associate

Dalibor Branković (Arheo Kvarner d. o. o., dalibrank@gmail.com)

Nakladnik / Publisher

Institut za arheologiju / Institute of Archaeology

Za nakladnika / Publisher in chief

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Prijevod na engleski / English translation

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ANDREJA KUDELIĆ, FILOMENA SIROVICA

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Turopolja

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Turopolje

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1. UVOD

Kurilovec-Belinščica arheološko je nalazište smješteno na području središnje Hrvatske, u nizinskoj kulturno-povijesnoj regiji Turopolje, nedaleko grada Velika Gorica. To, u arheološkim krugovima već dobro poznato nalazište, otkriveno je relativno nedavno, 2005. godine tijekom terenskog pregleda na trasi autoceste Zagreb – Sisak. U arheologiju je ušlo pod nazivom Velika Gorica jug te je već iduće, 2006. godine na dijelu nalazišta provedeno zaštitno arheološko iskopavanje čime je dobiven uvid u karakter potpovršinskog arheološkog zapisa. Terenski pregled i kasnija arheološka iskopavanja provela je tvrtka Kaducej d.o.o. u suradnji s Muzejom grada Zagreba i tvrtkom Geoarheo d.o.o. Utvrđeno je da je na položaju očuvan višeperiodni, ponajprije brončanodobnom arheološkom zapisu sa sporadičnim ostacima iz rimskog doba i novog vijeka. Na temelju tih istraživanja, Institut za arheologiju pokrenuo je zahtjev za preventivnom zaštitom nalazišta pri Ministarstvu kulture Republike Hrvatske koje ga je registriralo pod nazivom Kurilovec-Belinščica. Od 2011. godine, u organizaciji Instituta za arheologiju, te u suradnji s tvrtkom Kaducej d.o.o., a od 2014. godine i s Arheološkim muzejom u Zagrebu, na nalazištu se sustavno provode različita, većinom neinvazivna arheološka istraživanja. Istraživanja je financiralo Ministarstvo kulture, a od 2013. godine provodena su u sklopu projekta *Geneza i razvoj brončanodobnih zajednica u sjevernoj Hrvatskoj* (MZOS-197-1970685-0689) voditeljice dr. sc. Snježane Vrdoljak s Instituta za arheologiju. Ciljevi istraživanja koji su s vremenom prošireni na cijelo područje Turopolja i objedinjeni u sklopu projekta *Kurilovec-Belinščica, brončanodobno nalazište u Turopolju*, bili su usmjereni na stjecanje boljeg razumijevanja prošlosti i samog položaja i šireg turopoljskog krajolika. Sustavnim provedbo istraživanja, ali i kontinuiranim publiciranjem dobivenih rezultata, arheološko nalazište Kurilovec-Belinščica postaje značajno nacionalno i međunarodno prepoznato brončanodobno nalazište.

Ta su nastojanja proširena suradnjom sa stručnjacima iz različitih područja te je ova monografska publikacija nastala i iz potrebe da se dugogodišnja interdisciplinarna istraživanja, koja su rezultirala brojnim vrijednim podacima, prikažu na jednom mjestu. Istraživanja su ponajprije ponajprije bila usmjerena na poučavanje lončarstva brončanog doba i dijelom su provedena 2014. i 2015. godine, u sklopu projekta *Lončarstvo u prapovijesnim kulturama, s naglaskom na*

INTRODUCTION

Kurilovec-Belinščica is an archaeological site located in central Croatia, in the lowland cultural and historical region of Turopolje, not far from the town of Velika Gorica. This site, which is already well-known in archaeological circles, was discovered relatively recently, in 2005, during a field survey on the route of the Zagreb – Sisak motorway. It entered archaeology under the name Velika Gorica south, and in the following 2006, on the part of the site, an archaeological rescue excavation was conducted, which provided an insight into the character of the subsurface archaeological record. The field survey and subsequent archaeological excavation were carried out by the company Kaducej Ltd. in cooperation with the Zagreb City Museum and Geoarcheo Ltd. It has been found that at the location, a multi-period archaeological record was preserved, primarily from the Bronze Age with sporadic remains from the Roman and the modern periods. Based on these investigations, the Institute of archaeology initiated a request for preventive protection of the site at the Ministry of Culture of the Republic of Croatia, which scheduled it under the name Kurilovec-Belinščica. Since 2011, organised by the Institute of Archaeology, in cooperation with the company Kaducej Ltd., and since 2014 with the Archaeological Museum in Zagreb, various, mostly non-invasive, archaeological research has been systematically carried out at the site. The Ministry of Culture financed the research, and since 2013 it has been carried out as part of the *Genesis and Development of Bronze Age Communities in Northern Croatia* project (MZOS-197-1970685-0689) led by Dr Snježana Vrdoljak from the Institute of Archaeology. The goals of the research, which over time has been extended to the entire area of Turopolje and integrated as part of the *Kurilovec-Belinščica project, a Bronze Age site in Turopolje*, were focused on gaining a better insight into the past of the location itself, as well as the broader Turopolje landscape. Through the systematic implementation of investigations and the continuous publication of the obtained results, the archaeological site of Kurilovec-Belinščica has become an important nationally and internationally recognised Bronze Age site.

These efforts were expanded by cooperation with experts from different fields, and this monographic publication arose out of the requirement to present long-term interdisciplinary research, which resulted in numerous valuable data in one place. This research was primarily focused on studies of Bronze Age pottery and was partly carried out in 2014 and 2015 as part of the project *Pottery production in prehistoric cultures, especially*

Halštatsku kulturu, na području hrvatskog i austrijskog Podunavlja, voditeljice prof. dr. sc. Marte Mileusnić sa Zavoda za mineralogiju, petrologiju i mineralne sirovine na Rudarsko-geološko-naftnom fakultetu Sveučilišta u Zagrebu. Lončarska tehnologija dodatno je proučavana i kroz istraživački boravak u Laboratoriju za primijenjena istraživanja Mađarskog Nacionalnog muzeja (*Magyar Nemzeti Múzeum*) u sklopu teme *Pottery technology in the Bronze age: thin section ceramic petrography*. Istraživački boravak 2017. i 2018. godine stipendirala je Vlade Republike Mađarske u okviru Programa suradnje između Ministarstva znanosti, obrazovanja i sporta Republike Hrvatske, Agencije za mobilnost i Ministarstva ljudskih resursa Mađarske u područjima obrazovanja i znanosti. Od 2021. godine nastavak istraživanja omogućen je kroz uspostavljeni istraživački projekt *prePOT: Tehnološke značajke i kulturne prakse u prapovijesnim lončarskim tradicijama na području Hrvatske*, Hrvatske zaklade za znanost (UIP-2020-02-3637).

Eksperimentalna istraživanja prapovijesnog lončarstva, koja su uvelike temeljena na podacima i nalazima s položaja Kurilovec-Belinščica, sustavno su se provodila i u sklopu projekata Centra za eksperimentalnu arheologiju: *Tehnološki i socijalni aspekti proizvodnje keramike brončanog doba te Prapovijesno lončarstvo – interdisciplinarnost i eksperiment*, koji je proveden u suradnji s prof. dr. sc. Inom Miloglav i Odsjekom za arheologiju Filozofskog fakulteta Sveučilišta u Zagrebu. Dio provedenih eksperimenata trajno je zabilježen i u sklopu dokumentarnog filma *Eci, peci, peć*, premijerno prikazanog u Lapidariju Arheološkog muzeja u Zagrebu 2013. godine (sl. 1.1). Provedena istraživanja pružila su uvid u svakodnevni život u Turopolju tijekom brončanog doba pa su javnosti predstavljena i kroz izložbu *Život na vodi – Brončano doba Turopolja* (sl. 1.2), koja je u Muzeju Turopolja postavljena od jeseni 2019. do ljeta 2020. godine, kao dio programa *Prehistory Adventure*, provenjenog u sklopu *Programa prekogranične suradnje Interreg V-A Slovenija – Hrvatska* Europske Unije.

Stoga, ova monografija završni je korak prema punom prikazu provedenih istraživanja te donosi sintezu dobivenih rezultata koja obuhvaća analitički pregled novostrećenih spoznaja i reinterpretaciju postojećih podataka. Kako je značajni segment ovog istraživanja bio usmjeren na istraživanje turopoljskog krajolika, početna poglavljia obuhvaćaju prikaz prirodnih obilježja Turopolja te antropogenih procesa koji su utjecali na njegov današnji izgled. Ta razmatranja proširena su analizom arheoloških

Hallstatt culture, of Croatian and Austrian Danube regions, led by prof. Dr Marta Mileusnić from the Department of Mineralogy, Petrology and Mineral Resources at the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb. The pottery technology was additionally studied through a research stay in the Laboratory for Applied Research of the Hungarian National Museum (*Magyar Nemzeti Múzeum*) under the topic *Pottery technology in the Bronze age: thin section ceramic petrography*. A research stay in 2017 and 2018 was funded by the Government of the Republic of Hungary as part of the Cooperation Program between the Ministry of Science, Education and Sports of the Republic of Croatia, the Agency for Mobility and the Hungarian Ministry of Human Resources in the fields of education and science. In 2021, the continuation of the research was enabled through the Installation Research Project of the Croatian Science Foundation: *prePOT: Technological features and cultural practices in prehistoric pottery traditions in Croatia* (UIP-2020-02-3637).

Experimental research into prehistoric pottery, which is based mainly on data and finds from the Kurilovec-Belinščica site, was systematically carried out as part of the project led by the Center for Experimental Archaeology: *Technological and social aspects of the production of Bronze Age ceramics and Prehistoric pottery - interdisciplinarity and experiment*, which was carried out in collaboration with prof. Dr Ina Miloglav and the Department of Archeology of the Faculty of Humanities and Social Sciences, University of Zagreb. Part of the conducted experiments was permanently recorded as the documentary *Eci, peci, peć*, which premiered in the Lapidarium of the Archaeological Museum in Zagreb in 2013 (Fig. 1.1). The conducted research provided an insight into everyday life in Turopolje during the Bronze Age, which was presented to the public with the exhibition *Life on the Water – The Bronze Age of Turopolje* (Fig. 1.2), from autumn 2019 to summer 2020 displayed in the Museum of Turopolje as part of the program *Prehistory Adventure*, European Union Cross-Border Cooperation Program *Interreg V-A Slovenia – Croatia*.

Thus, this monograph is the final step towards a complete presentation of the conducted research and brings a synthesis of the obtained results, which includes an analytical review of newly acquired knowledge and a reinterpretation of existing data. As a significant segment of these investigations was focused on studies of the Turopolje landscape, the initial chapters include a description of the natural features of Turopolje and the anthropogenic processes that have influenced its present appearance. These considerations were expanded



Sl. 1.1 Plakat premijernog prikazivanja dokumentarnog filma *Eci, peci, peć* (izradila: Nikolina Sirovica)

Fig. 1.1 Poster for the premiere of the documentary *Eci, peci, peć* (made by: Nikolina Sirovica)

obilježja turopoljskog krajolika te poznatih i sasvim novih nalazišta te oblikuju dosad nepoznatu sliku brončanodobnog Turopolja. U tom kontekstu posebnu važnost dobiva upravo nalazište Kurilovec-Belinščica, valorizacija kojeg je potakla daljnja višegodišnja istraživanja. Razmatranjem arheoloških obilježja položaja te njegove sposobnosti da odgovori na otvorena pitanja o brončanodobnom naseljavanju Turopolja, osmišljeno je projektno usmjereno istraživanje koje je obuhvatilo različite vrste arheoloških metoda terenskih istraživanja. Kroz integraciju podataka dobivenih tim postupcima omogućeno je bolje razumijevanje prethodno prikupljenih podataka, ali i arheoloških zapisa utvrđenih na istodobnim turopoljskim nalazištima.

Time je postavljena osnova za naredna razmatranja koja obuhvaćaju rezultate obrade pokretnih nalaza, ponajprije različite postupke analize lončarije kao najbrojnijeg skupa nalaza. Provedeni postupci u prvom su redu omogućili klasifikaciju ulomaka lončarije te izvođenje tipološke klasifikacije keramičkih posuda. Tome



Sl. 1.2 Detalj izložbe *Život na vodi – Brončano doba Turopolja* (snimila: A. Kudelić)

Fig. 1.2 Detail of the exhibition *Life on the Water – The Bronze Age of Turopolje* (photo by: A. Kudelić)

by the analysis of the archaeological features of the Turopolje landscape and also known and completely new sites which form the hitherto unknown notions of the Bronze Age Turopolje. In this context, the Kurilovec-Belinščica site is particularly important, as the valorisation of the site stimulated further multi-year research. Through considerations of the archaeological characteristics of the location and its ability to answer open questions about the Bronze Age settlement of Turopolje, project-oriented research, which included different types of archaeological fieldwork methods, was developed. The integration of the data obtained through these procedures enabled a better understanding of the previously collected data and the archaeological records established at the concurrent Turopolje sites.

These were the foundations for the following considerations, which include the results of the artefacts processing and primary different procedures for analysing pottery as the most numerous set of finds. The procedures enabled the classification of pottery fragments and the typological classification of ceramic vessels. This was followed by the reconstruction of pottery production technology through a detailed presentation of the results of archaeometric analysis of ceramics and raw materials and then through the analysis of production techniques along with experimental procedures. The final part of the pottery processing included the analysis

je uslijedila rekonstrukcija tehnologije proizvodnje lončarije kroz detaljan prikaz rezultata arheometrijskih istraživanja keramike i sirovinskog materijala, a zatim kroz analizu tehnika izrade uz eksperimentalne postupke. Završni dio obrade lončarije obuhvatio je analizu tragova upotrebe funkcija keramičkih posuda. Obradu kamenih izradevina proveo je Dalibor Branković, uz zasebno razmatranje lomljenih i glaćanih izradevina te njihovih funkcionalnih obilježja. Ostali nalazi obrađeni su skupno, uz prikaz analize kućnog lijepa, dijelova ognjišta i ognjišnih predmeta, pribora za tkanje te životinjskih i biljnih ostataka.

Utemeljeno na prikazanim analitičkim postupcima, završno je poglavje usmjereno na teme koje su proizašle iz mnogobrojnih podataka o nalazištu i nalazima te njihovom širem značenju u okviru brončanodobnog naseljavanja Turopolja. Time je potvrđeno da je brončano doba jedno od onih povijesnih razdoblja koja su ostavila posebno primjetan trag na krajoliku. Iako u nizinskim, ravničarskim područjima on najčešće ostaje nedostupan direktnom doživljaju, zamjetan postaje upravo arheološkim istraživanjima koja ukazuju na važnost prošlosti za razumijevanje interakcije između čovjeka i krajolika.

Na kraju ovog uvodnog prikaza potrebno je istaknuti da arheološka istraživanja u Kurilovcu ne bi bilo moguće provesti bez kontinuirane podrške naših matičnih institucija, ali i sustavne pomoći koju su nam pružile različite organizacije i ustanove te brojni suradnici, kolege i prijatelji. Stoga želimo istaknuti da realizacija prikazanih terenskih istraživanja ne bi bilo moguća bez sustavne pomoći djelatnika tvrtke Kaducej. d.o.o. te zahvalnost za kontinuiranu potporu ponajprije dugujemo Josipu Burmazu i Dinku Tresiću Pavičiću bez čijeg angažmana znatan dio provedenih postupaka ne bi bilo moguće realizirati. Zahvalni smo i Snježani Vrdoljak, znanstvenoj savjetnici na Institutu za arheologiju, što je prepoznala važnost neinvazivnih istraživanja te ih uklopila u svoj istraživački projekt još davne 2011. godine. Na tim je temeljima s vremenom, potporu našim istraživanjima osiguralo i Ministarstvu kulture Republike Hrvatske te Konzervatorski odjelu u Zagrebu, pa zahvalnost dugujemo i Ameliu Vekiću koji je od 2015. do 2019. godine podržavao i pratilo istraživanja u Kurilovcu. Zahvalnost dugujemo i Muzeju Turopolja, osobito kustosici Tatjani Pintarić koja je s posebnim interesom pratila istraživanja i uvijek bila spremni na suradnju. Njenim su angažmanom, te uz podršku ravnateljice Margarete Biškupić Čurla, rezultati istraživanja uklopljeni u program *Prehistory*

of use-related properties and, thus, the considerations of the functions of ceramic vessels. The processing of stone artefacts was carried out by Dalibor Branković, with separate consideration of knapped and ground artefacts and their functional characteristics. The remaining finds were processed with the analysis daub, parts of the hearth and hearth-related ceramic objects, items for textile production, and animal and plant remains. Based on the presented analytical procedures, the final chapter is focused on topics that emerged from numerous data about the site and find and their wider meaning within the framework of the Bronze Age settlement of Turopolje. These considerations confirmed again that the Bronze Age is one of those historical periods that left a particularly noticeable mark on the landscape. Although in lowland, plain areas, it usually remains inaccessible to direct experience, it becomes noticeable precisely through archaeological research that points to the importance of the past for understanding the interaction between man and the landscape.

And so, at the end of this introductory review, it is necessary to point out that archaeological investigations in Kurilovac would not have been possible without the continuous support of our affiliated institutions, but also without the continuous help provided by various organisations and institutions, as well as numerous collaborators, colleagues and friends. Therefore, we would like to point out that the realisation of the presented fieldwork would not have been possible without the systematic help of the employees of Kaducej Ltd. and our gratitude for the continuous support we owe primarily to Josip Burmaz and Dinko Tresić Pavičić, without whose involvement a significant part of the conducted procedures would not have been possible.

We are also grateful to Snježana Vrdoljak, a scientific advisor at the Institute of Archaeology, for recognising the importance of non-invasive investigation and incorporating it into her research project back in 2011. Based on these and over time, the Ministry of Culture of the Republic of Croatia and the Conservation Department in Zagreb supported our research, so we also owe thanks to Amelio Vekić, who, from 2015 to 2019, supported and monitored research in Kurilovac. We also owe thanks to the Museum of Turopolje, especially to the curator Tatjana Pintarić, who followed our studies with special interest and was always ready to cooperate. With her involvement and with the support of director Margareta Biškupić Čurla, the results of the research were integrated into the *Prehistory Adventure* program, which, in fruitful collaboration with Tena Karavidović and Marko Ceković, resulted in the organisation of the

Adventure, što je u plodonosnoj suradnji s Tenom Karavidović i Markom Cekovićem rezultiralo organizacijom izložbe i kratkog animiranom filma *Život na vodi – Brončano doba Turopolja*.

Arheometrija keramike i lončarskih sirovina ostvarena je kroz iznimno produktivnu suradnju s prof. Martom Mileusnić i dr. sc. Attilom Kreiterom čija su zalaganja, savjeti i nesebična pomoći u velikoj mjeri doprinijeli razumijevanju te problematike. Zahvalnost dugujemo i dragom kolegi i prijatelju Silviju Stankoviću, posebno na iznimnom strpljenju i nesebičnoj pomoći na mnogim satima koje je uložio u poduku o tehnikama izrade keramičkih posuda. Bitan dio istraživanja bio je usmjeren na prikupljanje podataka o arheološkim obilježjima Turopolja, čija je realizacija omogućena nesebičnom pomoći kolega arheologa, Deni Los iz tvrtke Kaducej d. o. o., Ivana Drnića i Jacqueline Balen iz Arheološkog muzeja u Zagrebu, Leje Čataj iz Hrvatskog restauratorskog zavoda te Aleksandre Bugar iz Muzeja grada Zagreba, koji su nam ustupili podatke o rezultatima vlastitih istraživanja. Položaj Kurilovec-Belinščica se tijekom istraživanja počeo ponovo koristiti u poljoprivredne svrhe te dio provedenih postupaka ne bi bio moguć bez razumijevanja i strpljenja braće Mirenić, zakupaca ovog državnog zemljišta.

I na kraju, veliku zahvalnost dugujemo našim kolegama i prijateljima koji su tijekom godina pružali veliku podršku našim nastojanjima te sudjelovali u terenskim istraživanjima i u provedbi brojnih arheoloških eksperimenata. Uz nadu da nikoga nećemo izostaviti, realizacija značajnog dijela prikazanih istraživanja ne bi bila moguća bez pomoći i podrške Dinka Tresića Pavičića, Tene Karavidović, Ivane Turčin, Silvije Stankovića, Davida Oguića, Jana Klemschea, Snežane Smolić, Lujane Paraman, Nere Šegvić, Anite Dugonjić, Pavla Dugonjića, Denisa Blaževića, Dalibora Brankovića, Igora Mandića, Srećka Kudelića, Franje Kudelića, Vatroslava Sirovice i Nikoline Sirovice te brojnih kolega arheologa i studenata arheologije koji su sudjelovali u našim istraživanjima.

Svakako smo zahvalni i što smo upoznali Ivana, skretničara iz zaboravljenе kućice uz prugu pored nalazišta. Uz zahvalnost što nas je pustio u svoj dom, uz uvijek iskrene riječi i spremnost na pomoć. Bio je naš prvi susjed i mi njegov, posljednji stanovnik nalazišta Kurilovec-Belinščica.

exhibition and a short animated film *Life on the Water – The Bronze Age of Turopolje*.

The archeometry of ceramics and pottery raw materials was achieved through highly productive collaboration with prof. Dr Martom Mileusnić and Dr Attila Kreiter, whose efforts, advice and selfless help greatly contributed to understanding this issue. We also owe our gratitude to our dear colleague and friend Silvio Stanković, especially for his exceptional patience and selfless help during the many hours he invested in sharing knowledge on techniques of making ceramic vessels. An essential part of the research was focused on data collection on the archaeological features of Turopolje, the realisation of which was made possible by the selfless help of fellow archaeologists Deni Los from the Kaducej Ltd., Ivan Drnić and Jacqueline Balen from the Archaeological Museum in Zagreb, Lea Čataj from the Croatian Conservation Institute and Aleksandra Bugar from the Zagreb City Museum, who gave us information about the results of their research. During the research, the location of Kurilovec-Belinščica began to be used again for agricultural purposes. Part of the procedures would not have been possible without the understanding and patience of the Mirenić brothers, the tenants of this state-owned land.

Furthermore, we owe a great deal of gratitude to our colleagues and friends who, over the years, supported our efforts and participated in fieldwork and the implementation of numerous archaeological experiments. With the hope that we will not leave anyone out, the realisation of a significant part of the presented research would not have been possible without the help and support of Dinko Tresić Pavičić, Tena Karavidović, Ivana Turčin, Silvio Stanković, David Oguić, Jan Klemsche, Snežana Smolić, Lujana Paraman, Nera Šegvić, Anita Dugonjić, Pavle Dugonjić, Denis Blažević, Dalibor Branković, Igor Mandić, Srećko Kudelić, Franjo Kudelić, Vatroslav Sirovica and Nikolina Sirovica and numerous fellow archaeologists and archaeology students who participated in our investigations.

We are grateful that we met Ivan, the shunter from the forgotten house by the railway next to the site. With gratitude for letting us into his home, with always sincere words and willingness to help. He was our first neighbour, and we were his, the last inhabitant of the Kurilovec-Belinščica site.

