Segestika i Siscija: naselje s početka povijesti: Arheološki muzej u Zagrebu

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IVAN DRNIĆ

SEGESTIKA I SISCIJA — NASELJE S POČETKA POVIJESTI
SEGESTICA AND SISCIA — A SETTLEMENT FROM THE BEGINNING OF HISTORY

SEGESTIKA
I SISCIJA
—
SEGESTICA
AND SISCIA

amz

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SEGESTICA AND SISCIA — A SETTLEMENT FROM THE BEGINNING OF HISTORY

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Ivan Drnić

arheološki
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SEGESTICA AND *SISCIA* — A SETTLEMENT FROM THE BEGINNING OF HISTORY

Ivan Drnić, Alka Domić Kunić

1.1 POVIJESNI I ZEMLJOPISNI KONTEKST (IVAN DRNIĆ)

Kako se malo brončanodobno naselje, nastalo krajem drugog tisućljeća prije Krista, postupno transformiralo u jedan od najvažnijih željeznodobnih centara na prostoru međuriječja Save i Drave, a koje je u antičkim pisanim izvorima zabilježeno pod imenima Segestika i Siscija? Odgovor na ovo pitanje nije nimalo jednostavan, a ova izložba je pokušaj rekonstrukcije i interpretacije višestoljetnog razvoja jedne panonske zajednice i njenog položaja u širim kulturnim, društvenim i političkim događanjima koja su se odigravala na jugu Karpatske kotline tijekom prvog tisućljeća prije Krista.

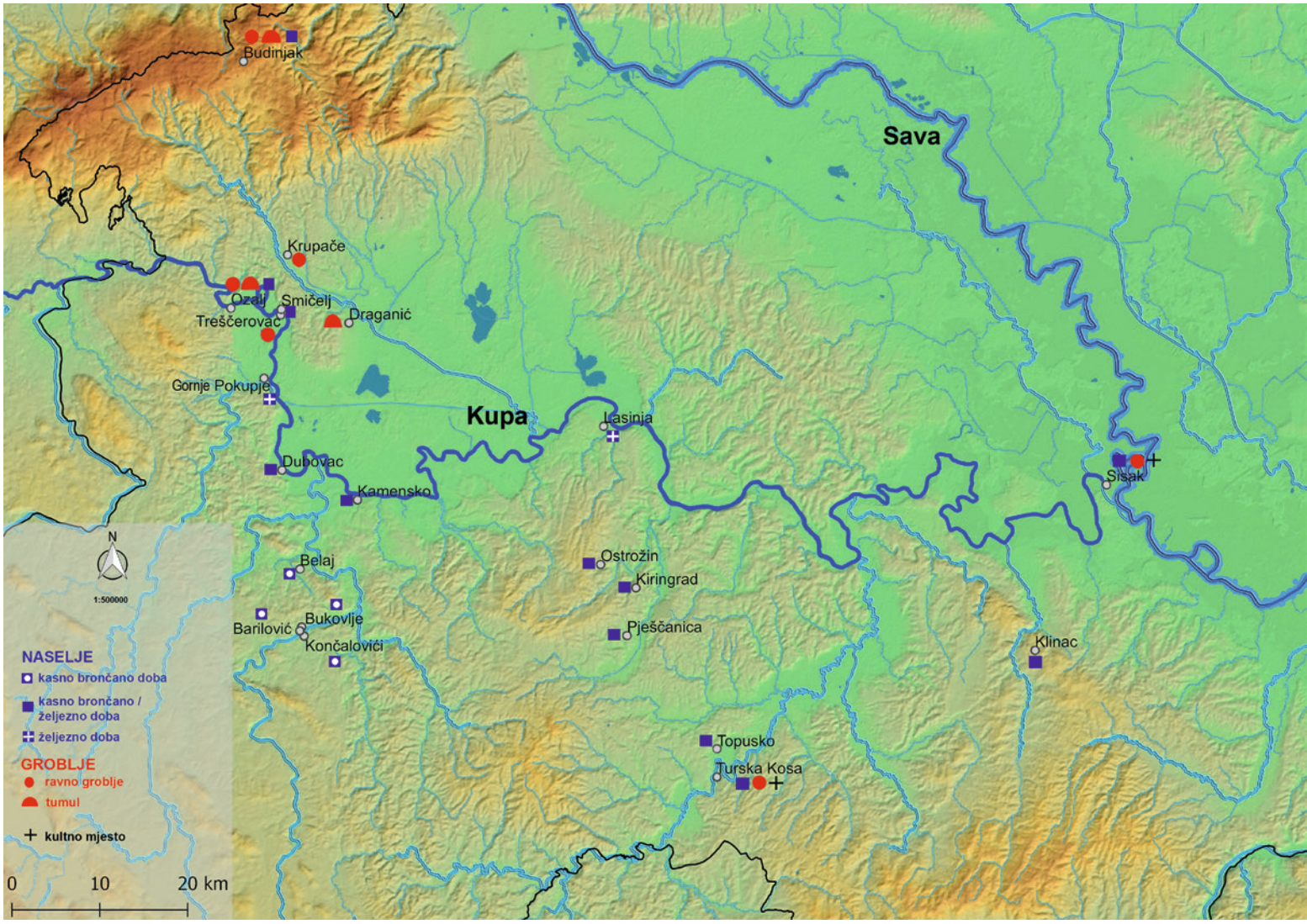
Zasigurno najzaslužniji razlog za uspon sisačkog pretpovijesnog naselja njegov je iznimno povoljan zemljopisni položaj. Naime, naselje se smjestilo neposredno prije ušća rijeke Kupe u Savu, koja je od najranije pretpovijesti predstavljala glavni komunikacijski pravac na jugu Karpatske kotline koji je spajao istočnoalpski prostor sa srednjim Podunavljem. Također, ono je postalo i najvažniji centar uz donji tok rijeke Kupe od Ozlja, gdje Kupa izlazi iz planinske regije Gorskoga kotara i prelazi u ravničarski prostor jugozapadnog dijela Panonske nizine, pa sve do utoka u rijeku Savu kod Siska. Ovaj prostor okružen je sa sjeverozapada Žumberačkim gorjem, sa sjeveroistoka Vukomeričkim goricama, na jugozapadu se nalazi Slunjska krška ploča, a na jugu Zrinska i Petrova gora koje predstavljaju kontaktnu zonu prema zapadnom Balkanu. Taj specifičan položaj Donjeg Pokuplja i sisačkog naselja kao istaknutog centra te regije na razmeđu triju geografskih i kulturno različitih regija - jugoistočnih Alpa, južne Panonije i zapadnog Balkana, učinio je to naselje važnom komponentom u komunikacijskoj mreži željeznog doba, što se jasno odražava i u arheološkoj ostavštini (Sl. 1). Uz dvije dominantne rijeke, Savu i Kupu, taj je prostor ispresijecan nizom manjih vodotokova i močvara i u tadašnje vrijeme prekriven nepregledim hrastovim šumama. Takav krajolik definirao je sve aspekte života njegovih stanovnika, od smještaja naselja, preko načina izgradnje kuća pa do pribavljanja hrane putem poljoprivrede i uzgoja stoke, ali i lova, a koji će biti detaljno predstavljeni na izložbi.

Vremenski okvir unutar kojeg će biti sagledan povijesni razvoj sisačke pretpovijesne zajednice može se podijeliti u tri kronološke faze: kasno brončano doba te starije i mlađe željezno doba

HISTORICAL AND GEOGRAPHICAL CONTEXT (IVAN DRNIĆ)

How did the small Bronze Age settlement, created at the end of the second millennium BC and recorded in ancient written sources as *Segestica* and *Siscia*, completely transform into one of the most important Iron Age centers in the Sava and Drava River interfluve? The answer to this question is, by no means, simple, and this exhibition is an attempt at reconstructing and understanding the millennium-long development of a Pannonian community and the role it played in the wider cultural, social and political events that were taking place in the south of the Carpathian basin during the first millennium BC.

Its exceptionally favorable geographical position is certainly the greatest contributing factor behind the rise of the prehistoric settlement in Sisak. Namely, the settlement is situated right at the confluence of the Kupa and Sava Rivers which has, since the earliest period of prehistory, been the main communication route in the south of the Carpathian basin; between the eastern Alps and the Middle Danube region. Additionally, it became the most important center along the lower stream of the Kupa River between Ozalj, where the Kupa exits the mountainous region of Gorski Kotar and flows into the southwestern, lowland part of the Carpathian basin, all the way to where it flows into the Sava River near Sisak. This territory is bordered by the Žumberak Mountains in the northwest, the Vukomeričke Gorice Hills in the northeast, the Slunj karst plateau in the southwest, and the Zrinska and Petrova Gora Mountains in the south – a contact zone towards the western Balkans. This specific position of the Donje Pokuplje region, and the settlement in Sisak as the standout center, situated at the crossroads of three geographically and culturally different regions – the southeastern Alps, southern Pannonia and the western Balkans, made this settlement an important component of the Iron Age communication network (Fig. 1). This is clearly visible in the archaeological record. Apart from the two dominant rivers – the Sava and the Kupa, the area is crisscrossed by a series of small streams and marshes, and was, at the time in question, covered by immense oak forests. Such a landscape defined all aspects of the lives of the inhabitants, from the position of the settlements, the modes of constructing houses, the methods of obtaining food through agriculture, cattle-breeding, and hunting – all of which will be presented in detail in this exhibition.



SL. 1
Sisak i ostala kasnobrončanodobna i željeznodobna nalazišta Donjeg Pokuplja (M. Mađerić)

FIG. 1
Sisak and other Late Bronze and Iron Age sites in the Donje Pokuplje region (M. Mađerić)

(Sl. 2).[1] Prema dostupnim, ali relativno malobrojnim podatcima sisačko naselje formirano je u završnoj fazi kasnog brončanog doba (oko 1000. pr. Kr.), na desnoj obali odnosno u današnjem koritu rijeke Kupe, na položaju poznatom pod imenom Pogorelac-Keltsko, iako pojedini predmeti upućuju i na određene aktivnosti, možda čak i ritualnog karaktera, i nešto ranije, već od 14./13. st. pr. Kr. Upravo je u završnoj fazi kasnog brončanog doba zabilježen znatan porast broja naselja i grobalja na prostoru Pokuplja, što odražava određene društvene i ekonomske promjene koje su vjerojatno utjecale i na osnutak sisačkog naselja.

Sisačko naselje stagnira u početnoj fazi starijeg željeznog doba, koje je na prostoru jugoistočnih Alpa i jugozapadne Panonije obilježila halštatska materijalna kultura. To je vrijeme nastanka moćnih centara s izraženom društvenom stratifikacijom na vrhu koje su bili tzv. kneževi pokapani pod grobnim humcima koji su podizani diljem zapadne i južne Panonije te istočnih Alpa. Sisačko naselje nalazilo se između snažnih centara u Dolenjskoj kao što su Stična i Novo mesto te kulturne grupe Kaptol s važnim nalazištem na eponimnom lokalitetu u Požeškoj kotlini. Nakon turbulentnih događanja u 6. st. pr. Kr., što se među ostalim reflektira u kolapsu pojedinih utvrđenih naselja i nestanku elitnih tumula, a koja su se tradicionalno pripisivala prodoru nomadskih populacija s istoka Karpatske kotline poznatih kao Skiti, dolazi do znatne trasformacije željeznodobnih zajednica u zapadnoj i južnoj Panoniji. Upravo je u tom razdoblju, u literaturi nazvanom kasnim halštatom, sisačko naselje doživjelo svoj prvi procvat, kada se širi u smjeru zapada na povišenu desnu obalu rijeke Kupe. Na osnovu recentnih istraživanja čini se izglednim da je u toj fazi naselje bilo formirano unutar više-manje pravilne mreže s gusto poredanim stambenim objektima, na površini procijenjenoj na 3 do 4 ha. Čini se da su u kontekstu širih povijesnih događanja i kontakata, koji su u ovom razdoblju ostvareni između mediteranskog i kontinentalnog svijeta, određeni kulturni impulsi dosegnuli i ušće Kupe u Savu, kao što su, primjerice, proto-urbani koncepti organizacije naselja. U tom razdoblju naselje se transformira u najvažniji regionalni centar Pokuplja i jugozapadne Panonije s potvrđenom proizvodnjom keramičkog posuđa, preradom metalnih sirovina te izradom kvalitetnih predmeta od bronce, a ostatci nastambi pokazuju da su one bile građene za to vrijeme naprednim građevinskim tehnikama. Također, ostvaren je značajan kontakt sa zajednicama na prostoru Dolenjske, a određeni aspekti materijalne kulture, kao što su elementi nošnje ili oblici keramičkog posuđa, upućuju na izravnu povezanost s centrima u srednjoj Posavini (Donja Dolina) i zapadnoj Bosni (Sanski most).

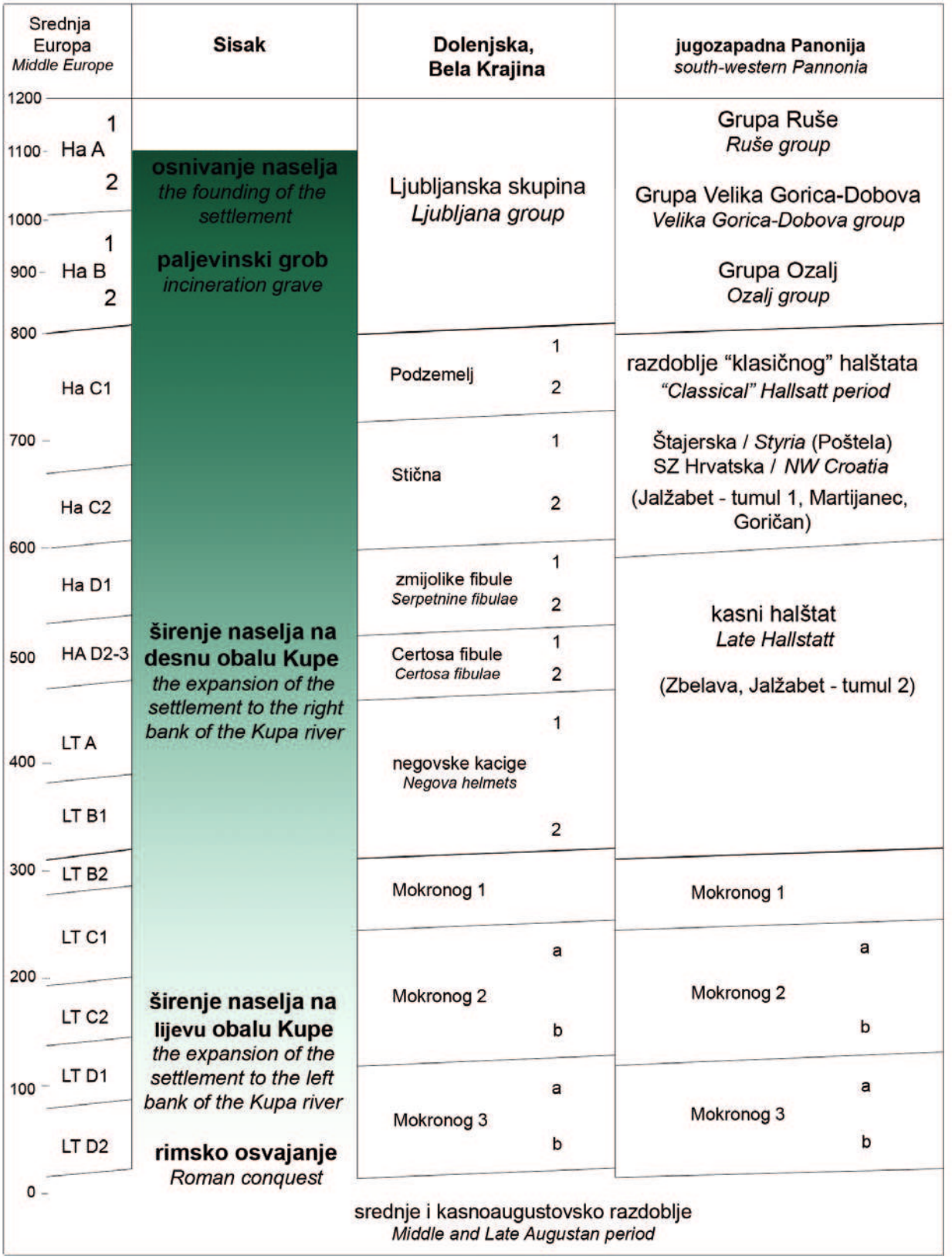
Nakon povijesnih događanja iz 4. i početka 3. st. pr. Kr., obilježenih dolaskom novih populacija s prostora sjeverno od Alpa u panonski prostor, koje antički pisci nazivaju Keltima, ali prije svega značajnom kulturnom transformacijom koja se odražava pojavom latenske materijalne kulture, sisačko naselje doživljava

1 Osim apsolutnih datuma u katalogu su korišteni i relativnokronološki stupnjevi koji su u brončanom i željeznog dobu uobičajeni za srednjoeuropski prostor (tzv. modificirana Reineckeova kronologija) ili za pojedine lokalne kulturne grupe (dolenjska halštatska skupina).

The time span covered in this exhibition to present the historical development of the prehistoric community from Sisak can be divided into three chronological phases: the Late Bronze Age, and the Early and Late Iron Age (Fig. 2).[1] According to available, but relatively limited, data, the settlement in Sisak was formed in the final phase of the Late Bronze Age (around 1000 BC), on the right bank, i.e. in today's Kupa riverbed, at a position known as Pogorelac-Keltsko, although some finds suggest that certain activities, possibly ritualistic in nature, could have occurred earlier, from the 14th and 13th century BC. A significant rise in the number of settlements and cemeteries was noted precisely in the final phase of the Late Bronze Age in the Pokuplje region, a fact that reflects certain social and economic changes which probably also affected the formation of the settlement in Sisak.

The settlement in Sisak stagnated at the initial phase of the Early Iron Age, which is marked by the Hallstatt material culture in the southeastern Alps and southwestern Pannonia. It was a time when powerful centers with notable levels of social stratification developed, headed by so called 'princes' who were buried under burial mounds that were built throughout western and southern Pannonia and the eastern Alps. The Sisak settlement was situated between several strong centers in the Dolenjska region, such as Stična and Novo Mesto, as well as the Kaptol cultural group with its important center at the eponymous site in the Požega valley. After the turbulent events of the 6th century BC, reflected, among other things, in the collapse of fortified settlements and the disappearance of elite tumuli, which were traditionally seen as the result of an influx of nomadic populations from the east of the Carpathian basin, also known as the Scythians, the Iron Age communities in western and southern Pannonia went through a significant transformation. The settlement in Sisak flourished and spread westward to the elevated right bank of the Kupa River during this time, a period defined as the Late Hallstatt. Based on recent excavations, it seems likely that during this phase the settlement formed within a more-or-less regular network of densely placed habitational structures, and covered an area estimated to have been between 3 and 4 ha. In the context of wider historical events and the contacts made at the time between the Mediterranean and the continental world, it seems that certain cultural practices also reached the confluence of the Kupa and Sava River – for example, the proto-urban concepts of settlement organization. It was during this time that the settlement transformed into the most important regional center in the Pokuplje region and southwestern Pannonia, as attested to by the production of ceramic vessels and textiles, the processing of metals, and the production of high-quality bronze items. The remains of dwellings indicate that they were indeed built with the use of advanced construction techniques. Additionally, significant contacts were made with the communities living in the Dolenjska region, and some aspects of material culture at the

1 Other than absolute dating, the catalogue also utilizes phases from relative chronologies which are commonly used for the Bronze and Iron Age in central Europe (Reinecke's modified chronology), as well as for certain local cultural groups (the Dolenjska Hallstatt group).



SL. 2
Kronološka tabla (I. Drnić)

FIG. 2
Chronological table (I. Drnić)

novi zamah u 2. i 1. st. pr. Kr., šireći se i na lijevu obalu rijeke Kupe. Ta ekspanzija vjerojatno predstavlja lokalnu reakciju na društvene, ekonomske i političke procese koji su od početka 2. st. pr. Kr. na prostoru srednje Europe doveli do znatne centralizacije pa i urbanizacije, kao i povećanja proizvodnih aktivnosti i intenzivnih veza s mediteranskim (primarno rimskim) svijetom, što se naziva civilizacijom opida. To je i vrijeme kada sisačko naselje izranja iz literarnog mraka pretpovijesti i pojavljuje se u djelima antičkih pisaca pod imenom Segestika i Siscija.

1.2 SEGESTIKA I SISCIJA U DJELIMA ANTIČKIH AUTORA (ALKA DOMIĆ KUNIĆ)

Što je povijest, a što historija

Kako bi se pojasnio naslov izložbe važno je objasniti što je to uopće povijest, odnosno historija. Stoga je najbolje vratiti se na izvorište. "Dosad sam govorio o Egiptu na temelju vlastitih opažanja, prenoseći što sam sām vidio i zaključke koje sam sām izveo, kao i rezultate svojih vlastitih istraživanja"[2] – tako je Herodot iz Halikarnasa, "otac povijesti", u 5. st. pr. Kr. okarakterizirao svoju metodu rada na istraživanju povijesti, geografije i etnografije tada poznatog svijeta, prikupivši pregršt podataka koje je tako maestralno opisao u svojoj *Povijesti*. Upravo odatle i potječe izraz *historija* (grč. ἱστορία) koji je izvorno značio istraživanje i spoznaju stečenu istraživanjem, a onda i opisivanje, pripovijedanje, kao i sveukupnost prošlih događaja.

U starini, izraz *historija* koristio se u značenju izravnog promatranja i izvješćivanja o tom promatranju, dok se bilježenjem prošlih događaja bavila druga istraživačka grana, kronika. Danas, izrazi *povijest* i *historija* u razgovornom se jeziku koriste kao istoznačnice za prošlu zbilju, no strukovno nazivlje razlikuje dva pojma: *povijest* označava prošle događaje, dok je *historija* znanost koja te događaje proučava; historiografija, historiji sestrinska znanost, to čini na temelju pisane građe. Vremenski tijek od pojave čovjeka do današnjih dana znanost ugrubo dijeli na dva dijela: prapovijest (pretpovijest) i povijest; najmlađa razdoblja prapovijesti, s vrlo rijetkim pisanim tragovima, nazivaju se i protopovješću.

2 Hdt. 2.99.

site, like elements of attire or forms of pottery, point to direct links with centers in the central Posavina region (Donja Dolina), and in western Bosnia (Sanski Most).

After the historical events of the 4th and early 3rd centuries BC, marked in part by the arrival of new populations from areas north of the Alps into Pannonian territories, referred to by ancient authors as the Celts, but primarily by the significant cultural transformation reflected in the appearance of the La Tène material culture, the settlement in Sisak flourished again during the 2nd and the 1st centuries BC and spread to the left bank of the Kupa River. This expansion probably reflects the local reaction to the social, economic and political processes that led to significant centralization, urbanization, and increase of production, as well as the intensification of connections with the Mediterranean (primarily Roman) world in central Europe from the beginning of the 2nd century BC – referred to as the *oppida* civilization. It was also a time when the settlement in Sisak dived out of the literary darkness of prehistory and appeared in the works of ancient authors under the names of *Segestica* and *Siscia*.

SEGESTICA AND *SISCIA* IN THE WORKS OF ANCIENT AUTHORS (ALKA DOMIĆ KUNIĆ)

What is past, and what is history?

In order to explain the title of the exhibition, it is important to explain what history is. Therefore, it is best to go back to the source. "So far, I have spoken about Egypt based on my own observations, sharing what I myself have seen, and the conclusions I have drawn, as well as the results of my own research"[2] – that is how, in the 5th century BC, Herodotus from Halicarnassus, the "father of history ", characterized his method of researching history, geography and ethnography of the then known world; collecting a multitude of data which he then so masterfully recorded in his *History*. This is precisely where the term *history* (Greek ἱστορία) comes from. It originally denoted the study and insight gained through research, and was later expanded to include descriptions, narration, and the totality of past events.

In ancient times, the term *historia* was used to denote the direct observation and the reporting on that observation, while recording past events was done within the scope of another branch of research – chronicle. In the spoken language of today, the terms *past* and *history* are used as synonyms that denote a past reality, but vocational terminology distinguishes between two terms: *past* denotes past events, while *history* is a science that studies those events; historiography, a sister-branch of history, does so on the basis of written sources. In science, the passage of time from the emergence of man to the present day is roughly divided into two parts: prehistory and history; the latest periods of prehistory, with very few written traces, are also called proto-history.

2 Hdt. 2.99.

Pojava pisma – početak povijesti

Pojava pisma znači prekretnicu u tako koncipiranoj podjeli prošlosti. Otkako je čovjek počeo bilježiti pojedine podatke, paleontologiji, arheologiji, antropologiji i drugim znanstvenim disciplinama koje "nijemo" svjedoče o čovjekovom hodu kroz vrijeme pridružile su se historija i historiografija, koje prošle događaje prate posredstvom davno zapisane riječi.

I pismo ima svoju povijest. Razdoblju pretpismenosti svojstveno je slikovno pismo izumljeno u Mezopotamiji tijekom 4. tisućljeća prije Krista. Začetak su mu slikovni prikazi ceremonija i događaja iz života vladara ili pojedinaca iz višeg društvenog staleža; ti se prikazi s vremenom shematiziraju u znakove (piktograme), a iz njih potom nastaju piktografi, sastavnice slikovnog pisma gdje svaki znak označava ono što i predstavlja (nacrtani čovjek je znak za čovjeka, nacrtana kuća znak za kuću…). Sljedeća razvojna faza ujedno označava početak pismenosti: piktogrami se pojednostavljuju i evoluiraju u pojmovno pismo (ideograme). Pojedini pojmovi međusobno se povezuju i dobivaju preneseno, asocijativno značenje, iz čega se potom razvijaju znakovi koji označavaju čitave riječi ili pojedine slogove.

Korak dalje prema današnjem fonetskom pismu, u kojem jedan znak (grafem) označava jedan glas (fonem), učinili su u 2. tisućljeću pr. Kr. semitski narodi na istočnoj obali Sredozemlja, u biblijskom Kanaanu čija su velika trgovačka središta Tir, Sidon, Ugarit i Biblos diktirala potrebom da se što djelotvornije zabilježe trgovačke i druge poslovne transakcije. U početku se (u Ugaritu) u tu svrhu koristilo posebno glasovno klinasto pismo koje je potom istisnuo fenički alfabet. Zahvaljujući kontaktima feničkih trgovaca s ostalim sredozemnim narodima, Grci (koji su već otprije koristili vlastiti pismeni sustav – minojski linear A i nešto mlađi mikenski linear B) tijekom 7. st. pr. Kr. preuzimaju alfabet i prilagođavaju ga svojem indoeuropskom glasovnom sustavu.

Stotinjak godina prije toga Grci su kolonizirali obalu južne Italije i tada su starosjedioci Apeninskog poluotoka došli u dodir s još nestandardiziranim grčkim pismom. Etruščani su ga prilagodili svom neindoeuropskom jeziku, a na tim će temeljima nekoliko stotina godina poslije stanovnici Lacija sastaviti svoje pismo, izravnog preteču današnje abecede.

Povijest, koja počinje s pojavom pisma, nije počela u isto vrijeme u svim dijelovima Sredozemlja: u Mezopotamiji i Egiptu pismo se koristi od oko 3500. pr. Kr., u Grčkoj od 15. st. pr. Kr., u Italiji od 8. st. pr. Kr., dok se istočna obala Jadrana, primjerice, s pismenošću susrela tek s pojavom grčkih kolonista u 4. st. pr. Kr., a panonsko Međuriječje s rimskim osvajanjem i uspostavom rimske vlasti krajem 1. st. pr. Kr.

The appearance of script – the beginning of history

The appearance of script marks a turning point in such a conception of the past. Ever since man began to record certain data, paleontology, archaeology, anthropology, and other scientific disciplines that "silently" speak about man's walk through time were joined by history and historiography that keep track of past events based on words that were written down long ago.

Script also has its history. The times before literacy are characterized by pictorial script that was invented in Mesopotamia during the 4th millennium BC. In the beginning, it was used to depict ceremonies and events from the lives of the rulers or individuals from higher social strata. With time, these depictions became schematized and turned into signs (pictograms), which then developed into pictographs, components of pictorial script where each sign denoted that which it represented (a drawn man denotes a man, a drawn house denotes a house…). The next developmental phase also marked the beginning of literacy: pictograms became simpler and evolved into a concept script (ideograms). Individual terms were interconnected and acquired a transferred, associative meaning, and signs developed that were used to denote entire words or individual syllables.

Another step towards today's phonetic script, wherein one sign (grapheme) denotes a single sound (phoneme), was taken by Semitic peoples in the 2nd millennium BC on the eastern Mediterranean coast, in the biblical land of Kanaan, where the large trading centers of Tyre, Sidon, Ugarit and Byblos required a means to note down trading and other business transactions more efficiently. In the beginning (in Ugarit), this was done via a special cuneiform script that was later replaced by the Phoenician alphabet. Thanks to the contacts that Phoenician traders had with other Mediterranean peoples, the Greeks (who had already had their own system of writing – the Minoan Linear A, and the somewhat later Linear B), took over the alphabet in the 7th century BC, and adapted it to their Indo-European phonetic system.

About a hundred years before that, the Greeks had colonized the eastern coast of Italy, thereby placing the inhabitants of the Apennine peninsula in contact with the then still not standardized Greek script. The Etruscans adapted it to their non-Indo-European language. Those foundations would, several hundred years later, be used by the inhabitants of Latium to create the direct predecessor of today's alphabet.

History, which begins with the emergence of script, did not start at the same time in all parts of the Mediterranean: In Mesopotamia and Egypt, script appeared in about 3500 BC, in Greece in the 15th century BC, and in Italy the 8th century BC. The eastern Adriatic coast, in contrast, came into contact with literacy only with the arrival of Greek colonizers in the 4th century BC, and the Pannonian Interfluve with the Roman conquests and the establishment of Roman rule at the end of the 1st century BC.

Vijesti o našim krajevima

Grci arhajskog doba nisu zalazili u kopno, već su se držali morskih puteva po Sredozemlju.[3] U to su se doba malobrojni usuđivali zalaziti u Kronovo more ili Jonijev zaljev, kako su zvali Jadransko more, a kamoli rijetki su bili oni koji su se udaljavali od mora i kretali u nepoznatu unutrašnjost – ti su zaslužili da im se imena spominju iz naraštaja u naraštaj, a njihovi podvizi poprime karakter legendi. Povijesno sjećanje na ta rijetka putovanja dubokom unutrašnjošću očuvala je priča o Argonautima, jedna od najpopularnijih u čitavoj starini. Plovidba na "Argu" simbol je drevnih trgovačkih poduhvata koji su od obale Crnoga mora išli uzvodno Dunavom, Savom i Ljubljanicom te potom smjerali prema Kvarneru, iako je to tek jedna od brojnih inačica pravca kojim su Argonauti uplovili u Jadran.

Priču o Argonautima je, između ostalih, zabilježio i helenistički pjesnik Apolonije iz Roda (3. st. pr. Kr.). Namjerno arhaični koncipirajući svoj spjev, Apolonije je želio naglasiti drevno (ne)poznavanje krajeva udaljenih od mora. On tako spominje rijeku Ister (Ἴστρος, Dunav) koja se (gledajući uzvodno) račva u dva ogranka od kojih jedan ide prema "dubokom zaljevu" (sjevernom Jadranu). Riječ je, dakako, o Savi, a čitava plovidba uzvodno Dunavom i Savom odraz je, kako rekosmo, istraživačkih pothvata i trgovačkih veza brončanodobne Grčke sa širim Podunavljem (unutar kojeg se nalazi panonsko Međuriječje) i Jadranom – s prostorom na samom rubu tada poznatog svijeta.

Grci koji su živjeli uz obalu Crnoga mora su, tijekom sve intenzivnijeg trgovanja sa zapadnim susjedima (stanovništvom nastanjenim duž Dunava), s vremenom dobro upoznali hidrografsku situaciju u Podunavlju. Herodotova slika Podunavlja u 5. st. pr. Kr. prilično je točna – on više ne spominje račvanje Dunava, nego nabraja sjeverne i južne pritoke u njegovom donjem i srednjem toku. No, naseljavanje Kelta (ili Gala, kako su ih zvali Rimljani) u dolinama panonskih rijeka (od 4. st. pr. Kr. dalje) prekinulo je izravnu vezu između grčkog svijeta i Podunavlja. Postupni grčki zaborav starih trgovačkih puteva kroz unutrašnjost, gdje su sad gospodarili Kelti, rezultirao je iskrivljavanjem percepcije o tamošnjoj geografiji. Ostala su samo sjećanja zaodjenuta u legende, i u prvi plan je (opet ili tek tada?) iskrsnulo vjerovanje u postojanje dva dunavska kraka. To kronično nepoznavanje unutrašnjosti potrajat će sve dok se za Podunavlje nije zainteresirala nova velesila u usponu – Rim.

Panonsko Međuriječje,[4] prostor omeđen tokovima Drave i Save, pokazalo se kao najlakša i najpraktičnija poveznica između Italije i Podunavlja, koje je za Rim najprije bilo poželjno novo tržište, a potom je zadobilo i stratešku važnost, jer je tok Dunava bio idealna prirodna granica za rimski imperij u širenju. No, sve do vojnog pohoda koji je Oktavijan, budući car August, poduzeo 35. pr. Kr. da bi osvojio Međuriječje, u djelima antičkih pisaca o tome prostoru nema mjerodavnih vijesti. Točnije rečeno, nema gotovo nikakvih vijesti. Pa ipak, Međuriječje nije bilo posve nepoznato.

3 O grčkom poznavanju unutrašnjosti: Domić Kunić 2006b; 2009.

4 O rimskom interesu za Međuriječje: Domić Kunić 2006a; 2012.

News on our territories

Greeks from the archaic period did not go inland, but stayed on maritime routes on the Mediterranean.[3] At the time, few men dared sail into the Cronus' Sea or the Bay of Ionius, as the Adriatic was called at the time, and even fewer dared depart from the sea and move into the unknown inland. Those people who did had their names passed down from generation to generation, and their endeavors became legends. Historical recollections of those rare journeys in the deep hinterland were preserved in the story of the Argonauts, one of the most popular in all of Antiquity. Sailing the "Argo" is a symbol of ancient trading ventures that went from the coast of the Black Sea upstream along the Danube, the Sava and the Ljubljanica Rivers, and then down towards the Kvarner archipelago. This is only one of the numerous variants of the directions that the Argonauts used to sail into the Adriatic.

The story of the Argonauts was recorded by, among others, the Hellenistic poet Apollonius from Rhodes (3rd century BC). By intentionally conceptualizing his epic, Apollonius wanted to emphasize the ancient (lack of) knowledge about lands that were far from the sea. He mentions the River Ister (Ἴστρος, the Danube) that (when looking upstream) splits into two branches, one of which flows towards the "deep bay" (the northern Adriatic). This is, clearly, the Sava River, and the entire navigation upstream along the Danube and the Sava is a reflection of the expeditions and trading connections between Bronze Age Greece, the wider Transdanubian area (including the Pannonian Interfluve) and the Adriatic, with areas at the very edge of the then known world.

The Greeks who lived along the coast of the Black Sea became well-acquainted with the hydrographic situation in the Danube region as a result of their ever-increasing trade with their western neighbors (the populations along the Danube). Herodotus' portrayal of the Danube region in the 5th century BC is quite accurate — he no longer mentions the Danube River fork, but lists the northern and southern tributaries in its lower and central stream. However, the settlement of the Celts (or Gauls, as the Romans called them) in the valleys of Pannonian rivers (from the 4th century BC onwards) interrupted the direct link between the Greek world and the Danube region. The Greeks gradually forgot old trade routes through the inland, which was now inhabited by the Celts, resulting in a distorted perception of the geography of the area. Only memories wrapped up in legends remained, so the belief about the two branches of the Danube came to the forefront (again, or only then?). This chronically incorrect view of the inland would remain unchanged until Danube region came to the attention of a new rising power – Rome.

The Pannonian Interfluve,[4] an area bordered by the Drava and Sava River, proved to be the easiest and most practical link between Italy and the Danube region that was, at first, seen as a desirable new market by Rome. It soon gained strategic importance,

3 On the Greek insight into the inland: Domić Kunić 2006b; 2009.

4 On the Roman interest in the Interfluve: Domić Kunić 2006a; 2012.

SL. 3
Strabon iz Amasije (bakrorez, 16. st.)

FIG. 3
Strabo of Amasia (copper engraving, 16th century)

Otkako se Rim u 3. st. pr. Kr. zainteresirao za istočnu obalu Jadrana i njezino zaleđe, rimska politika, a potom i legije su, polako ali neumitno, pod kontrolu dovodili područje između Jadrana i Dunava. S prisutnošću italskih trgovaca i legionara postupno se širila i rimska spoznaja o tamošnjim krajevima i stanovnicima.

Najstariji nama poznati spomen Panonaca u pisanim izvorima potječe od Polibija iz Megalopola (2. st. pr. Kr.), Grka iz Arkadije koji je u Rim dospio kao talac. Kontekst Polibijevog ulomka daje naslutiti da je riječ o oružanom sukobu rimske vojske s Panoncima, na nekom mjestu izvan njihove zemlje: "Osvojivši tu utvrdu na početku rata, Panonci su je učinili svojim uporištem i odabrali je za prihvat plijena".[5] Budući da je ishodište puteva prema Panoniji počinjalo u Akvileji, osnovanoj kao polazištu za prodor prema širem Podunavlju, gotovo je sigurno da u Polibijevim Panoncima treba prepoznati neku od zajednica iz zapadnog dijela Međuriječja, koja se tijekom 2. st. pr. Kr. iz nama nepoznatih razloga sukobila s rimskim legijama. O Panoncima se potom čuje sporadično (i većinom usputno) u vijestima o pljačkaškim upadima iz prialpskog i panonskog prostora u sjeveroistočnu Italiju. Posljedica tih upada bile su rimske kaznene akcije, u više navrata poduzimane tijekom 2. i 1. st. pr. Kr. Te su vojne akcije sve više poprimale osvajački karakter – Rim je bio svjestan koliko je važno steći kontrolu nad panonskim Međuriječjem, i zbog širenja tržišta, i zbog strateškog povezivanja Italije s Podunavljem i njenim istočnim posjedima u Grčkoj i Makedoniji. Ne manje važan razlog bili su i prirodni resursi u panonskom prostoru, poglavito željezna ruda na Petrovoj i Zrinskoj gori južno od Siska, kao i nedaleka bogata ležišta željeza u porječju Japre, Une i Sane.

Prve cjelovitije (iako ne uvijek točne) vijesti o prostoru između Jadrana i Dunava zabilježio je Strabon, geograf i povjesničar iz Amasije na Crnome moru (Sl. 3). Strabon je živio u Rimu i djelovao za vrijeme prvih careva Augusta i Tiberija, no mnogi njegovi podaci odnose se i na nešto starije doba. Dragocjene su njegove informacije o trgovini koja se nešto prije njegovog vremena počela intenzivnije odvijati između Italije i šireg Podunavlja, kojemu je pripadalo i panonsko Međuriječje. Iako nije posve sigurno govori li Strabon o trgovačkim aktivnostima svoga vremena ili o pionirskim pothvatima italskih trgovaca koje stoljeće prije, iz njegovih se riječi može zaključiti ponešto o dosezima trgovine, glavnim trgovačkim rutama i pojedinim artiklima: "Preko Okre se roba iz Akvileje prevozi kolima do grada zvanog Nauport… Odatle se odvozi rijekama sve do Istera"[6], te na drugome mjestu: "Ovi [domaće stanovništvo] na kola natovaruju i prevoze u unutrašnjost morske proizvode, vino spremljeno u drvenim posudama i maslinovo ulje, dok oni prvi [Italci] u zamjenu dobivaju robove, stoku i kože.".[7]

Uz Strabona, ključni izvori za poznavanje panonskog Međuriječja su Apijan i Dion Kasije. Oba ta povjesničara opisala su povijest Rima od samih njegovih početaka do svoga vremena (logično

5 Polyb. *ad Suda, frg.* 64.

6 Strab. 4.6,10.

7 Strab. 5.1,8.

because the flow of the Danube was an ideal natural border for the expanding Roman Empire. However, up until the military campaigns conducted by Octavian, the future emperor Augustus, in 35 BC in order to conquer the Interfluve, the ancient authors did not report any relevant information about the territory. Still, the Interfluve was not completely unknown. Ever since Rome had become interested in the eastern Adriatic coast and its hinterland in the 3rd century BC, Roman policy and politics, supported by Roman legions, slowly but surely began to control the area between the Adriatic and the Danube. Thanks to the increased presence of traders and legionaries from Italy, Roman knowledge about these areas and their inhabitants also started to expand.

The oldest known mention of Pannonians in written sources is ascribed to Polybius from Megalopolis (2nd century BC), a Greek from Arcadia who came to Rome as a hostage. The context of Polybius' paragraph hints at there being an armed conflict between the Roman army and the Pannonians at a location outside their territory: "The Pannonians, having seized the fort at the beginning of the war, had taken it as a base of operations, and had fitted it up for the reception of booty."[5] Seeing as the routes towards Pannonia started from Aquileia, founded as the starting point for the conquest of wider Transdanubia, it is almost certain that Polybius' Pannonians should be seen as one of the communities from the western part of the Interfluve, who, during the 2nd century BC, for reasons unknown to us, came into conflict with Roman legions. Later, Pannonians are very sporadically mentioned (and mostly in passing) in news on looting expeditions from the Alps and Pannonian areas into northeastern Italy. These raids made the Romans take punitive actions on several occasions during the 2nd and 1st centuries BC. These military actions were becoming more and more conquest-like – Rome was becoming increasingly aware of how important it was to gain control over the Pannonian Interfluve in order to expand their market, and to strategically connect Italy with the Danube region and its eastern lands in Greece and Macedonia. Pannonian natural resources were an equally important factor, especially iron ore from the Petrova and Zrinska Gora Mountains south of Sisak, and the rich nearby iron deposits in the catchment areas of the Japra, Una and Sava Rivers.

The first, more complete (albeit not always accurate) news on the territory between the Adriatic and the Danube was recorded by Strabo, a geographer and historian from Amaseia on the Black Sea (Fig. 3). Strabo lived in Rome and worked during the rule of the first emperors Augustus and Tiberius, but a lot of his records refer to older periods. He records precious information on the trade that had, somewhat before his time, started to intensify between Italy and the wider Transdanubia, including the Pannonian Interfluve. Although it is not completely clear whether Strabo refers to trade that took place in his time, or to the pioneer endeavors of Italian traders a few centuries before, his records lead to certain conclusions about the scope of trade,

5 Polyb. *ad Suda, frg.* 64.

ih naslovivši *Rimska povijest*), pa je razumljivo da se nisu mogli potanko baviti pojedinim povijesnim temama. Stoga moramo biti zahvalni i na onim (za naše poimanje prešturim) podacima o našim krajevima, koje iščitavamo iz njihovih djela. Apijan iz Aleksandrije (2. st.) se u opisu rimskog osvajanja Ilirika (tako su se u početku zajednički nazivale Dalmacija i Panonija) uvelike oslanjao na memoare i službena izvješća koje je ostavio Oktavijan, vrhovni zapovjednik legija koje su 35. pr. Kr. osvojile zapadni dio Međuriječja. Po tome je Apijan nezamjenjiv izvor za Panoniju iz vremena rimskog osvajanja, jer po vlastitom priznanju gotovo doslovce prepisuje od Oktavijana, sudionika i očevica tih događaja. Dion Kasije iz bitinijske Nikeje (2./3. st.) je pak u svoje vrijeme bio namjesnik prvo u Dalmaciji pa u Panoniji, pa se pohvalio da iz prve ruke poznaje te krajeve. I dok je Strabon, sasvim u skladu s karakterom svog djela naslovljenog *Geografija*, pisao o zemljopisu, Apijan i Dion Kasije usredotočili su se na osvajanje Dalmacije i Panonije, jer se rimska povijest, opisana u djelima antičkih pisaca, sastojala većinom od ratovanja i osvajanja. Ipak, našlo se tu i etnografskih i kulturoloških pojedinosti zahvaljujući kojima imamo prilično jasnu predodžbu o tome kako je Rim doživljavao prostor između Jadrana i Dunava.

Rimska slika o Panoniji[8] bila je prilično stereotipna: to je područje prekriveno gustim šumama (izrijekom su spomenute žironosne – dakle hrastove šume)[9] i ispresijecano močvarama, a spominju se i planine (vjerojatno je riječ o Požeškim gorama). Zime u Panoniji su duge i oštre,[10] a tlo je prilično jalovo jer ne uspijevaju ni vinova loza ni masline, bez kojih se u Sredozemlju nije mogao zamisliti život. Prehrana se temelji na ječmu i prosu, koje Panonci "piju i jedu", kako kaže Dion Kasije,[11] na temelju čega zaključujemo da su Panonci bili pivopije.

U skladu s teorijom raširenom u antici da je ljudski karakter određen podnebljem, u Panoniji su živjeli čvrsti ljudi. Dion Kasije smatra da njihova hrabrost i ratobornost imaju korijena u surovoj klimi i teškim životnim uvjetima, a njegov malo stariji suvremenik Herodijan iz Aleksandrije dodaje: "Stanovnici Panonije su vrlo jaki i visoki ljudi, u ratovanju vrlo vješti i žestoki, ali troma duha jer ne baš lako shvaćaju ako što lukavo ili dvosmisleno učiniš ili kažeš.".[12] Apijan nam je ostavio dragocjene pojedinosti iz kojih se mogu iščitati podaci o društvenom ustroju u Međuriječju: to je neurbanizirani prostor u kojemu stanovništvo živi raštrkano po selima. Naime, samo nekoliko panonskih naselja

8 O Panoniji: Domić Kunić 2006a; 2012.

9 "Slijede žironosni krajevi Panonije ..." (Plin. *Nat. hist. 3.25,147*).

10 "Cijela zemlja smještena iznad [obale] je planinska, hladna i podložna snijegu, osobito sjeverni dio, tako da ondje vlada oskudica vinove loze ne samo na visinama nego i u ravnici. To su planinske udoline koje nastavaju Panonci" (Strab. 7.5,10).

11 "Panonci ... od svih ljudi vode krajnje bijedan život. Nemaju sreće što se tiče tla niti podneblja, ne uzgajaju masline i ne prave vino osim u vrlo malim količinama, a i to nevaljale kakvoće jer je zima vrlo oštra i zauzima veći dio godine, nego piju, kao i jedu, ječam i proso. Zbog svega toga smatraju se najhrabrijima od svih za koje znamo, jer su vrlo srčani i krvoželjni, kao ljudi koji ne posjeduju ništa što život čini časnim i vrijednim" (Dio Cass. 49.36).

12 Herodian. 2.9,11.

the main trading routes, and individual trading goods: "Through the Ocra, the merchandise from Aquileia is conveyed in wagons to what is called Nauportus... From here it is carried down by the rivers as far as the Ister[6] and, secondly: "The latter [autochthonous populations] load on wagons and carry inland the products of the sea, and wine stored in wooden jars, and also olive oil, while the former [the Italics] get in exchange slaves, cattle, and hides."[7]

Apart from Strabo, Appian and Dio Cassius are key sources for studying the Pannonian Interfluve. Both latter historians described the history of Rome from its very beginnings to their time (logically entitling their works *Roman history*), so it is understandable that they could not go into details about individual historical topics. Therefore, we should be grateful for any data they provide about our territories (scarce as we may see it to be) in their works. In his description of the conquest of Illyricum (a common name for Dalmatia and Pannonia in the beginning), Appian from Alexandria (2nd century AD) relied heavily on the memoirs and official reports of Octavian, the commander-in-chief of the legions that conquered the western part of the Interfluve in 35 BC. As such, Appian is an irreplaceable source of data on Pannonia during the Roman conquest, especially because, as he admits, he almost literally copied Octavian, a participant in, and a witness of, the events described. Dio Cassius, from the Bithynian city of Nicaea (2nd/3rd century AD), was, in his time, a governor, at first in Dalmatia, and later in Pannonia, so he boasted about being familiar with those territories. While Strabo, completely in line with the character of his *Geography*, discussed geography, Appian and Dio Cassius focused on the conquest of Dalmatia and Pannonia because Roman history, described in the works of ancient authors, mostly consisted of war and conquest. However, the works do include some ethnographic and cultural details that give us a clear idea on how Rome saw the area between the Adriatic and the Danube.

The Roman view of Pannonia[8] was quite stereotypical: it was an area covered by dense forests (acorn-rich, i.e. oak forests are explicitly mentioned),[9] crisscrossed with marshes and some mountains (probably the mountains around Požega). Winters in Pannonia were long and harsh,[10] and the soil quite barren, seeing as it was impossible to grow either grapes or olives, without which life could not be imagined in the Mediterranean. The diet

6 Strab. 4.6,10.

7 Strab. 5.1,8.

8 On Pannonia: Domić Kunić 2006a; 2012.

9 "Then come the acorn-producing lands of Pannonia" (Plin. *Nat. hist. 3.25,147*).

10 "The whole of the country situated above [the seaboard] is mountainous, cold, and subject to snows, especially the northerly part, so that there is a scarcity of the vine, not only on the heights but also on the levels. These latter are the mountain-plains occupied by the Pannonians" (Strab. 7.5,10).

moglo se nazvati gradovima – to su mahom bila naselja na važnim raskrižjima puteva ili prijelazima preko rijeka, glavna trgovačka, prometna i strateška uporišta u inače ruralnoj okolici.[13] Panonsko stanovništvo je bilo organizirano u rodovske zajednice, bez zajedničkog političkog i vojnog vodstva, ali s naznakom podjele na društvene staleže – prema Apijanovom svjedočanstvu, stanovništvo Segeste međusobno se sukobilo oko pitanja da li dopustiti rimskoj posadi boravak u gradu; gradska elita bila je za to da se posada ugosti (u tome su, nema sumnje, vidjeli određene koristi za sebe), dok se običan narod tome žestoko suprotstavio. Oktavijan je odgovorio opsadom grada.[14]

was based on barley and millet, which the Pannonians, as stated by Dio Cassius, both "drank and ate"[11] – leading us to the conclusion that the Pannonians drank beer.

In line with the ancient wide-spread theory that human character is determined by the environment, Pannonia was inhabited by tough people. Dio Cassius thought that their bravery and belligerence were rooted in the harsh climate and difficult living conditions, and his somewhat younger contemporary, Herodian from Alexandria added: "Although the men of the Pannonian regions have huge and powerful bodies and are skillful and murderous in battle, they are dull of wit and slow to realize that they are being deceived."[12] Appian left us precious details that provide data on the social structure in the Interfluve, noting that it was a non-urbanized area where people were scattered in villages of which very few could be called cities – these were, as a rule, settlements located at important crossroads or river crossings, the main trading, traffic and strategic strongholds in otherwise rural surroundings.[13] The Pannonian population was organized in tribal communities, without common political and military leadership, but with some traces of social stratification. For example, according to Appian's account, the inhabitants of *Segesta* could not agree on whether they should let the Roman troops stay in the city; the city elite was in favor of housing the troops (wherein they undoubtedly saw certain bonuses for themselves), whereas the common people were strongly opposed. Regardless, Octavian responded by laying a siege on the city.[14]

13 "Peonija (= Panonija) je šumovita zemlja … Stanovnici ne žive u gradovima, nego raštrkani diljem zemlje ili u selima, prema srodstvu. Nemaju zajedničkog vijeća niti vladara nad cijelim narodom. Imaju 100.000 boraca, ali se ovi ne okupljaju u cjelinu, jer nemaju zajedničke uprave" (App. *Illyr. 4.22)*

14 "Kada se [Oktavijan] približio, Segetanci su poslali ljude da doznaju što želi. On je odgovorio da želi ondje smjestiti posadu i preuzeti stotinu talaca … Zatražio je onoliko hrane koliko mu mogu pribaviti. Gradski poglavari su pristali, ali je običan puk bio bijesan, pa ipak je pristao dati taoce, možda zbog toga što to nisu bila njihova djeca, nego djeca uglednika. No, kada je stigla posada, nisu mogli podnijeti da je vide, nego su u divljem bijesu zatvorili gradska vrata i postavili se na zidine" (App. *Illyr. 4.23*).

11 "The Pannonians … lead the most miserable existence of all mankind. For they are not well off as regards either soil or climate; they cultivate no olives and produce no wine except to a very slight extent and a wretched quality at that, since the winter is very rigorous and occupies the greater part of their year, but drink as well as eat both barley and millet. For all that they are considered the bravest of all men of whom we have knowledge; for they are very high-spirited and bloodthirsty, as men who possess nothing that makes an honorable life worthwhile"(Dio Cass. 49.36).

12 Herodian.2.9,11.

13 "The country of the Paeones (= Pannonians) is wooded… The inhabitants did not live in cities, but rather according to clans throughout the countryside and in villages. They did not gather for consultation, nor did they have collective leaders. The total of men capable of fighting was 100,000, but because of the absence of a common government they were not united into a single unit (App. *Illyr*. 4.22).

14 "As [Octavian] was approaching the town, the Segestans sent messengers to ask what he wanted. He replied that he wished to quarter a military garrison and take one hundred hostages … He also requested that they bring him as much food as they could provide. The local leaders were prepared to comply with him in this matter, but the population was infuriated; they endured the delivery of the hostages, probably because they were not their children but rather those of the leaders. However, they could not bear the sight of the garrison when it approached, and in an enraged assault they again shut the gates and placed themselves on the walls" (App. *Illyr. 4.23*).

Segesta i Siscija kroz pisane izvore

Prije svega valja reći ponešto o izvorima općenito. Antička književnost nije imala jasno određene žanrove – nema, primjerice, jasne granice između povijesnog, geografskog ili etnografskog djela, nego se većinom radi o kombinaciji tih književnih vrsta. Osim toga, i pristup znanosti bio je prilično drugačiji nego danas: nije bilo uobičajeno pojedine informacije ili tvrdnje potkrjepljivati dokazima – podaci su se preuzimali (većinom neselektivno) iz postojećeg literarnog korpusa i po vlastitom nahođenju sastavljali u novu cjelinu. Posljedica toga vrlo često je bila vlastita interpretacija pročitanog, nerijetko pogrešno shvaćenog i protumačenog gradiva, obojana vlastitim pristranim stavovima. Uz to što su bili neobjektivni i imali duboko usađene predrasude prema svijetu izvan granica sredozemne ekumene, te uz to što su pogrešno razumijevali i na svoju ruku skraćivali građu, naši su povijesni izvori imali još jednu karkateristiku: njihova su djela vrlo često imala programatski karakter, bila su sastavljena sa svrhom da se zabilježe slavni pothvati pojedinih pripadnika rimske elite (ili da im se u najmanju ruku pronađe uvjerljivo opravdanje). I sami su autori većinom pripadali toj eliti, pa su – razumljivo – pisali iz perspektive svog staleža i u korist njega. Osim toga, glavne teme povijesnih djela bili su rimski ratni uspjesi i širenje rimskog posjeda osvajanjem; svaka digresija, svaki podatak o geografiji, društvenom ustroju ili načinu života pojedinog naroda bio je u službi glavnog narativa i imao ulogu oslikati neprijatelja u takvom svjetlu da rimska pobjeda zasja još većim sjajem. Pritom su ti podaci bili procesuirani iz antičkog kuta gledanja i samim time podložni pristranosti koja se temeljila na nepoznavanju povijesnih i društvenih prilika drugih naroda koje je Rim, uz to, smatrao sebi inferiornima.

Do naših dana očuvano je vrlo malo antičkih tekstova, od čega velika većina tek u manjim ili većim ulomcima, a neki pak iz druge ili treće ruke, pa su im i količina i kvaliteta podataka prilično okrnjene. Povrh toga, mnogim djelima grčkih i latinskih pisaca znamo tek naslov, a za mnoga druga sasvim sigurno niti ne znamo da su postojala. Zbog svega toga moramo biti svjesni činjenice da je naše poznavanje antičke književnosti nalik vrhu sante leda – samo djelić se nalazi s naše strane spoznaje, a ostatak nam je skriven ili tek naslućen.

Kad je riječ o prethodniku današnjeg Siska,[15] razriješimo odmah jednu nedoumicu. Uvriježila se varijanta *Segestika*, no istinsko ime toga grada bilo je *Segesta*. "Krivci" za tu pogrešku su neki naši pisani izvori: Strabon, primjerice, dosljedno spominje "segestanski grad" (ἡ Σεγεστικὴ πόλις), gdje je oblik *segestike* zapravo pridjev; Plinije Stariji, polihistor iz Vespazijanovog doba (druga polovica 1. st.), spominje "(riječni) otok koji se naziva segestanskim" (*insula quae Segestica appellatur*) i također koristi pridjevski oblik *segestanski*. Jedini koji je točno prenio ime tog panonskog grada (Σεγέστη) je Apijan – što ne treba čuditi ako se prisjetimo da on zapravo prepisuje od Oktavijana, čije su legije Segestu i osvojile. Dion Kasije nam ovdje nije od pomoći, jer više

15 O Segesti: Domić Kunić 2018.

Segesta and *Siscia* through written sources

First of all, something should be said about sources in general. Ancient literature did not have clearly defined genres – for example, there is no clear distinction between a historical, geographical or ethnographical work, but, rather most are a combination of these literary genres. Additionally, the approach to science was quite different from what it is today: it was not common to support claims and information with evidence – data was adopted (mostly unselectively) from the existing literary corpus, and was composed a new at the author's discretion. The final product was often an individual interpretation of the consulted, and most often wrongly understood and interpreted material painted by the author's biased opinion. Other than being non-objective, deeply prejudiced against the world outside of the Mediterranean zone, and providing wrong interpretations and liberally shortening the material, our sources had another characteristic: their works were often programmatic in character, and were composed with the aim of recording the famous endeavors of individual members of the Roman elite (or at least to find convincing excuses for them). The authors themselves were mostly members of the same elite, so they, understandably, wrote from the perspective of their class and for its benefit. Additionally, the main topics of historical works were Roman military successes and the expansion of Roman territory through conquest. Each digression, each piece of data on the geography, social structure or the way of life of certain peoples were there to serve the main narrative and to paint the enemy in such a light that each Roman victory could shine even brighter. In doing so, the data was studied from the Roman perspective, and was, therefore, susceptible to being biased, seeing as it was based on a lack of knowledge of the historical and social circumstances of other peoples, peoples whom were also seen as inferior by the Romans.

Very few ancient texts have been preserved to this day, and most only as smaller or larger paragraphs, some even in second or third hand sources. Therefore, the amount and quality of data is quite low. Moreover, only the titles of a number of works written by Greek and Roman authors are known, and we most certainly do not know about many others. Due to all of this, we must be aware of the fact that our knowledge about ancient literature is like the tip of an iceberg – only a small part is on our side of perception, and the rest is either completely or partially hidden.

When it comes to the predecessor of today's Sisak,[15] one issue should be resolved at the outset. The variant *Segestica* has become commonly accepted, but the real name of the city was *Segesta*. The culprits behind this mistake are some of our written sources. Strabo, for example, consistently refers to the "Segestan city" (ἡ Σεγεστικὴ πόλις), where the form *Segestike* is actually an adjective; Pliny the Elder, a polyhistor from the time of Vespasian (second half of the 1st century), refers to "(a river) island called Segestan" (*insula quae Segestica appellatur*), and also uses the adjectival form *Segestan*. The only one who correctly recorded the name of this Pannonian city (Σεγέστη) is Appian – which is not

15 On *Segesta*: Domić Kunić 2018.

SL. 4
Olovna pločica (*tessera*) s natpisom *in Segestica* iz Siska (I. Krajcar, M. Galić)

FIG. 4
The led tag (*tessera*) with the in Segestica inscription from Sisak (I. Krajcar, M. Galić)

ne spominje Segestu nego samo Sisciju (Σισκία).[16] Iako se na Sisciju gleda kao na rimskodobnog nasljednika panonske Segeste, izgleda da su ta dva toponima međusobno suvremena; Strabon, naime, razlikuje Segestu (panonski grad i trgovačko središte) od obližnje utvrde Siscije, i jedini je povijesni izvor koji spominje oba ta mjesta u istovremenom kontekstu, očito na dvije susjedne lokacije.[17] Toponim Σεγέστη (lat. *Segesta*) vjerojatno potječe od indoeuropskog korijena **seg-* ("obrađena, zasijana polja"), dok se Σισκία (lat. *Siscia*) povezuje s indoeuropskim **si-sk-* ("suho mjesto u vlažnom okruženju").

Najstariji nama poznati izvor koji spominje Segestu je Strabon, u kontekstu trgovačkih puteva koji su Italiju povezivali s Podunavljem.[18] Trgovina između Italije i Podunavlja, o kojoj Strabon govori, bila je uspostavljena više od stotinu godina prije njegova vremena, nadovezavši se na već otprije postojeću robnu razmjenu u tome prostoru. Segesta, na ušću Kupe i na jednom od malobrojnih pogodnih prijelaza preko Save, već je od pretpovijesnih vremena imala karakter važnog trgovišta i ključnog prometnog čvorišta ne samo u smjeru zapad – istok, već i prema Jadranu,

surprising if we remember that he copied the work of Octavian, whose legions actually conquered *Segesta*. Dio Cassius is of no help in this case, because he no longer mentions *Segesta*, but only *Siscia* (Σισκία).[16] Although *Siscia* is seen as the Roman age successor of the Pannonian *Segesta*, it seems that the two toponyms are contemporaneous. Strabo, namely, differentiates between *Segesta* (the Pannonian city and trading center), and the near-by fort of *Siscia*, and is the only source that refers to both of these places in a contemporaneous context, clearly at two neighboring locations.[17] The toponym Σεγέστη (Lat. *Segesta*) probably derives from the Indo-European root **seg-* ("cultivated, sown fields"), while the Σισκία (Lat. *Siscia*) is connected to the Indo-European **si-sk-* ("dry place in wet surroundings").

The oldest known source that refers to *Segesta* is Strabo, in the context of trading routes that connected Italy and the Danube region.[18] The trade between Italy and Transdanubia that Strabo discusses had been established over a hundred years before his time, and stemmed from the preexisting exchange of goods in the area. *Segesta*, situated at the mouth of the Kupa River, and

16 Strab. 7.5, 2; Plin. *Nat. hist. 3.25,148; Dio Cass. 49.38; App. Illyr. 4.23.*

17 "Blizu Segestike i na cesti za Italiju smješteni su utvrda Siscija i Sirmij" (Strab. 7.5, 2).

18 Strab. 4.6,10; 7.5,2.

16 Strab.7.5, 2; Plin. *Nat. hist*. 3.25, 148; Dio Cass. 49.38; App. *Illyr*. 4.23.

17 "Near Segestica, and on the road to Italy, are situated both Siscia, a fort, and Sirmium" (Strab. 7.5, 2).

18 Strab. 4.6,10; 7.5,2.

zahvaljujući sustavu pritoka Save koji je otvarao put prema sjevernom Jadranu. I dok Strabon Segestu oslikava kao važno trgovačko središte, Apijan je naziva "jakim gradom" (πόλις ἐχυρά) na važnom strateškom položaju uz rijeku Savu.[19]

Rim je vrlo rano prepoznao iznimnu prometnu, trgovačku i stratešku važnost panonske Segeste. Rimski je interes, u početku sasvim ekonomske naravi, s vremenom prerastao u politički – kako se širio rimski posjed, tako je Dunav postajao sve izglednijom prirodnom granicom rimskog imperija. U tom je kontekstu posjedovanje panonskog Međuriječja postalo jednim od imperativa rimske vanjske politike; taj je plan i ostvaren, zahvaljujući Oktavijanu i njegovim legijama.

Apijan, međutim, spominje dva prethodna sukoba sa Segestanima: "Rimljani su dvaput bili napali zemlju Segestana, ali nisu polučili ni taoce niti išta drugoga".[20] Oba sukoba odigrala su se tijekom 2. st. pr. Kr., no nisu poznate pojedinosti. U kontekstu prvog od njih Apijan spominje nekog Kornelija čiji je pohod na Panonce završio porazom; drugi je sukob, u kojemu su rimsku vojsku vodili Lucije Kota i Lucije Cecilije Metelo, najvjerojatnije također završio nepovoljno po Rim.[21] Iako mnogi smatraju da su to bila dva (neuspjela) pokušaja osvajanja Segeste, postoji još jedna mogućnost: borbe se nisu vodile za sam grad, nego protiv Segestana, ne nužno na njihovom teritoriju. U Segestanima bi se, naime, lako mogli prepoznati oni Panonci koji su učestalo provaljivali preko sjeveroistočne granice Italije i pljačkali tamošnje pogranične gradove. Ako je tako, Segesta je svoju prvu (i to kobnu) opsadu iskusila tek tijekom jednomjesečnog rata koji se 35. pr. Kr. odvijao pod njenim bedemima. Tom je prilikom Oktavijan, skorašnji prvi car August, uveo Rim u panonsko Međuriječje.

one of the few favorable crossings across the Sava River, had been an important trading center and a key crossroads not only from west to east, but also towards the Adriatic, due to the system of tributaries of the Sava River that opened new routes towards the northern Adriatic. Moreover, while Strabo describes *Segesta* as an important trading center, Appian calls it "a strong city" (Greek πόλις ἐχυρά) at a strategically important position along the Sava River.[19]

Rome recognized the traffic-related, trading and strategic importance of Pannonian *Segesta* very early on. At the beginning, Roman interest was purely economic, however it soon became political. As Roman territories spread, the Danube became a more and more viable option as a natural border of the Roman Empire. In that context, holding the Pannonian Interfluve became an imperative goal of Roman foreign policy; a goal which was successfully achieved by Octavian and his legions.

One should note, however, that Appian also mentions two conflicts with the *Segestans* prior to Octavian's campaign: "Although the Romans had previously twice invaded the country of Segestica, they took neither hostages nor anything else."[20] Both conflicts took place during the 2nd century BC, but no details are known. In the context of the first conflict, Appian mentions a Cornelius who was defeated by the Pannonians; the other conflict, in which the Roman army was led by Lucius Cotta and Lucius Caecilius Metellus, probably did not go in the favor of the Romans.[21] While many authors have suggested that these were two (unsuccessful) Roman attempts at conquering *Segesta*, there is another possibility: the battles were not enacted in order to conquer the city, but purely against the Segestans, not necessarily on their territory. The term Segestans could easily have been applied to those Pannonians who often crossed the northern Italian border and looted the nearby cities. If that is the case, *Segesta* only experienced its first (and fatal) siege during the month-long war that was waged below its walls in 35 BC. On that occasion, Octavian, the soon to be first emperor Augustus, led Rome into the Pannonian Interfluve.

19 App. *Illyr.* 4.22.

20 App. *Illyr.* 4.22.

21 "Kada je Kornelijev pohod na Panonce završio porazom, sve je Italce obuzeo tako veliki strah od toga naroda da se dugo vremena nakon toga nijedan konzul nije usudio poduzeti pohod na njih" (App. *Illyr.* 3.14); *"Lucije Kota i Metelo su, čini se, pokorili Segestance" (App. Illyr. 2.10); usp. i App. Illyr. 4.22, citiran u tekstu.*

19 App. *Illyr.* 4.22.

20 App. *Illyr.* 4.22.

21 "When Cornelius campaigned against the Paeones (= Pannonians) and narrowly avoided a total defeat, the entire Italian population was overcome by great fear of the Paeones, and for a long time later consuls hesitated to undertake military expeditions against them"(App. *Illyr.* 2.10); comp. also App. *Illyr.* 4.22, cited in the text.

SL. 5
Amfora s najranijim epigrafičkim spomenom Siscije pronađena na položaju Željeznički kolodvor u Sisku
(I. Krajcar, M. Galić)

FIG. 5
The amphora with the earliest epigraphic mention of *Siscia*, discovered at the Željeznički Kolodvor position in Sisak
(I. Krajcar, M. Galić)

1.3 SEGESTIKA I SISCIJA NA EPIGRAFIČKIM SPOMENICIMA (IVAN DRNIĆ)

Osim u djelima antičkih pisaca ime Segestike i Siscije nalazimo i na pojedinim epigrafičkim spomenicima iz rimskog razdoblja. Posebno su zanimljiva dva predmeta: olovna pločica (lat. *tessera*) s natpisom *in Segestica* te amfora za prijevoz garuma (riblji umak) s nešto dužim natpisom (*titulus pictus*) koji uključuje i adresu odnosno mjesto kamo je amfora poslana, a to je *Siscia*. Zašto su baš ova dva natpisa posebno zanimljiva?

Spomenuta olovna pločica, odnosno robna markica kakve su korištene u proizvodnji i prodaji tkanina, predstavlja jedini poznati epigrafički spomen Segestike, a prijevod dijela natpisa koji se na njoj nalazi glasio bi *u Segestici* (Sl. 4).[22] S obzirom na to da je rimsko urbano središte na lijevoj obali Kupe zadržalo ime Siscija, ovaj natpis svjedoči o kontinuitetu korištenja ovog toponima i nakon rimskog osvajanja 35. pr. Kr, a koji se, prema interpretaciji I. Radmana-Livaje, odnosio na predgrađe - lučku i industrijsku zonu Siscije smještenu na današnjem Pogorelcu. Postojanje rimskih slojeva na desnoj obali Kupe potvrđeno je iskopavanjem iz 1985. na položaju Kovnica,[23] kao i u recentnim istraživanjima AMZ-a provedenima dvjestotinjak metara sjeverno od navedenog položaja.[24] Olovna pločica pronađena je prilikom jaružanja Kupe početkom 20. st., što otežava njeno datiranje iako analiza teksta i usporedba sa sličnim predmetima iz jasno definiranih konteksta upućuje na prva dva stoljeća nove ere.

Amfora tipa Dressel 8 s natpisom pronađena je 2014. u zaštitnom iskopavanju na sisačkom željezničkom kolodvoru, a nalazila se u drvenoj ostavi zajedno s amforom kasnorodskog tipa. Kontekst u kojemu su pronađene ove amfore potječe iz kasnoaugustovskog vremena.[25] Natpis na amfori navodi da je u njoj transportiran garum visoke kvalitete, zatim spominje ime trgovca (*mercator*, *negotiator*) ili prijevoznika (*navicular*) Publija Anija te Aula Kordija - naručitelja odnosno vlasnika naručenog garuma koji je isporučen u Sisciju (*Sisciae*) (Sl. 5). S obzirom na spomenutu dataciju ostave, ovaj natpis predstavlja najraniji epigrafički spomen Siscije koji se zasigurno odnosi na vojni logor, a ne na kasnije civilno naselje.

22 Radman-Livaja 2007.

23 Durman 1992; Wiewegh 2001; Gaspari, Erič, Šmalcelj 2006.

24 Drnić, Groh 2018.

25 Novaković, Paro, Radman-Livaja 2018, 236–243.

SEGESTICA AND *SISCIA* ON EPIGRAPHIC MONUMENTS (IVAN DRNIĆ)

Other than in the works of ancient authors, the names *Segestica* and *Siscia* are also recorded on some epigraphic monuments from the Roman era. Two finds are especially interesting: a lead tag (Lat. *tessera*) with the *in Segestica* inscription, and an amphora for transporting *garum (fish sauce)* with a somewhat longer inscription (*titulus pictus*) that includes an address, i.e. the location to which the amphora was sent - *Siscia*. What makes these two inscriptions especially interesting?

The aforementioned lead tag, the likes of which were used in the production and trade of fabrics, is the only known epigraphic mention of *Segestica,* with a certain part of the inscription translated as *in Segestica* (Fig. 4).[22] Considering the fact that the Roman urban center on the left bank of the Kupa River kept the name *Siscia,* this inscriptions attests to the continual use of this older toponym even after the Roman conquest of 35 BC. According to I. Radman-Livaja, it may have, at this point in time, referred to the suburbs – the harbor and industrial zone of *Siscia,* situated on today's Pogorelac. The existence of Roman layers on the right bank of the Kupa River was confirmed in the 1985 excavations of the Kovnica position,[23] as well as in the recent excavations conducted by AMZ about two hundred meters north of this said position.[24] The lead tag was discovered when the Kupa riverbed was dredged at the beginning of the 20th century, which makes it more difficult to date. However, text analysis and comparisons to similar finds from clearly defined contexts point to the first two centuries AD.

A Dressel 8 type amphora with an inscription was discovered in the 2014 rescue excavations of the Sisak railway station. It was found in a hoard, alongside an amphora of the Late Rhodian type. The context in which these amphoras were discovered can be dated to late Augustan period.[25] The inscription on the amphora lists that it was used to transport high-quality *garum*, it also mentions the trader (*mercator, negotiator*) or transporter (*navicular*) Publius Anius; as well as Aulus Cordius – the client, i.e. the owner of the ordered *garum* that was transported to *Siscia* (*Sisciae*) (Fig. 5). Considering the previously mentioned date of the hoard, this inscription is the earliest epigraphic mention of *Siscia,* certainly referring to the military camp, and not the later civilian settlement.

22 Radman-Livaja 2007.

23 Durman 1992; Wiewegh 2001; Gaspari, Erič, Šmalcelj 2006.

24 Drnić, Groh 2018.

25 Novaković, Paro, Radman-Livaja 2018, 236–243.

SL. 6
Brončanodobne igle iz Siska (I. Krajcar)

FIG. 6
Bronze Age pins from Sisak (I. Krajcar)

Ivan Drnić, Daria Ložnjak Dizdar

2.1 BRONČANO DOBA I PRVE AKTIVNOSTI NA PODRUČJU SISKA

Sporadični nalazi arheoloških predmeta s područja današnjeg Siska potječu već iz mlađeg kamenog, odnosno bakrenog doba, ali znatnije povećanje broja predmeta može se pratiti od kasnog brončanog doba, odnosno od druge polovice 2. tisućljeća pr. Kr.[26] Iako malobrojni dostupni podatci upućuju na to da se prvo naselje formiralo između 1100. i 1000. godine pr. Kr., odnosno u mlađoj fazi kasnog brončanog doba (stupanj Ha A2 – Ha B1 prema srednjoeuropskoj relativnoj kronologiji), određen broj metalnih predmeta, od kojih pojedini primjerci potječu iz rijeke Kupe, nešto je stariji i potječe iz starije faze kasnog brončanog doba (1300. – 1100. pr. Kr / Br D – Ha A1). Radi se o mačevima, narukvici, srpu, sjekiri i brojnim iglama. Među iglama se razlikuju tipovi s makovom glavicom, vazolikom glavicom, bikoničnom vodoravno narebrenom glavicom, bikoničnom glavicom i topuzastom glavicom (Sl. 6).[27] Dva primjerka igle s makovom glavicom bogato su ukrašena urezivanjem i rovašenjem. Te su igle rasprostranjene na širokom europskom prostoru i karakteristične su za kraj 14. i 13. st. pr. Kr. (Br D).[28] Tip igle s vazolikom glavicom povezuje se sa sjevernoalpskim prostorom i primjerak iz Siska nalazi se na južnoj granici njihovog rasprostiranja.[29] Tipovi igala s bikoničnom vodoravno narebrenom glavicom pojavljuju se na prostoru međuriječja Drave i Save te u zapadnom dijelu Karpatske kotline i mogu se datirati u 13. i 12. st. pr. Kr. (Br D – Ha A1) što potvrđuje i njihovo pojavljivanje u ostavama II. faze.[30] Njihova rasprostranjenost djelomično se preklapa s istovremenim tipom igala s topuzastom glavicom koje su vrlo raširen tip tijekom starije faze kulture polja sa žarama.[31] Igle s bikoničnom glavicom karakteristične su za 12. i 11. st. pr. Kr. (Ha A) i njihova rasprostranjenost povezuje se s prostorom Karpatske kotline.[32] Pronađeni vrhovi kopalja, srp, narukvica i sjekira pripadaju II. fazi ostava kulture polja sa žarama prema periodizaciji K. Vinski-Gasparini.[33] Na sadašnjem stupnju istraženosti za to razdoblje ne raspolažemo dokazima o postojanju naselja ili groblja na užem

THE BRONZE AGE AND THE FIRST ACTIVITIES ON THE TERRITORY OF SISAK

Sporadic archaeological finds from the area of modern Sisak can be dated to the Neolithic and the Copper Age, but a significant number of finds can be traced from the Late Bronze Age, i.e. the second half of the 2nd millennium BC.[26] Although scarce, the available data suggest that the first settlement was formed between 1100 and 1000 BC, i.e. in the later phase of the Late Bronze Age (phases Ha A2–Ha B in central European relative chronology). A certain number of metal finds, some of which were retrieved from the Kupa River, are somewhat earlier and can be dated to the earlier phase of the Late Bronze Age (Br D–Ha A1). These include swords, a bracelet, a sickle, an axe, and numerous pins. The pins include types with heads in the shape of a poppy, a vase, a biconical horizontally ribbed head, and club-headed pins. (Fig. 6).[27] Two poppy-headed pins are richly decorated with incising and gauging. These pins were distributed over a vast part of Europe and are characteristic for the end of the 14th and 13th century BC (Br D).[28] The type of pin with a vase-like head is connected with the northern Alpine territory, and the find from Sisak is at the southern border of their distribution.[29] Pin types with a biconical horizontally ribbed head appear across the interfluve of the Drava and Sava Rivers and in the western part of the Carpathian basin, and can be dated to the 13th and 12th century BC (Br D–Ha A1), as attested to by their presence in hoards ascribed to the II phase.[30] Their distribution partially overlaps with the contemporaneous type of club-headed pins which represent a widespread type during the earlier phase of the Urnfield culture.[31] Pins with a biconical head are characteristic for the 12th and 11th century BC (Ha A), and were recorded across the Carpathian basin.[32] The discovered spearheads, sickle, bracelet and axe are ascribed to the II phase of hoards of the Urnfield culture according to K. Vinski-Gasparini's periodization.[33] Based on the current understanding of the period, there is no evidence of there being a settlement or cemetery in Sisak, so the origin of the listed finds is, consequently,

26 Balen, Drnić, Mihelić 2012.
27 Vinski-Gasparini 1973, T. 19: 10–11, T. 26: 5–10.
28 Vinski-Gasparini 1973, 50; Innerhofer 2000, Karte 57–58; Ložnjak Dizdar 2011, 44, Karta 3.
29 Müller-Karpe 1959, 191, Sl. 28: 4.
30 Dular, Šavel, Tecco Hvala 2002, 219, Sl. 49.
31 Ložnjak Dizdar 2014, 241, Karta 3.
32 Říhovský 1983, 44.
33 Vinski-Gasparini 1973, 73.

26 Balen, Drnić, Mihelić 2012.
27 Vinski-Gasparini 1973, Pl. 19: 10–11, Pl. 26: 5–10.
28 Vinski-Gasparini 1973, 50; Innerhofer 2000, Maps 57-58; Ložnjak Dizdar 2011, 44, Map 3.
29 Müller-Karpe 1959, 191, Fig. 28: 4.
30 Dular, Šavel, Tecco Hvala 2002, 219, Fig. 49.
31 Ložnjak Dizdar 2014, 241, Map 3.
32 Říhovský 1983, 44.
33 Vinski-Gasparini 1973, 73.

SL. 7
Ritualno deponiranje predmeta
u rijeku Kupu (S. Bogojević Narath)

FIG. 7
Ritual deposition of items
into the Kupa River (S. Bogojević Narath)

sisačkom prostoru, pa se posljedično nameće pitanje porijekla navedenih predmeta. Iako je u interpretaciji arheoloških predmeta s upitnim kontekstom potreban izniman oprez, činjenica da su neki od tih predmeta, primjerice mačevi, pronađeni u rijeci Kupi otvara mogućnost da su oni bili dio jednog specifičnog, arheološki dobro posvjedočenog fenomena.

questionable. Although the interpretation of archaeological finds from arguable contexts should be approached with caution, the fact that some of them, such as the swords, were discovered in the Kupa River, suggest that they might have been part of a specific, archaeologically well-attested, phenomenon.

2.2 RIJEKA KUPA KAO MJESTO RITUALA

Deponiranje, odnosno "odlaganje" metalnih predmeta u vodu, osobito oružja, pojava je zabilježena na širem europskom prostoru, a kojoj se, ovisno o pojedinim slučajevima, s više ili manje sigurnosti može pripisati ritualni karakter.[34] U ritualiziranim aktivnostima, koje uključuju vodu kao transformativni medij, deponirani predmeti imaju funkciju votivnih darova (Sl. 7). Naime, voda u raznim oblicima (rijeke, mora, močvare, izvori) u brojnim kulturama, pa i onim klasičnim - grčkoj i rimskoj, smatrana je granicom ovoga, materijalnog i onostranog svijeta. Svakako najpoznatiji primjer je mitološka rijeka Stiks koja predstavlja granicu između zemlje i podzemnog svijeta — Hada.

Iako vjerojatno prakticiran i u ranijim razdobljima europske pretpovijesti, običaj ritualnog deponiranja uglavnom metalnih nalaza u vodene kontekste, kao što su rijeke, jezera, izvori ili močvare, intenzivira se u srednjem brončanom, a vrhunac doživljava u kasnom brončanom dobu. U starijem željeznom dobu broj predmeta u vodenim kontekstima osjetno se smanjuje, iako postoje pojedine regionalne posebnosti, što zasigurno odražava određene društvene, a posljedično i promjene u vrijednosnim sustavima pojedinih pretpovijesih zajednica. Ova se ritualna aktivnost ponovno manifestira u arheološkom zapisu diljem zapadne i srednje Europe tijekom 5. i 4. st. pr. Kr. odnosno u mlađem željeznom dobu, pri čemu se polažu različite kategorije predmeta: od oružja (kacige, mačevi, koplja) i konjske opreme (žvale), preko dijelova nošnje (fibule) i brončanog posuđa, pa sve do željeznog oruđa i u završnoj fazi novca.[35] Ritualno polaganje predmeta u vodu nastavljeno je i u rimsko vrijeme, ali i kasnije u srednjem vijeku[36] o čemu, osim nalaza, svjedoče i pojedini mitovi od kojih je vjerojatno najpoznatiji onaj o Gospi od jezera iz priče o kralju Arturu, koja legendarnom kralju Brita predaje mač Ekskalibur.

U kontekstu nalaza iz rijeke Kupe s prostora današnjeg Siska zasigurno najzanimljivije predmete čine dva mača s jezičastom drškom (Sl. 8). Prvi mač, iz fundusa Arheološkog muzeja u Zagrebu, pripada tipu Stätzling koji se datira u 12. i 11. st. pr. Kr. (Ha A), s distribucijom od središnje i sjeverne Italije, preko Karpatske kotline do Grčke.[37] Ovaj mač nema za brončane predmete karakterističnu zelenu patinu što dodatno potvrđuje činjenicu da se radi o nalazu iz vode. Drugi primjerak, iz Gradskog muzeja Sisak, nešto je stariji, a prema morfološkim karakteristikama blizak je mačevima tipa Reutlingen, osobito primjercima iz ostave Topolnica u istočnoj Srbiji koji imaju naglašenije središnje rebro, datiranima u 13. i 12. st. pr. Kr. (Br D – Ha A1).[38] Mačevi tipa Reutlingen predstavljaju iznimno popularan oblik starijeg dijela kasnog brončanog doba,

34 Bradely 1990; Dumont, Gaspari, Wirth 2006; Turk *et al*. (eds.) 2009.

35 Schönfelder 2007; Gaspari 2007, Drnić 2014 i dr.

36 Gaspari 2017.

37 Vinski Gasparini 1973, 184, 219, T. 26: 11; Harding 1995, 49, kat. br. 172; Pabst 2012, Sl. 2, Popis 2.

38 Harding 1995, 35–36; Burkowsky 1999, 22, kat. br. 15.

THE KUPA RIVER AS A PLACE OF RITUAL

The depositing, i.e. "discarding", of metal finds, especially weapons, into bodies of water is a practice that has been recorded across Europe, and can, depending on the case in question, with more or less certainty, be described as ritualistic.[34] In ritualized activities, wherein water is the transformative medium, the deposited objects can serve as votive gifts (Fig. 7). In different cultures, including classical ones – both Greek and Roman, different bodies of water (rivers, seas, marshes, springs) were seen as the border between this, material, and the world beyond. Certainly, the most famous example is the mythological Styx River that represents the border between the earth and the underworld — Hades.

Although it was probably also practiced in earlier periods of European prehistory, the ritual of depositing mostly metal finds in water contexts, such as rivers, lakes, springs or marshes, intensified during the Middle Bronze Age, and was at its peak in the Late Bronze Age. In the Early Iron Age, the number of finds discovered in water is significantly lower, although there are some regional variations – a fact that certainly reflects certain social changes in the value systems of specific prehistoric communities. This ritual practice reappears in the archaeological record across western and central Europe from the 5th and 4th century, i.e. from the Late Iron Age, with a range of different categories of objects deposited: such as weapons (helmets, swords, spears), horse-riding equipment (bits), pieces of attire (fibulas), bronze vessels, iron tools and, in the final phase, coins.[35] The ritualistic deposition of objects in water continued during the Roman times, and into the Middle Ages,[36] something not only attested to by archaeological finds, but also by specific myths – the most famous of which probably being the one about the Lady of the Lake from the story of king Arthur, wherein she gave the legendary king of Britons the sword Excalibur.

In the context of the finds from the Kupa River, the two most interesting from the area of today's Sisak are swords with tongue-shaped handles (Fig. 8). The first sword, kept at the Archaeological Museum in Zagreb, is ascribed to the Stätzling type, dated to the 12th and 11th century BC (Ha A), and distributed from central and northern Italy, across the Carpathian basin to Greece.[37] This sword does not display the green patina that is characteristic of bronze finds, proving that it is a water find. The second find, from the Sisak Municipal Museum, is somewhat older, and displays morphological characteristics similar to those of Reutlingen type swords, especially finds from the Topolnica hoard in eastern Serbia that have a more prominent central rib and were dated to the 13th and 12th century BC (Br D-Ha A1).[38] Reutlingen type swords

34 Bradely 1990; Dumont, Gaspari, Wirth 2006; Turk *et al*. (eds.) 2009.

35 Schönfelder 2007; Gaspari 2007, Drnić 2014, etc.

36 Gaspari 2017.

37 Vinski Gasparini 1973, 184, 219, Pl. 26: 11; Harding 1995, 49, cat. no. 172; Pabst 2012, Fig. 2, List 2.

38 Harding 1995, 35–36; Burkowsky 1999, 22, cat. no. 15.

SL. 8
Brončanodobni predmeti
iz rijeke Kupe u Sisku (I. Krajcar)

FIG. 8
Bronze Age finds from
the Kupa River in Sisak I. Krajcar)

s najvećim brojem primjeraka iz Karpatske kotline, uključujući i međuriječje Save i Drave, pa se i sisački primjerak sasvim dobro uklapa u navedenu distribucijsku sliku.[39]

Nedostatak patine upućuje na to da i vrh koplja s kratkim nasadnikom i dugačkim, uskim listom sa širokim središnjim rebrom šesterokutnog presjeka također potječe iz rijeke Kupe (Sl. 8). U odnosu na ostale istovremene vrhove kopalja s prostora

were an exceptionally popular form during the earlier period of the Late Bronze Age, with most originating from the Carpathian basin, including the interfluve of the Sava and Drava Rivers.[39] As such, it is evident that the find from Sisak fits well into this map of distribution.

39 Clausing 2003, 48–49, Sl. 2; Pabst 2012, Sl. 1, Popis 1; Blečić Kavur, Jašarević 2014, 39–40, Sl. 5.

39 Clausing 2003, 48–49, Fig. 2; Pabst 2012, Fig. 1, List 1; Blečić Kavur, Jašarević 2014, 39–40, Fig. 5.

Karpatske kotline predmet je iznimno dugačak, čak 56 cm, s rubom lista koji je uz nasadnik ukrašen nizom ureza što ga čini jedinstvenim u kulturnom kontekstu južne Panonije, sa sličnim, ali ne i identičnim analogijama na prostoru kontinentalne Grčke i Krete.[40] Vodeni nalaz predstavlja i nož s trnom za nasad drške tipa Wien-Leopoldsberg s konkavno oblikovanim sječivom na kojemu se nalazi urezan ukras dvije skupine po tri vodoravne linije obrubljene točkama i koncentričnim polukrugovima, dok se uz hrbat nalazi niz girlandi (Sl. 8).[41] Ipak, ovaj predmet je kronološki mlađi od opisanih mačeva i pripada razdoblju 10. i 9. st. pr. Kr. (Ha B) kada već postoji sisačko brončanodobno naselje, što otežava interpretaciju noža kao votivnog dara jer je u vodu mogao dospjeti i slučajno, a ne u sklopu rituala!

Najbližu analogiju za opisani ritual, koji se u drugoj polovici 2. tisućljeća počeo prakticirati i na obalama rijeke Kupe u današnjem Sisku, nalazimo na prostoru jugoistočnih Alpi, točnije u rijeci Ljubljanici u kojoj su pronađene tisuće predmeta iz različitih razdoblja. Naime, ritualno deponiranje predmeta u Ljubljanici, rijeci s jednom od najvećih koncentracija arheoloških predmeta u Europi, započinje u ranom brončanom dobu, nastavlja se u srednjem, a znatno povećava u kasnom brončanom dobu. Kao svojevrsna regionalna posebnost ritual se nastavlja i tijekom starijeg željeznog doba, a zatim i mlađeg željeznog doba te antičkog razdoblja, a dio predmeta potječe i iz srednjeg vijeka.[42] Još se jedna rijeka u Hrvatskoj može dovesti u vezu s opisanim ritualima, a to je Cetina iz koje također potječu brojni predmeti iz različitih razdoblja pretpovijesti, antike i srednjeg vijeka.[43]

Osim iz rijeka, nalazi iz voda poznati su iz starih riječnih rukavaca, poput mača iz Jaruna u Zagrebu[44] ili predmeta iz različitih vremenskih razdoblja iz Šoderice pored Drave.[45] Podrobne analize pokazuju kako su u razdoblju kasnog brončanog doba nalazi u vodama češći na području gdje nisu u većem broju pronađene ostave.[46] Slična dinamika može se pratiti i pri usporedbi depozicija istih tipova predmeta u ostavama i grobovima tijekom kasnog brončanog doba, gdje se najčešće ta područja međusobno isključuju. Pri tome sjeverna Hrvatske pripada prostoru gdje su uobičajene ostave s velikim brojem metalnih predmeta, dok su u istovremenim grobovima oni zastupljeni u znatno manjem broju.[47]

The lack of patina again suggests that the spearhead, with a short socket and a long, narrow blade with a central rib of a hexagonal cross-section, also comes from the Kupa River (Fig. 8). In relation to its contemporaneous spearheads from the Carpathian basin, this find is exceptionally long, a whole 56 cm, and the edge of its blade along the socket is decorated with a line of cuts, which makes it unique in the cultural context of southern Pannonia. Similar, but not identical analogies for this spearhead are known from continental Greece and Crete.[40] The Wien-Leopoldsberg type knife with a tang for hafting and a concave blade, decorated with two groups of three horizontal lines framed by dots and concentric semicircles and a series of garlands along the upper edge, is also a water find (Fig. 8).[41] However, this find is chronologically later than the described swords, and is ascribed to the 10th and 9th century BC (Ha B), when the Bronze Age settlement in Sisak already existed, making it difficult to interpret the knife as a votive gift because it could have been deposited into the water accidentally, and not as part of a ritual!

The closest analogy for the described ritual, which also could have been practiced on the banks of the Kupa River in modern Sisak during the second half of the 2nd millennium BC, can be found in the southeastern Alps, or, more precisely, in the Ljubljanica River that has yielded thousands of finds from different periods. Ritualistic deposition of finds in the Ljubljanica, one of the rivers with the highest concentration of archaeological finds in Europe, began in the Early Bronze Age, continued in the Middle, and increased significantly in the Late Bronze Age. The practice continued as a regionally specific occurrence in the Early and Late Iron Age, the Roman period, and, as some finds indicate, into the medieval times.[42] Another Croatian river can be linked with the described rituals as well – the Cetina, which also yielded numerous finds from different periods of prehistory, the Roman times and the Middle Ages.[43] Apart from rivers, known water finds also include those from old riverbeds, such as the sword from the Jarun Lake in Zagreb,[44] or finds from different periods discovered in Šoderica Lake next to the Drava River.[45] Detailed analyses have revealed that, during the Late Bronze Age, more water finds appear in areas where there are less hoards.[46] A similar dynamic can be observed through the comparison of the deposition of the same types of finds in hoards and graves during the Late Bronze Age.[47] In this period the areas are mostly mutually exclusive, meaning that northern Croatia is a territory where large numbers of metal finds are quite common in hoards, but not in graves, where they appear in significantly fewer numbers.

40 Avila 1983, 133, kat. br. 861–867; Vikatou, Moschos 2018, 241, kat. br. 308; Jung 2018, 247.

41 Říhovský 1972, 64–67; Balen, Drnić, Mihelić 2012, kat. br. 6.

42 Gaspari 2001; 2004; 2007; 2017.

43 Milošević 1999; 2006.

44 Balen-Letunić 1994, 29, 90, kat. br. 67.

45 Marković 2001.

46 Bradley 2013.

47 Hansen 1994.

40 Avila 1983, 133, cat. no. 861–867; Vikatou, Moschos 2018, 241, cat. no. 308; Jung 2018, 247.

41 Říhovský 1972,64–67; Balen, Drnić, Mihelić 2012, cat. no. 6.

42 Gaspari 2001; 2004; 2007; 2017.

43 Milošević 1999; 2006.

44 Balen-Letunić 1994, 29, 90, cat. no. 67.

45 Marković 2001.

46 Bradley 2013.

47 Hansen 1994.

SL. 9
Iskopavanje provedeno 1992. godine
na položaju Pogorelac-Keltsko u Sisku
(Arhiv Gradskog muzeja Sisak)

FIG. 9
The 1992 excavations
at the Pogorelac-Keltsko position in Sisak
(Archives of the Sisak Municipal Museum)

2.3 OSNIVANJE BRONČANODOBNOG NASELJA

Osim opisanih nalaza iz rijeke Kupe, kao i većeg broja predmeta bez preciznijeg podatka o mjestu nalaza, jedna skupina predmeta upućuje na položaj gdje se mogla nalaziti najranija jezgra sisačkog pretpovijesnog naselja. Godine 1992. provedeno je iskopavanje u koritu rijeke na posljednjem meandru koji Kupa čini prije utoka u Savu, na poziciji koja se u literaturi naziva "Keltsko".[48] Dimenzije istražene sonde bile su 8 x 4 m (Sl. 9). Ispod metar debelog sloja sterilnog riječnog pješčanog nanosa zabilježeni su ostatci više okomito zabijenih drvenih pilota te nekoliko okomitih dasaka. U izvještaju se navodi i postojanje "sivocrnog laporastog sloja" u kojemu je prikupljena najveća količina pokretnih nalaza, kao i obrađenog kamenja. I V. Tkalčić u kratkom izvještaju iz 1912. godine o istraživanju na ovom istom položaju navodi da je u iskopavanju u koritu rijeke naišao na okomito zabijene drvene pilote, odnosno stupove kako ih on naziva, što jasno upućuje na mogućnost da je dio pretpovijesnog naselja uz rijeku Kupu zaista mogao biti sojeničarskog karaktera.

U iskopavanjima iz 1992. prikupljena je veća količina nalaza, uglavnom ulomaka keramičkog posuđa, kao i ostali keramički predmeti: cjediljka, piramidalni utezi tkalačkog stana, pršljenovi, ulomci dekorativnih ploča, glačalice te ulomci kalupa za lijevanje. Pronađeno je i nešto metalnih nalaza koji se, kao uostalom i keramički nalazi, mogu datirati od završne faze kasnog brončanog pa sve do mlađeg željeznog doba. Među predmetima s položaja Pogorelac-Keltsko zabilježeni su oblici koji pripadaju završetku kasnog brončanog i samom početku starijeg željeznog doba (Sl. 10), a koji nisu prisutni u poznatoj građi prikupljenoj u Tkalčićevom iskopavanju iz 1912. godine niti u recentnim iskopavanjima AMZ-a na povišenoj, desnoj obali rijeke Kupe. To su zdjele/šalice zaobljenog ili koničnog trbuha i cilindričnog vrata s izvučenim rubom te višom trakastom ručkom, ukrašene urezivanjem i ubadanjem. Slijede karakteristične zdjele uvučenog ruba ukrašene vodoravnim fasetiranjem, okomitim i kosim žljebljenjem i kaneliranjem, ponekad s manjim ušicama ili visokim trakastim ručkama. Tu su i ulomci lonaca ili zdjela koničnog vrata i izvučenog ruba ukrašenog kratkim žljebovima te visoke ručke trokutastog presjeka ukrašene fasetiranjem i žljebljenjem, kakva se nalazila i na zdjeli iz kasnobrončanodobnog paljevinskog groba pronađenog u Sisku s druge strane rijeke Kupe (Sl. 14). Od karakterističnih metalnih nalaza ovome najranijem horizontu sisačkog naselja pripada i brončana igla s bikoničnom glavicom i tordiranim vratom (Sl. 10). Distribucija igala navedenih morfoloških karakteristika može se pratiti od sjeveroistočne Italije, preko Posočja do središnje i istočne Slovenije u 10. i 9. st. pr. Kr. (Ha B), a sisačkom primjerku bliske analogije nalazimo na grobljima u Dobovi (grob 9) i Velikoj Gorici (grobovi G/1910 i 1/1911).[49]

Sve u svemu, na poziciji Pogorelac-Keltsko prikupljen je materijal koji potječe iz cijelog prvog tisućljeća pr. Kr., što predstavlja najduži kontinuitet od svih do sada istraženih položaja s ostatcima predrimskih naseobinskih slojeva u Sisku. Iz tog razloga,

48 Burkowski 2004.

49 Teržan 2002, 87–88; Starè 1975, T. 6: 1; Karavanić 2009, T. 61: 3.

THE FOUNDATION OF THE BRONZE AGE SETTLEMENT

Unlike the described finds from the Kupa River, and the large number of finds that lack precise data on the place of their discovery, one group of finds provide an indication of where the earliest core of the Sisak prehistoric settlement could have been located. In 1992, excavations were conducted in the Kupa riverbed, at the last meander that the Kupa makes before it flows into the Sava, a position that is referred to in publications as "Keltsko".[48] The excavated trench measured 8 x 4 meters (Fig. 9). Below a meter of a sterile layer composed of river sand, the site yielded the remains of several vertical wooden supports and several vertical planks. The report also refers to a "gray-black layer of marl" that yielded the largest number of movable finds, as well as processed stone. Additionally, in a short report from 1912, V. Tkalčić mentions that he too had discovered vertical wooden supports, i.e. pillars, as he calls them, when he excavated the riverbed in the same area – a fact that clearly points to the possibility that a part of the prehistoric settlement on the bank of the Kupa River could have been composed of stilt-houses.

The 1992 excavations yielded a large amount of finds, mostly fragments of ceramic vessels, as well as other ceramic objects: a colander, pyramidal loom weights, whorls, fragments of decorative plates, polishers and fragments of molds. Additionally, some metal finds were also discovered that can, just like the ceramic finds, be dated to the period between the Late Bronze and the Late Iron Age. The finds from the Pogorelac-Keltsko position include forms that can be dated to the end of the Late Bronze and the very beginning of the Early Iron Age (Fig. 10). These forms were not recorded in Tkalčić's 1912 excavations or the recent excavations conducted by AMZ on the elevated right bank of the Kupa River. These finds include bowls/cups with a rounded or conical body, a cylindrical neck, an everted rim and a tall ribbon-like handle, decorated with incising and stabbing. These are followed by characteristic bowls with an inverted rim, decorated with horizontal facets, vertical and slanted gauges and cannelures, sometimes also having smaller handles or tall ribbon-like handles. The finds also include pot or bowl fragments with a conical neck and an everted rim decorated with short gauges and tall handles of triangular cross-section decorated with facets or gauges, such as the one found on a bowl from the Late Bronze Age incineration grave discovered in Sisak, on the other bank of the Kupa River (Fig. 14). Characteristic metal finds from this earliest phase of the Sisak settlement include a bronze pin with a biconical head and a twisted neck (Fig. 10). Pins with the listed morphological characteristics were spread across northeastern Italy, the Soča River valley and central and eastern Slovenia during the 10th and 9th centuries BC (Ha B), and the find from Sisak has close analogies with finds from the cemeteries at Dobova (grave 9) and Velika Gorica (graves G/1910 i 1/1911).[49]

All in all, the Pogorelac-Keltsko position yielded material that can be dated to the entire 1st millennium BC, and thereby provides the longest continuity among all of the positions with pre-Roman

48 Burkowski 2004.

49 Teržan 2002, 87–88; Starè 1975, Pl. 6: 1; Karavanić 2009, Pl. 61: 3.

SL. 10
Keramičke posude i brončana igla
s položaja Pogorelac-Keltsko u Sisku (I. Krajcar)

FIG. 10
Ceramic vessels and the bronze pin
from the Pogorelac-Keltsko position in Sisak (I. Krajcar)

SL. 11
Slučajni nalazi završne faze
kasnog brončanog doba iz Siska (I. Krajcar)

FIG. 11
Chance finds of the final phase
dated to the Late Bronze Age from Sisak (I. Krajcar)

na sadašnjem stupnju istraženosti, jezgru naselja odakle se ono širilo dalje na povišene dijelove desne obale Kupe u starijem željeznom dobu, a zatim i na lijevu obalu u mlađem željeznom dobu, vjerojatno treba tražiti upravo na ovom položaju.

Od slučajnih nalaza sa sisačkog prostora koji bi kronološki mogli pripadati najranijoj fazi naselja treba spomenuti i britvu tipa Oblekovice tanke drške koja završava obručem s trapezastim zadebljanjem[50] te dvije male brončane neukrašene sjekire s ušicom, za kakve se pretpostavlja da su izrađivane u radionicama u Pounju i Posavini (Sl. 11).[51]

layers excavated in Sisak thus far. That is why, based on currently available data, the core of the settlement, from which it spread to the elevated parts on the right bank of the Kupa River in the Early Iron Age, and to the left bank during the Late Iron Age, should probably be expected precisely at this location.

Chance finds from the area of Sisak that could chronologically be ascribed to the earliest phase of settlement also include an Oblekovice type razor with a thin handle that ends in a hoop with a trapezoidal protrusion,[50] and two small undecorated bronze axes with a loop that are assumed to have been made in workshops in the Pounje and Posavina regions (Fig. 11).[51]

50 Weber 1996, 234-240, T. 65A; Balen, Drnić, Mihelić 2012, kat. br. 7.
51 Rakvin 2015, 93–96.

50 Weber 1996, 234–240, Pl. 65A; Balen, Drnić, Mihelić 2012, cat. no. 7.
51 Rakvin 2015, 93–96.

SL. 12
Kasnobrončanodobni paljevinski grob iz Siska
(Arhiv Gradskog muzeja Sisak)

FIG. 12
The Late Bronze Age incineration grave from Sisak
(Archives of the Sisak Municipal Museum)

SL. 13
Položaj paljevinskog groba
u odnosu na brončanodobno naselje
na položaju Pogorelac-Keltsko
(Google maps)

FIG. 13
The position of the incineration grave
in relation to the Bronze Age settlement
at the Pogorelac-Keltsko position
(Google maps)

SL. 14
Keramičke posude
i ostatci spaljenog pokojnika iz sisačkog
kasnobrončanodobnog groba (I. Krajcar)

FIG. 14
Ceramic vessels and the remains
of the incinerated deceased person
from the Late Bronze Age grave in Sisak (I. Krajcar)

2.4 POKAPANJE

Kasno brončano doba (od 14. do 9. st. pr. Kr.) na prostoru srednje Europe obilježio je kulturni fenomen koji je u arheologiji definiran kao kultura polja sa žarama, a čije je osnovno obilježje pokapanje spaljenih pokojnika u ravna groblja. Ovaj fenomen, karakterističan za brojne inače relativno heterogene srednjoeuropske brončanodobne zajednice, imao je svoje manifestacije i na prostoru jugozapadne Panonije u obliku Ozaljske kulturne grupe i grupe Velika Gorica-Dobova, datiranih u završetak brončanog doba, odnosno u 10. i 9. st. pr. Kr.[52] Iz ovoga razdoblja poznat je jedini pretpovijesni grob s područja današnjeg Siska (Sl. 12).

Naime, u arheološkom nadzoru na zapadnom ulazu u grad, u Zagrebačkoj ulici, na suprotnoj strani rijeke Kupe u odnosu na naselje na poziciji Pogorelac-Keltsko (Sl. 13), 2013. godine otkriven je oštećen paljevinski grob u kojemu su se nalazile tri keramičke posude: niska zdjela uvučenog ruba ukrašenog kosim kanelurama, bikonična šalica izvučenog ruba s visokom fasetiranom drškom te lonac zaobljenog trbuha i koničnog vrata s manjom trakastom drškom smještenom na prijelazu trbuha u vrat, u literaturi nazivan i amforom (Sl. 14). Opisani oblik šalice definiran je kao tip Baierdorf-Velatice i datiran u 12. i 11. st. pr. Kr. (Ha A).[53] Takve se šalice pojavljuju na širokom prostoru od Donje Austrije do južnog dijela Karpatske kotline, a pronađene su u naseljima kao što su Kalnik[54] i Beli Manastir,[55] kao i u grobovima u Dobovi.[56] Analogije za opisani lonac, odnosno amforu nalazimo u grobnim cjelinama grupe Velika Gorica-Dobova,[57] što upućuje na kontakte s kasnobrončanodobnim zajednicama tijekom razdoblja od 11. do 9. st. pr. Kr. (Ha A2 – B) koje su obitavale uz rijeku Savu od Krškog polja, preko širega zagrebačkog područja do Turopolja. Također, oblik zdjele te posebno način na koji je ukrašena (uske, gotovo okomite kanelure na rubu) iz sisačkog groba poznati su i na grobljima i naseljima tijekom 10. i 9. st. pr. Kr. (Ha B) u Donjem i Gornjem Pokuplju (Metlika-Hrib, Ozalj, Dubovac, Kiringrad itd.)[58] kojemu zemljopisno pripada i sisačka kasnobrončanodobna zajednica. Prema opisanim nalazima, grob se može datirati u 11. i 10. st. pr. Kr., odosno Ha A2 – B1 stupnjeve kulture polja sa žarama. Zajedno s navedenim keramičkim posudama u grobnoj raci su se nalazile i vrlo fragmentirane kosti odrasle osobe, moguće žene, spaljene na visokoj temperaturi (iznad 800˚C).[59]

52 Vinski-Gasparini 1983; Ložnjak Dizdar 2013, 103–105; Ložnjak Dizdar, Potrebica 2017, 105.

53 Pittioni 1954; Lochner 1991.

54 Vrdoljak 1994, T. 27: 1; T. 29: 2.

55 Vinski-Gasparini 1973, 66, T. 22: 1–2.

56 Starè 1975, T. 15: 11.

57 Vinski-Gasparini 1973, T. 105: 3; Stare 1975, T. 8: 1, *passim*.

58 Grahek 2004, T. 9: 6; Čučković, Čučković 2011, T. 4: 1, 5-6; T. 6: 2, 4; Majnarić-Pandžić 1986, Sl. 3: 1–2; Balen-Letunić 1987, T. 1: 3.

59 Antropološku analizu je proveo dr. sc. Mario Novak iz Instituta za antropologiju.

BURIAL RITES

In central Europe, the Late Bronze Age period, i.e. the period between the 14th and the 9th century BC, was marked by a cultural phenomenon that was defined in archaeology as the Urnfield culture. Its basic characteristic was the burying of the incinerated remains of the deceased in flat cemeteries. This phenomenon, characteristic of numerous, otherwise relatively heterogeneous Bronze Age communities of central Europe also manifested in southwestern Pannonia in the form of the Ozalj and the Velika Gorica - Dobova cultural groups dated to the end of the Bronze Age, i.e. to the 10th and the 9th century BC.[52] The only prehistoric grave from the area of today's Sisak was dated to this period (Fig. 12).

More specifically, in 2013, archaeological surveillance was conducted at the western entrance to the town in Zagrebačka Street, opposite the aforementioned settlement at Pogorelac-Keltsko, revealing a damaged incineration grave (Fig. 13). The grave contained three ceramic vessels: a short bowl with an inverted rim decorated with slanted cannelures, a biconical bowl with an everted rim and a tall faceted handle, and a pot with a rounded body, a conical neck, and a small ribbon-like handle at the transition between the body and the neck that is, in publications, also defined as an amphora (Fig. 14). The described cup was defined as the Baierdorf - Velatice, and was dated to the 12th and 11th century BC (Ha A).[53] This type appears across a wide area, including Lower Austria and the southern part of the Carpathian basin, and was also recorded in settlements such as Kalnik[54] and Beli Manastir,[55] as well as in graves in Dobova.[56] Parralells for the described pot, i.e. amphora, have been recorded in graves of the Velika Gorica - Dobova group,[57] which indicates contacts with the Late Bronze Age communities that lived alongside the Sava River between the Krško polje, the wider area of Zagreb, and the Turopolje region during the period between the 11th and the 9th century BC (Ha A2–B). Additionally, the bowl shape and, in particular, decorations (narrow, almost vertical cannelures on the rim) from the Sisak grave have been found in graves and cemeteries in the Donje and Gornje Pokuplje regions (Metlika-Hrib, Ozalj, Dubovac, Kiringrad, etc.),[58] which also, geographically speaking, includes the Late Bronze Age population from Sisak. Based on the described finds, the grave can be dated to the 11th– 10th century BC, or Ha A2–B1 phases of the Urnfield culture. Along with the listed ceramic vessels, the grave also contained the very fragmented bones of an adult, possibly a woman, that were burnt at a high temperature (over 800˚C).[59]

52 Vinski-Gasparini 1983; Ložnjak Dizdar 2013, 103–105; Ložnjak Dizdar, Potrebica 2017, 105.

53 Pittioni 1954; Lochner 1991.

54 Vrdoljak 1994, Pl. 27: 1; Pl. 29: 2.

55 Vinski-Gasparini 1973, 66, Pl. 22: 1–2.

56 Starè 1975, Pl. 15: 11.

57 Vinski-Gasparini 1973, Pl. 105: 3; Stare 1975, Pl. 8: 1, *passim*.

58 Grahek 2004, Pl. 9: 6; Čučković, Čučković 2011, Pl. 4: 1, 5–6; Pl. 6: 2, 4; Majnarić-Pandžić 1986, Fig. 3: 1–2; Balen-Letunić 1987, Pl. 1: 3.

59 The anthropological analysis was conducted by Mario Novak, PhD, from the Institute of Anthropological Research.

SL. 15
Zlatni torkvesi iz rijeke Kupe kod Siska
(Arhiv Magyar Nemzeti Múzeum)

FIG. 15
The gold torques from the Kupa River near Sisak
(Archives of the Magyar Nemzeti Múzeum)

2.5 ZLATNI TORKVESI

Zlatni nalaz iz Siska jedan je od poznatijih predmeta u literaturi o kasnom brončanom dobu u Karpatskoj kotlini. Nalaz je kupljen za Mađarski nacionalni muzej gdje se i danas čuva te je opisan u literaturi kao torkvesi datirani u 12. i 11. st. pr. Kr. (Ha A).[60] Ogrlice od zlatne žice napravljene su na specifičan način od upletene i prekovane zlatne žice koja je mjestimično raskovana u pravokutne dijelove ukrašene urezivanjem (Sl. 15). Ovaj specifičan stil izrade pojavljuje se na nekoliko istovremenih nalaza u ostavama blaga u zapadnom dijelu Karpatske kotline.[61] Istovremeni nalaz iz Rothengruba u Donjoj Austriji pripada istom stilu izrade, a radi se o pektoralu ili dijelu ukrasa za glavu.[62] Slični nalazi otkriveni su i u ostavama Arikogel i Koppental u Gornjoj Austriji u blizini poznatog nalazišta Hallstatt.[63] Izradom su vrlo slični i zlatni nalazi iz Várvölgy-Felsőzsida iz zapadne Mađarske, gdje su u ostavi pronađeni brojni zlatni predmeti, poput ploča, vitica i predmeta koji su također opisani kao torkvesi.[64] Ti se nalazi vremenski povezuju s poznatim nalazom iz Velema[65] preko zlatnih ploča ukrašenih koncentričnim krugovima. Zlatni nalazi iz Várvölgy, Velema i Rothengruba datirani su u 11. st. pr. Kr. (Ha A2). Ipak, u literaturi postoje različita mišljenja, ali kombinacijom tipo-kronološke analize i radiometrijskih mjerenja ostaje se pri dataciji u 12. i 11. st. pr. Kr. (Ha A).[66]

Ovi izuzetni zlatni nalazi, koji su pronađeni na međusobnim razdaljinama i do 150 km, tumače se kao proizvodi jedne radionice koji su mogli biti darovi, miraz ili predmet razmjene između uglednika različitih zajednica iz kulturnog kompleksa kulture polja sa žarama.[67] U toj komunikacijskoj mreži treba promatrati i stratešku ulogu kasnobrončanodobne zajednice koja je obitavala na prostoru današnjeg Siska, o čemu zasad svjedoče malobrojni arheološki tragovi.

GOLD TORQUES

The gold find from Sisak is among the more famous finds mentioned in publications on the Late Bronze Age Carpathian basin. The finds were obtained for the Hungarian national museum, where they are kept to this day, and were recorded as torques dated to the 12th and 11th century BC (Ha A).[60] Necklaces made of gold wire were produced in a specific way from intertwined and reforged wire that was, in some places, forged into rectangular parts further decorated with incisions (Fig. 15). This specific style of production appears in several contemporaneous finds from treasure hoards discovered in the western part of the Carpathian basin.[61] The contemporaneous find from Rothengrub in Lower Austria was made in the same style, but it is either a pectoral or a part of a head ornament.[62] Similar finds have also been discovered in two hoards – Arikogeland and Koppental in Upper Austria, near the famous site of Hallstatt.[63] Gold finds from Várvölgy-Felsőzsid in western Hungary were also made in a similar way. This hoard yielded numerous gold finds, such as discs, ringlets and items that were also described as torques.[64] These finds are chronologically linked with the famous find from Velem[65] due to the gold plates decorated with concentric circles. The gold finds from Várvölgy, Velem and Rothengrub have been dated to the 11th century BC (Ha A2). Opinions on this vary in publications, but the combination of typological and chronological analyses, along with radiometric measurements, indicate that these should be dated to the 12th and 11th century BC (Ha A).[66]

These exquisite gold finds, discovered up to 150 km away from each other, are interpreted as products made in one workshop that could have been gifts, dowry or exchange goods between noblemen from different communities of the Urnfield cultural complex.[67] The strategic role of the Late Bronze Age community from today's Sisak should also be studied within this communication network, as attested to by the archaeological traces of this network, however sparse they may be.

60 Mozsolics 1950, 31–32, T. IX; Šimić 2009, Sl. 8-8a, Kat. 41. U prvoj objavi A. Mozsolics (1950, 32) navode se četiri torkvesa s time da su tri s nepoznatog nalazišta, a jedan iz Siska pronađen u Kupi, nedaleko ušća u Savu, te A. Mozoslics zaključuje kako vjerojatno sva četiri komada potječu s istog nalazišta.

61 Slični nalazi od zlatne žice potječu iz sela Malino i čuvaju se u Muzeju brodskog Posavlja (Miklik-Lozuk, Miškiv, Lozuk 2006, 6, 8, 21), ali oni prema stilskoj analizi pripadaju drugom proizvodnom krugu te nisu uključeni u ovo razmatranje.

62 Pittioni 1954, 417, Sl. 288–289.

63 Gruber 2008.

64 Mozsolics 1982, 299, T. 13: 1–4; T. 14.

65 Mozsolics 1950; Ilon 2015.

66 Mozsolics 1982, 306; Hänsel 2003, 173; Ilon 2015, 107–112.

67 Hänsel 2003, 173, Sl. 17.

60 Mozsolics 1950, 31–32, Pl. 9; Šimić 2009, Fig. 8–8a, cat. 41. The first publication, by A. Mozsolics (1950, 32) brings four torques – three from unknown sites, and one from Sisak, discovered in the Kupa River, not far from the Sava interfluve. A. Mozoslics concludes that all four finds probably originate from the same site.

61 Similar finds made of gold wire were found in the Malino village and are being kept at the Museum of the Brodsko Posavlje region (Miklik-Lozuk, Miškiv, Lozuk 2006, 6, 8, 21). Based on a stylistic analysis, they belong to another production circle, and are not a part of this study.

62 Pittioni 1954, 417, Fig. 288–289.

63 Gruber 2008.

64 Mozsolics 1982, 299, Pl. 13: 1–4; Pl. 14.

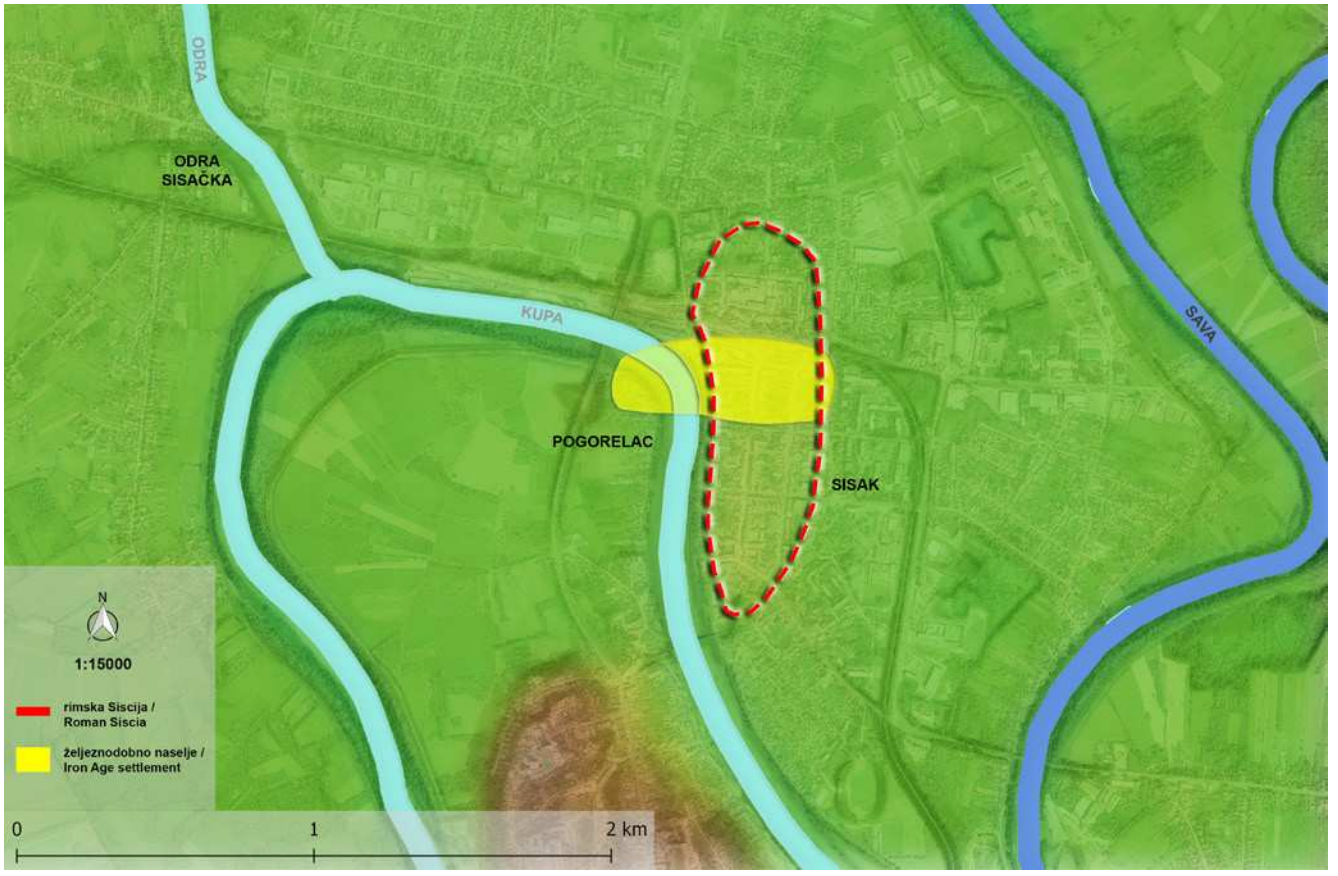
65 Mozsolics 1950; Ilon 2015.

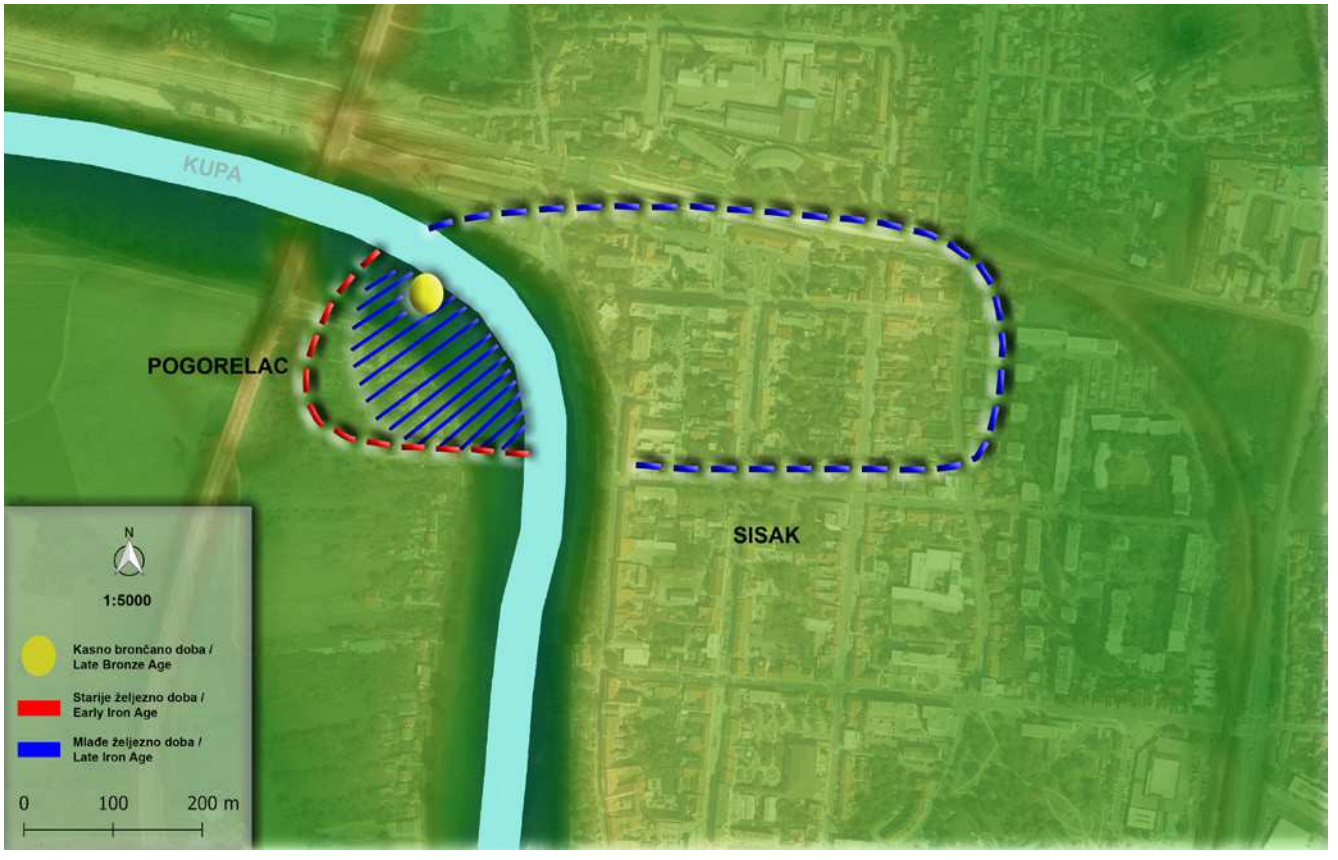
66 Mozsolics 1982, 306; Hänsel 2003, 173; Ilon 2015, 107–112.

67 Hänsel 2003, 173, Fig. 17.

SL. 16
Naseobinska dinamika brončanodobnog
i željeznodobnog naselja u Sisku (M. Mađerić)

FIG. 16
Settlement dynamics of the Bronze
and Iron Age settlement in Sisak (M. Mađerić)





3. ŽELJEZNODOBNO NASELJE U SISKU

THE IRON AGE SETTLEMENT IN SISAK

Ivan Drnić

S obzirom na to da se život u sisačkom pretpovijesnom naselju odvijao u razdoblju od oko tisuću godina, jasno je da je ono prolazilo kroz različite razvojne faze. Ta naseobinska dinamika, koja je uključivala naseljavanje desne obale rijeke Kupe, na položaju danas poznatom kao Pogorelac, ali i lijeve strane, na mjestu današnje gradske jezgre, može se podijeliti u tri glavne faze:

1. završetak kasnog brončanog i starija faza starijeg željeznog doba (1000. – 600./550. pr. Kr.),
2. mlađa faza starijeg i početak/sredina mlađeg željeznog doba (600./550. – 200./150. pr. Kr.),
3. srednja/kasna faza mlađeg željeznog doba (200./150. – 35. pr. Kr.).

Važno je istaknuti da se predložena interpretacija naseobinske dinamike zasniva na dostupnim podacima i da ona nikako nije konačna. Iako su spoznaje o sisačkom pretpovijesnom/protopovijesnom naselju znatno unaprijeđene u posljednjih petnaestak godina, one nikako nisu u potpunosti zadovoljavajuće, osobito ako se uzme u obzir kompleksnost nalazišta, pri čemu svako novo istraživanje može baciti novo svjetlo na poznavanje ovoga, bez ikakve sumnje, iznimnog nalazišta.

Seeing as life in the prehistoric settlement in Sisak went on for about a thousand years, it clearly had to go through different stages of development. These settlement dynamics, including the settling of the right bank of the Kupa River, the position known today as Pogorelac, and the left bank, where today's city centre is, can be divided into three main phases:

1. The end of the Late Bronze and the earlier phase of the Early Iron Age (1000–600/550 BC),
2. The later phase of the Early and the beginning/middle of the Late Iron Age (600/550–200/150 BC),
3. The middle/late phase of the Late Iron Age (200/150–35 BC).

It is important to note that the suggested interpretation of the settlement dynamics is based on available data and is by no means final. Although insight into the prehistoric/proto-historic settlement in Sisak has been significantly increased in the last fifteen or so years, they are in no way completely satisfactory, especially if one considers the complexity of the site. Thus, new research can shed new light on this undoubtedly exceptional site.

3.1 NASEOBINSKA DINAMIKA

U prethodnom poglavlju o nastanku sisačkog brončanodobnog naselja već je objašnjeno da su njegovi tragovi locirani na desnoj obali rijeke Kupe, na što, nažalost, ne upućuju istražene naseobinske strukture, već prikupljena pokretna građa među kojom pojedini primjerci potječu iz završne faze kasnog brončanog doba (stupnjevi Ha A2 – Ha B). Osim kasnobrončanodobnog materijala, u iskopavanjima na poziciji Pogorelac-Keltsko prikupljena je pokretna građa, uglavnom ulomci keramičkih posuda iza posuda: , ali i znatan broj metalnih nalaza, iz starijeg i mlađeg željeznog doba, što upućuje na najduži kontinuitet od svih do sada istraženih pozicija s ostatcima predrimskih naseobinskih slojeva u Sisku. Iz tog razloga, na sadašnjem stupnju istraženosti, jezgru sisačkog pretpovijesnog naselja, odakle se ono u starijem željeznom dobu širilo na povišenu desnu obalu Kupe, a zatim i na lijevu obalu u mlađem željeznom dobu, vjerojatno treba tražiti upravo na ovom položaju (Sl. 16).

Recentna iskopavanja Arheološkog muzeja u Zagrebu, koja se u kombinaciji s geofizičkim pregledima kontinuirano provode od 2012. godine proširila su dosadašnja relativno skromna znanja o željeznodobnom naselju na položaju Pogorelac (Sl. 17). U

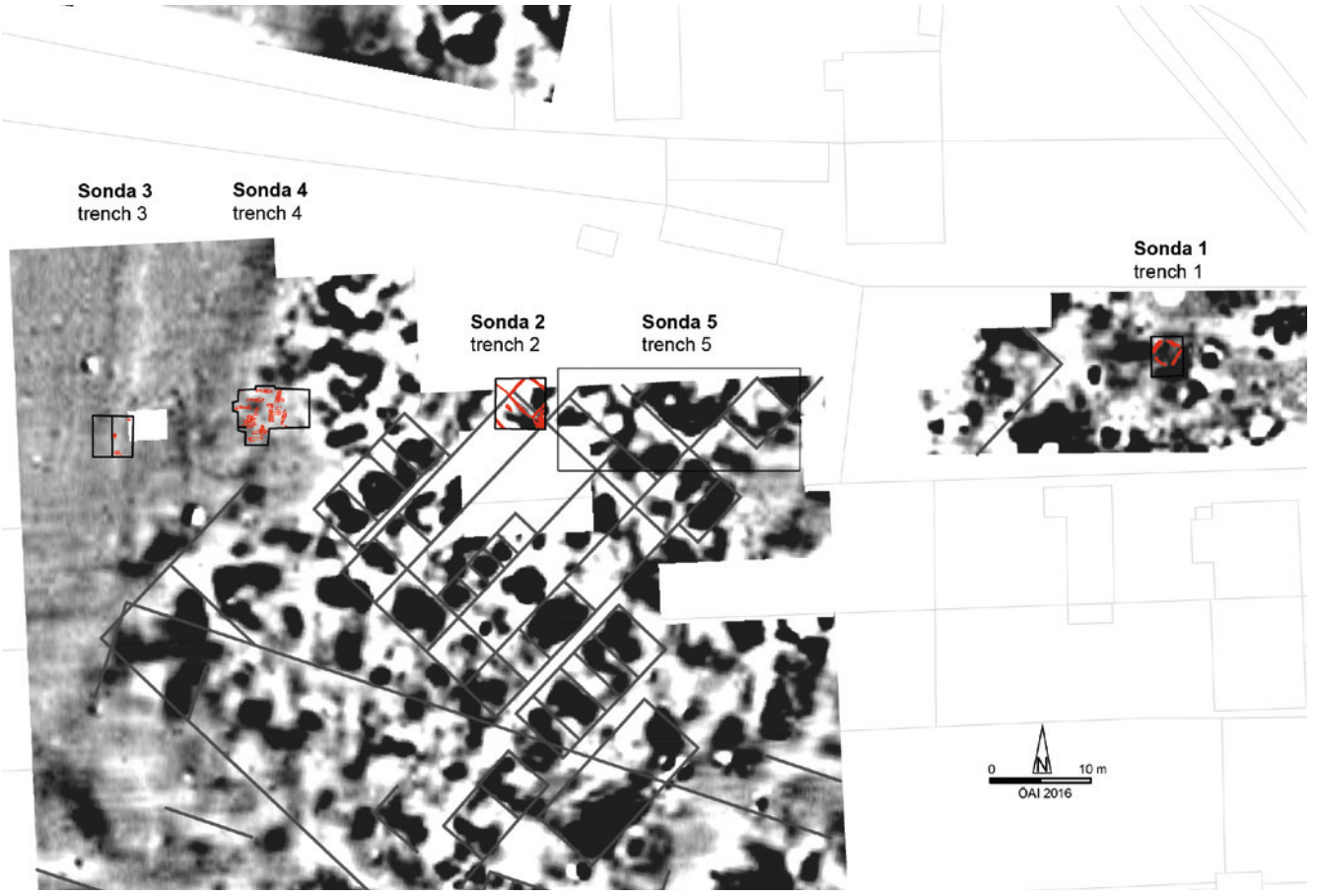
SETTLEMENT DYNAMICS

The previous chapter on the development of the Bronze Age settlement is Sisak already explained that its traces were located on the right bank of the Kupa River. Unfortunately, this does not refer to excavated dwellings, but only to movable material that includes some finds dated to the final phase of the Late Bronze Age (the Ha A2–Ha B phase). Other than Late Bronze Age material, the excavations at Pogorelac-Keltsko mostly yielded fragments of ceramic vessel as well as a significant number of metal finds dated to the Early and Late Iron Age, indicating that this site enjoyed the longest continuity of all the positions with remains of pre-Roman layers excavated thus far in Sisak. That is why, based on the currently available data, the core of the settlement, from which it spread to the elevated parts on the right bank of the Kupa River in the Early Iron Age and to the left bank during the Late Iron Age, should expectedly be located at this precise location (Fig. 16).

Recent excavations, continuously conducted by the Archaeological Museum in Zagreb since 2012, in combination with geophysical surveys, have widened previously narrow insight into the Iron Age settlement in the Pogorelac position

SL. 17
Rezultati geomagnetskog pregleda na sjeveroistočnom dijelu položaja Pogorelac s označenim položajem istraženih Sondi 1-5
(I. Drnić, S. Groh 2018)

FIG. 17
The results of geomagnetic survey done at the northeastern part of the Pogorelac position with marked positions of Trenches 1–5
(I. Drnić, S. Groh 2018)



SL. 18
Segment stariježeljeznodobnog naselja u Sondama 2 i 5 na položaju Pogorelac u Sisku s gusto građenim objektima (kasnohalštatska / ranolatenska faza) (I. Drnić, M. Mađerić)

FIG. 18
The segment of the Early Iron Age settlement in Trenches 2 and 5 at the Pogorelac position in Sisak with densely distributed structures (the Late Hallstatt / Early La Tène phase) (I. Drnić, M. Mađerić)

istraživanjima su potvrđeni različiti horizonti naseljavanja, kao i kronološki različita uporaba prostora unutar naselja. Ustanovljeni su i načini gradnje nastambi i djelomično njihova organizacija.

Najstariji naseobinski slojevi iz starijega željeznog doba istraženi su u Sondama 1, 2, 4 i 5, smještenima na desnoj, povišenoj obali rijeke Kupe, dok u iskopavanju Sonde 3 nisu zabilježeni tragovi naseljavanja iz ovoga razdoblja, čime je definirana zapadna granica naselja. (Sl. 17) Kada se ovim podatcima pridruže rezultati iskopavanja iz 1992. na položaju Pogorelac-Keltsko, pretpostavljena površina stariježeljeznodobnog naselja iz razdoblja od 6. do 4. st. pr. Kr., smještenog na sjeveroistočnom dijelu Pogorelca, procjenjuje se na 3 do 4 hektara (Sl. 16). Recentna iskopavanja su potvrdila nekoliko uzastopnih stariježeljeznodobnih naseobinskih faza iz kasnohalštatskog razdoblja kada je sisačko naselje doživjelo znatnu ekspanziju.[68] Također, iskopavanja kombinirana s rezultatima geofizičkih mjerenja potvrdila su da je naselje na Pogorelcu, ili barem njegov dio, u kasnohalštatskoj/ranolatenskoj fazi (6. – 4. st. pr. Kr.) imalo dobro organiziranu unutrašnju strukturu s nastambama organiziranim u više-manje pravilnu mrežu, što bi moglo upućivati na određene protourbane koncepte u planiranju (Sl. 18 – 19). Slična naseobinska organizacija zabilježena je i na nekim drugim kasnobrončanodobnim i stariježeljeznodobnim naseljima u susjednim regijama, primjerice na položaju Tribuna u Ljubljani[69] te nalazištu Pod kod Bugojna.[70]

Prisustvo mlađeželjeznodobnih slojeva u Sondi 1 drugačijih depozicijskih karakteristika u odnosu na one stariježeljeznodobne, kao i njihov izostanak u zapadnom dijelu naselja, upućuju na mogućnost da se naselje opsegom smanjilo te je u razdoblju od kraja 4. i početka 3. st. pr. Kr. pa sve do druge polovice 1. st. pr. Kr. okupiralo prostor bliže rijeci Kupi (Sl. 16 – 17, 20). Nadalje, krajem srednjeg ili vjerojatnije u kasnom latenu, od sredine 2. st. pr. Kr., dio naselja se formirao i na lijevoj obali rijeke Kupe, gdje do sada nisu zabilježeni tragovi naseljavanja iz starijega željeznog doba. Ova spoznaja stubokom je promijenila perspektivu iz koje se sagledavala naseobinska dinamika na sisačkom prostoru u mlađem željeznom dobu i početkom rimske vladavine. Prema uvriježenom mišljenju, uglavnom zasnovanom na interpretaciji Strabonovog teksta, Segest(ik)a, smještena na poziciji Pogorelac, na desnoj obali rijeke Kupe, predstavlja željeznodobno naselje *(pólis/*πόλις*)*, dok je Siscija kao rimska utvrda osnovana krajem 1. st. pr. Kr. i početkom 1. st. po Kr. na lijevoj obali.[71] Ključna saznanja za promjenu shvaćanja o postojanju željeznodobnog naselja i na lijevoj obali Kupe, koje je do tada bilo samo na razini spekulacije, iznjedrilo je zaštitno iskopavanje na mjestu zgrade Državnog arhiva, na križanju Frankopanske ulice i Ulice Franje Lovrića, provedeno u dvije etape, 2003. i 2004. godine, na površini od 405 m². Detaljnom analizom stratigrafskih podataka i brojne pokretne građe, uglavnom ulomaka keramičkih posuda, iz dva metra visokih mlađeželjeznodobnih kulturnih slojeva definirane su tri naseobinske faze koje su prethodile najranijoj rimskoj

(Fig. 17). The research has confirmed the existence of different habitational phases as well as a chronologically different use of the area within the settlement. The research has additionally revealed the modes of constructing dwellings and some aspects of their organization.

The oldest Early Iron Age habitational layers were recorded in Trenches 1, 2, 4 and 5, situated on the right, elevated bank of the Kupa River, while the excavations of Trench 3 did not yield traces of habitation from this period, thereby defining the western border of the settlement (Fig. 17). When this data is studied together with that obtained in the 1992 excavations of the Pogorelac-Keltsko position, the presumed area of the Early Iron Age settlement, situated in the northeastern part of Pogorelac and dated to the 6th - 4th century BC, amounts to 3–4 hectares (Fig. 16). Recent excavations have revealed several Early Iron Age habitational phases from the Late Hallstatt period, when the settlement in Sisak expanded significantly.[68] The excavations in combination with the results of geophysical prospection also confirmed that the settlement at Pogorelac, or at least a part of it, had a well-organized internal structure whereby dwellings were organized in a more-or-less regular grid in the Late Hallstatt/Early La Tène period (6th–4th century BC), a fact that could point to certain proto-urban planning concepts. (Fig. 18–19) A similar organization of settlements was recorded at some other Late Bronze and Early Iron Age sites in the neighboring regions, for example the Tribuna position in Ljubljana[69] and the site of Pod near Bugojno.[70]

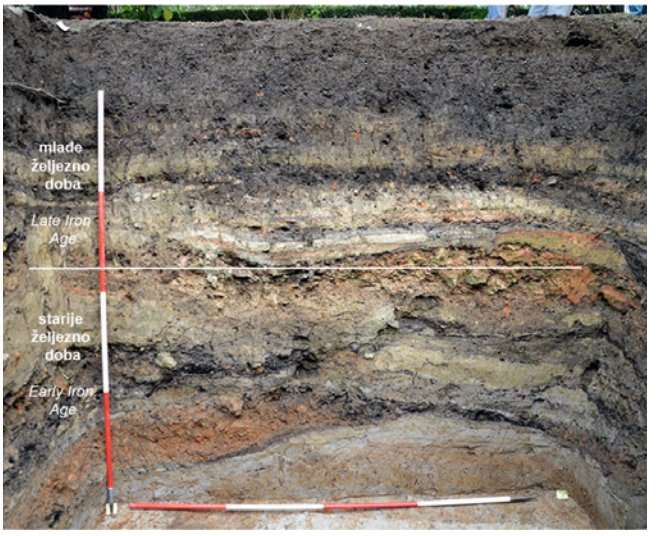
The presence of Late Iron Age layers in Trench 1 that display different depositional characteristics to those of the Early Iron Age, as well as a lack of them in the western part of the site, point to the possibility that the settlement reduced in size and occupied an area closer to the Kupa River from the end of the 4th and the beginning of the 3rd to the second half of the 1st century BC (Fig. 16–17, 20). Furthermore, at the end of the Middle or, more likely, in the Late La Tène, from the mid-2nd century BC, a part of the settlement was formed on the left bank of the Kupa River where no traces of settlement dated to the Early Iron Age have been discovered so far. This piece of information changed the perspective on the settlement dynamics studied in the territory of Sisak in the Late Iron Age and at the beginning of Roman rule. According to the generally accepted opinion, mostly founded on the interpretation of Strabo's text, *Segest(ic)a*, situated in the Pogorelac position on the right bank of the Kupa River, was the Iron Age settlement (*pólis* / πόλις), while *Siscia*, as the Roman fort founded at the end of the 1st century BC and the beginning of the 1st century AD, was on the left bank.[71] Key revelations, which changed the idea of there being an Iron Age settlement on the left bank of the Kupa River (previously only speculated), were made in the excavations of the Državni Arhiv position at the crossroads of Frankopanska and Franje Lovrića streets. These were conducted in two phases in 2003 and 2004 in an area of 405 m². A detailed analysis of the

68 Drnić, Groh 2018.
69 Vojaković 2013; 2014.
70 Čović 1987, 507–510.
71 Strabon 7.3.2; Šašel 1974, 726; Nenadić 1987, 72 i dr.

68 Drnić, Groh 2018.
69 Vojaković 2013; 2014.
70 Čović 1987, 507–510.
71 Strabo 7.3.2; Šašel 1974, 726; Nenadić 1987, 72 and others.

SL. 19
Zračna snimka Sonde 5 s gusto građenim objektima na položaju Pogorelac u Sisku (kasnohalštatska/ranolatenska faza) (L. Bogdanić)

FIG. 19
An aerial view of Trench 5 with densely distributed structures at the Pogorelac position in Sisak (the Late Hallstatt/Early La Tène phase) (L. Bogdanić)



SL. 20
Naseobinski slojevi starijeg i mlađeg željeznog doba u Sondi 1 na položaju Pogorelac u Sisku (sjeverni profil) (I. Drnić)

FIG. 20
The Early and Late Iron Age settlement layers in Trench 1 at the Pogorelac position in Sisak (the northern profile) (I. Drnić)

prisutnosti na ovom prostoru. Od istraženih struktura ističu se ostatci okomite keramičarske peći s očuvanim ložištem i rešetkom iz prve faze (Sl. 65) te ostatci građevine pravokutnog tlocrta dužine 16 metara, orijentacije sjeveroistok-jugozapad, koju tvore ostatci spaljenih drvenih greda prosječne širine oko 60 cm, iz druge naseobinske faze.[72]

Nakon iskopavanja na položaju Državnog arhiva, gdje je prvi puta jasno potvrđena naseobinska aktivnost iz mlađeg željeznog doba na lijevoj strani Kupe, uslijedila su i nova otkrića na položajima Dunavski Lloyd, Frankopanska b.b. te naposljetku na sisačkom željezničkom kolodvoru. Pozicija Dunavski Lloyd, smještena pedesetak metara istočno od korita rijeke Kupe, istraživana je 2010. godine.[73] Na površini od 300 m² istraženi su ostatci rimske arhitekture datirani od 1. do 4. st. i definirani u četiri naseobinske faze. Ispod najstarije rimske faze zabilježeni su ostatci i predrimskih, mlađeželjeznodobnih slojeva i struktura, kao što su podnice objekata, ognjišta, ukopi stupova, otpadne jame i kanali, te veća količina pokretne građe.[74] Pozicija Frankopanska ulica b.b. nalazi se između prethodno opisanih položaja Dunavski Lloyd i Državni arhiv. Ovdje je 2011. istražena površina od 59 m² pri čemu su definirane tri faze korištenja prostora: recentna/novovjekovna, rimska i mlađeželjeznodobna u kojoj su zabilježene različite strukture ukopane u geološku podlogu, uključujući i ostatke dvodijelne keramičarske peći s rešetkom (Sl. 66).[75]

Zaštitno istraživanje na željezničkom kolodvoru provedeno je u dvije faze tijekom 2014. i 2016. godine na površini od oko 3000 m².[76] I ovdje su ispod gustih ostataka rimske arhitekture, uključujući i monumentalne ostatke siscijskog foruma, zabilježeni naseobinski slojevi mlađeg željeznog doba koje rijetki metalni nalazi, kao što su fibule tipa Podzemelj i Picugi, datiraju od druge polovice 2. do u drugu polovicu 1. stoljeća pr. Kr., moguće do 35. godine pr. Kr. i početka rimske okupacije ovoga prostora. Naime, između mlađeželjeznodobnih slojeva i slojeva sa zidanom arhitekturom, istraženi su naseobinski slojevi s rijetkim ostatcima drvene arhitekture i pokretnim materijalom (fina stolna keramika, fibule, nalazi vojne opreme) koji datiraju iz srednje/kasnoaugustovskog i tiberijevskog razdoblja, a koji se s prilično sigurnošću mogu dovesti u vezu s rimskim vojnom prisutnošću. Stoga, iako bez konkretnijih građevinskih ostataka, nalazi iz ovih slojeva, zajedno s istovremenim materijalom s pozicija Dunavski Lloyd, Frankopanska b.b. i Državni arhiv, jasno upućuju na postojanje rimskog vojnog logora na lijevoj obali rijeke Kupe krajem 1. st. pr. Kr. i početkom 1. st. po Kr., posvjedočenog i u zapisima antičkih pisaca.

72 Drnić, Miletić Čakširan 2014.

73 Baćani *et al.* 2012, 89–96; Škrgulja 2018.

74 Škrgulja 2018.

75 Škrgulja 2018.

76 Jerončić, Paro, Mesarić 2018; Novaković, Paro, Radman-Livaja 2018; Miletić-Čakširan 2018.

stratigraphic data and numerous movable finds, mostly pottery fragments, in two meters of the Late Iron Age layers revealed three phases of settlement that preceded the earliest Roman presence in the area. The following stand out among the excavated structures: the remains of a vertical pottery kiln with a preserved firing chamber and grid from the first phase (Fig. 65), and the 16-m-long remains of a rectangular, northeast-southwest orientated building composed of burnt wooden beams that were on average 60 cm wide from the second phase of settlement.[72]

The excavations at Državni Arhiv, which were the first to yield traces of Late Iron Age habitation on the left bank of the Kupa River, were followed by new discoveries at the Dunavski Lloyd, Frankopanska b.b. and finally the Željeznički Kolodvor positions. The Dunavski Lloyd position, situated about fifty meters east of the Kupa riverbed, was excavated in 2010.[73] An area of about 300 m² revealed the remains of Roman architecture from four discernable habitational phases dated to the time between the 1st and 4th century AD. Below the earliest Roman phase, the remains of pre-Roman, Late Iron Age layers and structures were found, including dweling floors, hearths, post holes, waste pits, ditches, and much movable material.[74] The Frankopanska ulica b.b. position is situated between the previously described position of Dunavski Lloyd and Državni Arhiv. In 2011, the area of 59 m² revealed three phases of space use: the recent/Modern Age, Roman and Late Iron Age, which revealed different structures buried in the geological base, including the remains of a updraught pottery kiln with a grid (Fig. 66).[75]

Rescue excavations of the Željeznički Kolodvor position were conducted in two phases in 2014 and 2016 and covered approximately 3000 m².[76] It too yielded Late Iron Age habitational layers beneath the dense remains of Roman architecture, including the monumental remains of the *Siscia* forum. They can, based on rare metal finds, such as Podzemelj and Picugi type fibulas, be dated to the time between the second half of the 2nd and the second half of the 1st century BC, possibly until 35 BC and the beginning of Roman occupation in the area. The space between the Late Iron Age layers and stone architecture yielded habitational layers with scarce traces of wooden architecture and movable finds (fine tableware, fibulas, military equipment). These can be dated to the middle/late Augustan and Tiberian period and securely connected to the presence of the Roman military. Therefore, although there were no compact architectural remains, the finds from these layers, along with contemporaneous material from the Dunavski Lloyd, Frankopanska b.b. and Državni Arhiv positions, clearly point to the existence of a Roman military camp on the left bank of the Kupa River at the end of the 1st century BC and the beginning of the 1st century AD, as attested in the works of ancient authors.

72 Drnić, Miletić Čakširan 2014.

73 Baćani *et al.* 2012, 89–96; Škrgulja 2018.

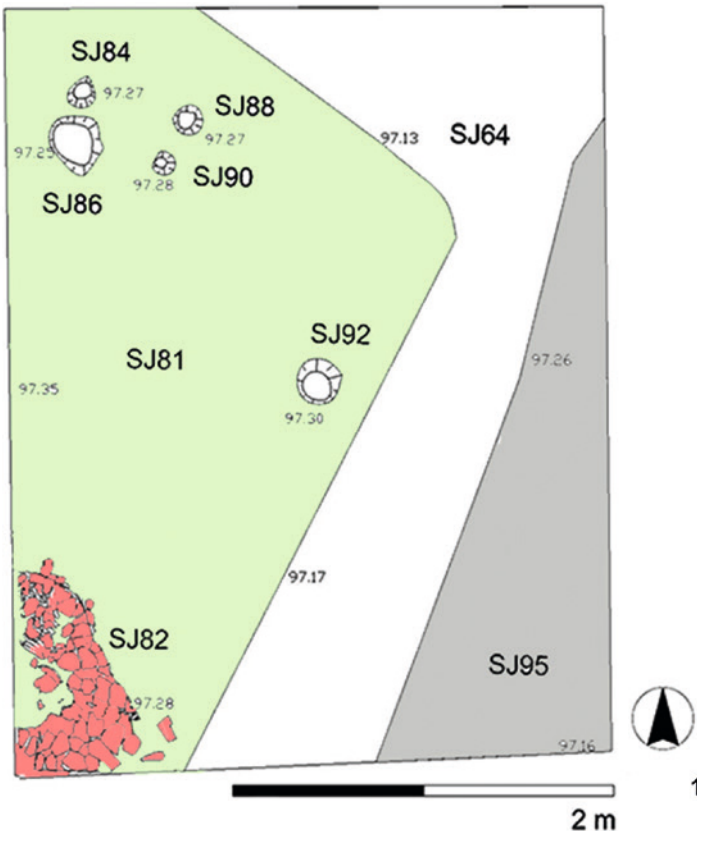
74 Škrgulja 2018.

75 Škrgulja 2018.

76 Jerončić, Paro, Mesarić 2018; Novaković, Paro, Radman-Livaja 2018; Miletić-Čakširan 2018.

SL. 21
Ostatci Objekta 3 s podnicom od nabijene zemlje i rupama za stupove u Sondi 1 na položaju Pogorelac u Sisku (I. Drnić, M. Mađerić)

FIG. 21
The remains of Structure 3 with a floor made of compacted clay and post holes in Trench 1 at the Pogorelac position in Sisak (I. Drnić, M. Mađerić)



Za dio mlađeželjeznodobnog naselja na desnoj obali rijeke Kupe, na sadašnjoj razini istraženosti koja uključuje potpun nedostatak ranorimskog materijala u svim istraženim sondama, može se zaključiti da je ono prestalo funkcionirati krajem 1. st. pr. Kr., što se poklapa s povijesno zabilježenim događajem rimskog osvajanja naselja i osnivanja vojnog uporišta 35./34. pr. Kr. Istraženi rimskodobni naseobinski ostatci s Pogorelca datiraju od kraja 1. i početka 2. do kraja 3. st. kada je na sjeveroistočnom dijelu Pogorelca bio naseljen periferni dio Siscije s tragovima drvene arhitekture.[77]

3.2 ARHITEKTURA ŽELJEZNODOBNIH NASTAMBI

Na osnovi podataka prikupljenih u recentnim istraživanjima na Pogorelcu, mogu se pretpostaviti dva tipa drvene gradnje na istraženom dijelu željeznodobnog naselja na Pogorelcu. Prvi tip predstavlja gradnja s okomitim u zemlju zabijenim stupovima koji su činili zidnu osnovu objekta. Postojanje objekata građenih ovom tehnikom potvrđuju ukopi za stupove, koji su zabilježeni u najstarijoj naseobinskoj fazi iz starijeg željeznog doba i istraženi u Sondi 2 te na periferiji naselja u Sondi 4. No zbog relativno male istražene površine u obje sonde, navedene stupove nije bilo moguće povezati u sigurne cjeline koje bi tvorile tlocrte pojedinih građevina. Nešto jasnija situacija zabilježena je u naseobinskom Horizontu 1a u Sondi 2, gdje su u sterilan sloj žute gline bile ukopane tri rupe od stupova polukružno postavljene oko ovalnog ognjišta promjera 60 cm.[78] Rupe za stupove zabilježene su i u mlađoj fazi Objekta 3 u Sondi 1, gdje su se u obnovljenom podu od žuto-zelene gline nalazili ukopi za stupove koji su činili osnovu zidne odnosno krovne konstrukcije (Sl. 21). Kod ovog tipa gradnje prostor između nosivih stupova obično se ispunjava prepletom od šiblja koji se premazuje kućnim lijepom, odnosno smjesom blata i organskog materijala (trave, slame, piljevine), a koji je u slučaju Objekta 3 potvrđen masivnim slojem urušenja koje je u potpunosti prekrilo ostatke poda. Slično konstrukcijsko rješenje s podovima od nabijene zemlje i okomitim stupovima zabijenima u tlo zabilježeno je na nizu objekata na ljubljanskoj Tribuni u svim kasnobrončanodobnim i stariježeljeznodobnim fazama naselja, od kojih je peta faza, datirana od kraja 6. do u 4. st. pr. kr (certoški i negovski stupanj dolenjske halštatske skupine), više-manje istovremena s kasnohalštatskim naseobinskim horizontima na Pogorelacu u Sisku.[79]

Drugi, iz tehničke perspektive napredniji konstrukcijski tip predstavlja gradnja s vodoravno položenim temeljnim gredama na koje se postavljaju okomiti stupovi kao konstrukcijska osnova zidne plohe, a zatim se na njih polažu grede vjenčanice i krovna konstrukcija (Sl. 27). U okvirima tradicijskog graditeljstva ovaj se tip gradnje, poznat pod terminom kanatni tip/tehnika (slo. *sohasta gradnja*, njem. *Ständerbau*, engl. *postpad construction*),[80] zadržao sve do 20. stoljeća, a primjeri kao što su tzv. posavske kuće

77 Drnić, Groh 2018.

78 Drnić, Groh 2018, 91, Sl. 18.

79 Vojaković 2013; 2014.

80 Dular 2008, 340, Sl. 4–5a; Črešnar 2007; Vojakovič 2013, 303–304, Sl. 155.

With the current state of research, which shows a complete lack of early Roman material in all excavated trenches, it can be said that the Late Iron Age settlement on the right bank of the Kupa River ceased to exist at the end of the 1st century BC, which coincides with the historically recorded Roman conquest of the settlement and the creation of a military stronghold in 35/34 BC. The excavated Roman habitational remains from Pogorelac can be dated to the time between the end of the 1st/the beginning of the 2nd century and the end of the 3rd AD, when the northeastern part of Pogorelac functioned as the periphery of *Siscia*, as indicated by traces of wooden architecture.[77]

THE ARCHITECTURE OF IRON AGE DWELLINGS

Based on data collected in recent excavations at Pogorelac, it is possible to suggest two types of wooden construction in the excavated part of the Iron Age settlement at Pogorelac. The first type used vertical beams planted into the ground as the basis of the structure walls. The existence of structures constructed in this manner is attested by post holes recorded in the oldest Early Iron Age habitational phase in Trench 2 and at the periphery of the settlement in Trench 4. However, due to the relatively small excavated surface in both trenches, the said posts could not be connected into meaningful units that would make up the layouts of the structures. A somewhat clearer situation was noted in the horizon 1a in Trench 2, where three post holes were dug in a sterile layer of yellow clay, forming a semicircle around an oval hearth that measured 60 cm in diameter.[78] Post holes were also recorded in the later phase of Structure 3 in Trench 1, where the renewed yellow-green clay floor had holes from posts that made up the construction of the walls, i.e. the roof (Fig. 21). In this type of construction, the space between the supporting posts is usually filled with interwoven wattle that is then covered with daub, i.e. a mixture of mud and organic material (grass, hay, sawdust). In the case of Structure 3, this was confirmed by the discovery of a massive layer of collapsed material that completely covered the floor. A similar construction technique, with floors made of compacted clay and vertical posts stuck into the ground, has been confirmed in a series of structures at Tribuna in Ljubljana in all Late Bronze and Early Iron Age phases of settlement. There the fifth phase, dated from the late 6th until 4th century BC (the Certosa and Negova phases of the Dolenjska Hallstatt group), is more-or-less contemporaneous with the Late Hallstatt phase of settlement at Pogorelac in Sisak.[79]

The second and technologically more advanced type of construction includes horizontally placed foundation beams. Vertical posts are then set upon these as the construction basis for the wall surfaces onto which rafters and the roof construction are then attached (Fig. 27). In traditional construction, this type, known as postpad construction (Slo. sohasta gradnja, Ger. Ständerbau),[80] was used until the 20th century, and examples like

77 Drnić, Groh 2018.

78 Drnić, Groh 2018, 91, Sl. 18.

79 Vojaković 2013; 2014.

80 Dular 2008, 340, Fig. 4–5a; Črešnar 2007; Vojakovič 2013, 303–304, Fig. 155.

SL. 22
Dio istraženog Objekta 6/10 u Sondi 2
na položaju Pogorelac u Sisku (I. Drnić)

FIG. 22
A part of excavated Structure 6/10 in Trench 2
at the Pogorelac position in Sisak (I. Drnić)

SL 23
Dio istraženog Objekta 6/10 u Sondi 5
na položaju Pogorelac u Sisku (L. Bogdanić)

FIG. 23
A part of excavated Structure 6/10 in Trench 5
at the Pogorelac position in Sisak (L. Bogdanić)

SL. 24
Podnica i dio temeljne grede Objekta 6/10
u Sondi 2 na položaju Pogorelac u Sisku (I. Drnić)

FIG. 24
The floor and a part of the basal beam in Structure 6/10
in Trench 2 at the Pogorelac position in Sisak (I. Drnić)

mogu znatno pridonijeti razumijevanju ove već u pretpovijesni korištene građevinske tehnike. Kod kanatne tehnike vodoravne temeljne grede mogu biti postavljene na kamene temelje izrađene u suhozidu kakvi su zabilježeni na jugoistočnoalpskim brončanodobnim i željeznodobnim lokalitetima, od Mosta na Soči,[81] preko ljubljanske Tribune,[82] do Kučara u Beloj Krajini[83] i Poštele u Štajerskoj,[84] a koji su služili kao izolacija od vlage, što je posljedično utjecalo na sporije propadanje drveta i produženi vijek nastambe. Zabilježeni su i primjeri gdje su građevine postavljene izravno na tlo, što je utjecalo na brže propadanje drvene građe, kao što je to slučaj s kućom B na slovenskom nalazištu Kučar,[85] ali i kod svih istraženih sisačkih objekata. Važno je istaknuti da se dvije opisane graditeljske tehnike, sa stupovima i kanatni, nisu međusobno isključive. Primjerice, u naselju na Tribuni zabilježeni su primjeri kombinirane gradnje s tragovima vodoravnih temeljnih greda, suhozidnih temelja i ukopa za stupove koji su mogli nositi krovnu konstrukciju.[86]

Građevine izrađene u kanatnoj tehnici zabilježene su i u kasnohalštatskom horizontu sisačkog naselja na Pogorelcu, ali vjerojatno i u kasnolatenskom dijelu naselja na lijevoj obali rijeke Kupe, istraženog na položaju Povijesni Arhiv,[87] pri čemu Objekti 4 i 6/10, od kojih je ovaj drugi gotovo u potpunosti istražen u Sondama 2 i 5 na Pogorelcu, najbolje ocrtavaju sve elemente opisane građevinske tehnike (Sl. 22 – 23). Objekt 6/10, orijentacije sjeverozapad-jugoistok, bio je dugačak deset, a širok pet metara, ukupne površine oko 50 m², a vjerojatno je imao stambenu funkciju. Zajedno s drugim nastambama, od kojih su u istom naseobinskom horizontu više ili manje istraženi Objekt 5 u Sondi 2, Objekti 11-13 u Sondi 5 te Objekt 3 u Sondi 1, Objekti 4 i 6/10 činili su gusto sabijeno naselje sa stambenim jedinicama organiziranim u više-manje pravilnu mrežu.

the so-called “posavske kuće” (houses from the Posavina region) can make a significant contribution to the understanding of this construction technique that was already used in prehistoric times. In postpad construction, the horizontal foundation beams can be set on stone foundations made with the drywall technique, as recorded on the Bronze and Iron Age sites in the southeastern Alps, including Most na Soči,[81] Tribuna in Ljubljana,[82] Kučar in Bela Krajina[83], and Poštela in Styria.[84] These foundations were used as insulation against moisture and, consequently, ensured the slower decay of the wood and a longer-life for the dwelling. Examples where the buildings were set directly onto the ground, which speed-up the decay of the wood, have also been noted, as was the case with house B at the Slovenian site of Kučar,[85] as well as all excavated structures in Sisak. It is important to note that these two construction techniques, with posts and postpad, were not mutually exclusive. The Tribuna settlement yielded examples of combined constructions with traces of horizontal foundation beams, drywall foundations and post holes that could have supported the roof construction.[86]

Buildings made using postpad construction were also recorded in the Late Hallstatt phase of the Sisak settlement at Pogorelac and probably also in the part of the Late La Tène settlement excavated at the Povijesni Arhiv position on the left bank of the Kupa River.[87] Structures 4 and 6/10 from Pogorelac, the latter being almost completely excavated in Trenches 2 and 5, are the best examples of all the elements of the described construction technique (Fig. 22–23). Structure 6/10, orientated northwest-southeast, was ten meters long, five meters wide, covered an area of about 50 m², and was probably a dwelling. Along with other dwellings from the same phase of settlement, including the partially excavated Structure 5 in Trench 2, Structures

81 Svoljšak, Dular 2016.
82 Vojaković 2013, 303–304, Sl. 155.
83 Dular, Ciglenečki, Dular 1995, 33–38.
84 Teržan 1990, 31.
85 Dular, Ciglenečki, Dular 1995, 39–45.
86 Vojaković 2013, 304–305.
87 Drnić, Miletić Čakširan 2014; Drnić, Groh 2018.

81 Svoljšak, Dular 2016.
82 Vojaković 2013, 303–304, Fig. 155.
83 Dular, Ciglenečki, Dular 1995, 33–38.
84 Teržan 1990, 31.
85 Dular, Ciglenečki, Dular 1995, 39–45.
86 Vojaković 2013, 304–305.
87 Drnić, Miletić-Čakširan 2014; Drnić, Groh 2018.

SL. 25
Ostatci spaljenih drvenih arhitektonskih elemenata Objekta 4 u Sondi 2 na položaju Pogorelac u Sisku (I. Drnić)

FIG. 25
The remains of burnt wooden architectural elements of Structure 4 in Trench 2 at the Pogorelac position in Sisak (I. Drnić)

Svi navedeni objekti imali su podnice od žute nabijene gline, debljine od nekoliko centimetara do 20 – 30 cm, koja je funkcionirala kao izolator (Sl. 24). Isto je konstrukcijsko rješenje zabilježeno na nekoliko građevina na ljubljanskoj Tribuni gdje se za izradu podova glina koristila u kombinaciji s lomljenim kamenom i oblutcima.[88]

Činjenica da je kod većine navedenih objekata zabilježen samo jedan red spaljenih greda uz podnice koje su činile temeljenu osnovu, upućuje na to da su oni bili građeni u opisanoj kanatnoj tehnici. Dobar primjer tome dio je masivnog balvana kružnog presjeka istraženog uz jugozapadnu stranu Objekta 6/10, koji se nalazio tik uz nabijenu podnicu (Sl. 24), kao i dobro očuvan, ali samo u manjem dijelu istražen balvan uz sjeveroistočni rub Objekta 7 (Sl. 22). Kod ovoga tipa drvene gradnje zidne plohe popunjavaju se daskama ili oblicama koje se uglavljuju u okomite stupove, nakon čega se zid premazuje kućnim lijepom.[89]

88 Vojaković 2013, primjerice objekt br. 8: 91–94, općenito: 300, Sl. 150.

89 Dular 2008, 340, Sl. 4–5A.

11–13 in Trench 5, and Structure 3 in Trench 1, Structures 4 and 6/10 made up a dense settlement with housing units organized in a more-or-less regular grid.

All of the listed structures had 20–30 cm thick floors made of yellow compacted clay that functioned as insulation (Fig. 24). The same construction technique was noted in several structures at Tribuna in Ljubljana, where floors were made of a combination of clay and pieces of broken rock and pebbles.[88]

The fact that only one row of burnt beams was found along the floors that formed the foundation of most of the structures mentioned above indicates that they were built in the described postpad technique. A good example of this is the part of a massive round log that was discovered along the southwest side of Structure 6/10 right beside to the compacted floor (Fig. 24), as is the well-preserved but only partially excavated log found along

88 Vojaković 2013, for example, structure no. 8: 91–94, general: 300, Fig. 150.

SL. 26
Komadi kućnog lijepa s otiscima zidnih dasaka iz željeznodobnih naseobinskih slojeva s položaja Pogorelac u Sisku (I. Drnić, M. Galić)

FIG. 26
Pieces of daub with imprints of wall planks from the Iron Age settlement layers from the Pogorelac position in Sisak (I. Drnić, M. Galić)

Upravo takva zidna struktura zabilježena je u slučaju Objekta 4 koji se nalazio točno ispod Objekta 6/10 i kronološki pripada starijem, ali također kasnohalštatskom naseobinskom horizontu, gdje su u sloju s velikom količinom spaljenog drveta definirani ostatci dvije grede kružnog presjeka orijentacije sjeveroistok-jugozapad, ispod kojih su se nalazile tanje daske okomito postavljene na grede, orijentacije sjeverozapad-jugoistok (Sl. 25). Cijeli sloj sa spaljenim drvetom bio je prekriven debelim slojem kućnog lijepa. Jasno je da su opisane grede činile okomite stupove zidne konstrukcije, a tanje daske bile su pričvršćene na njih s unutrašnje strane objekta, dok je vanjska strana zidova bila premazana kućnim lijepom. Nakon što je objekt bio zahvaćen požarom, zidna konstrukcija se urušila pri čemu su daske završile ispod greda, na podu od nabijene zemlje, a sve je prekriveno masivnim urušenjem spaljenog kućnog lijepa. I slučaju Objekta 5 koji je istražen u manjem segmentu u jugozapadnom dijelu Sonde 2, zabilježeni su ostatci tankih dasaka orijentacije sjeverozapad-jugoistok, dok su se s njihove vanjske strane nalazili skromni ostatci okomito položene grede koja je mogla činiti okomitu osnovicu zida na koji su navedene daske bile pričvršćene.[90]

Antrakološke analize drveta iz spaljenih objekata s Pogorelca potvrdile su da je u gradnji nastambi dominantno korišten hrast (*Quercus sp.*), pri čemu je zabilježena prisutnost dvije vrste: hrast lužnjak (*Quercus robur*) i hrast kitnjak (*Quercus petraea*).[91]

the northeast edge of Structure 7 (Fig. 22). In this type of wooden construction, the wall surfaces are filled with boards or shapes that fit into the vertical columns and then coated with daub.[89] The same wall structure was recorded in Structure 4, located just below Structure 6/10 and chronologically ascribed to the earlier but also the Late Hallstatt settlement phase, which yielded a layer with a large amount of burnt wood, the remains of two beams orientated northeast-southwest, and below them thinner planks lying northwest-southeast and perpendicular to the beams (Fig. 25). The whole layer with burned wood was covered with a thick layer of daub. These beams were clearly the vertical posts of the wall structure, and the thinner planks were attached to them from the inside, while the exterior of the walls was coated with daub. After the structure burned, the walls collapsed, leaving the planks below the beams on the compacted floor and everything covered by a massive amount of collapsed daub. Structure 5, of which only a small segment was excavated in the southwestern part of Trench 2, yielded the remains of thin planks orientated northwest-southeast. The exterior of these revealed a few remains of a vertically laid beam that may have formed the vertical base of the wall to which they were fastened.[90]

Anthracological analyses of wood from burnt buildings from Pogorelac confirmed that oak (*Quercus sp.*) was the predominant species material for the construction of dwellings, and

90 Drnić, Groh 2018.

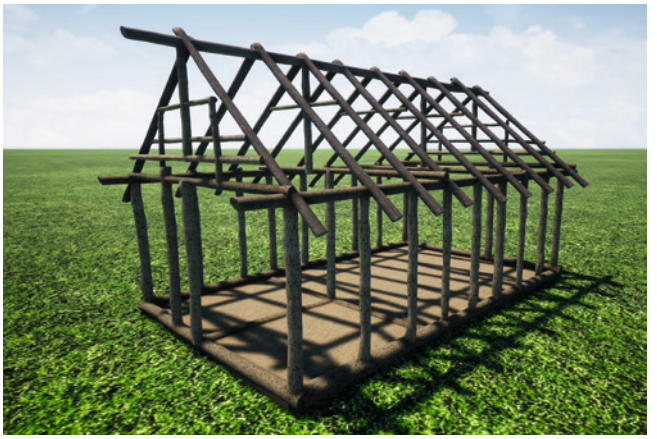
91 Analize su proveli Tomasz Ważny, Anastasia Christopoulou i Barbara Gmińska-Nowak (Nicolaus Copernicus University, Faculty of Fine Arts, Institute for the Study, Conservation and Restoration of Cultural Heritage).

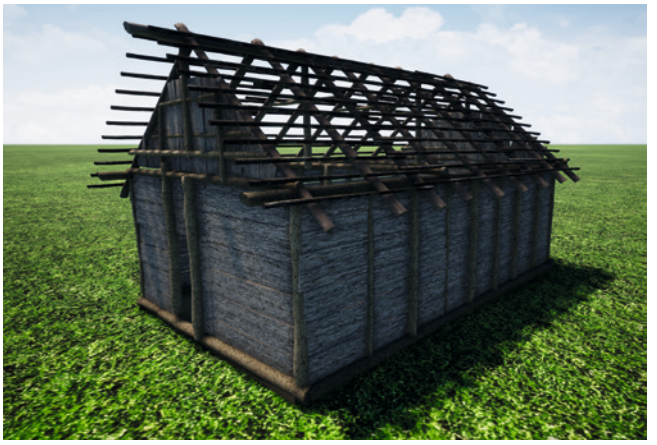
89 Dular 2008, 340, Fig. 4–5A.

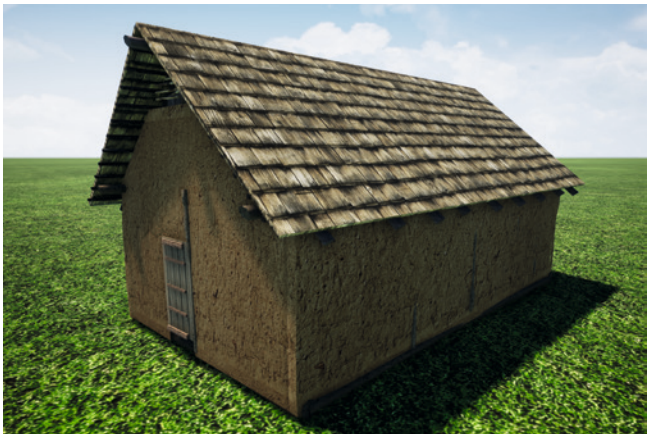
90 Drnić, Groh 2018.

SL. 27
Idealna rekonstrukcija kuće
iz kasnohalštatske/ranolatenske faze naselja
s položaja Pogorelac u Sisku (M. Mađerić).

FIG. 27
An ideal reconstruction of a house
from the Late Hallstatt/Early La Tène
phase of the settlement from the Pogorelac
position in Sisak (M. Mađerić).







Osim hrasta zabilježena je manja prisutnost neidentificiranih dvosupnica. Za usporedbu, analize drvene građe, provedene na nalazištu Tribuna u Ljubljani na većem broju uzoraka u svim naseobinskim fazama naselja, uz sporadičnu pojavu bukve (*Fagus*), javora (*Acer*) i johe (*Alnus*) potvrdile su i dominantnu uporabu hrasta (*Quercus sp.*) u gradnji nastambi.[92]

Već je navedeno da su drveni zidovi nastambi premazivani smjesom blata i organskog materijala, što je u istraživanjima na Pogorelcu potvrđeno masivnim slojevima zidnih urušenja s velikom količinom kućnog lijepa kod svih opisanih objekata, a koji su nastali uslijed uništenja nastambi u požaru. Među njima su pronađeni i komadi s otisnutim tragovima drvene podloge, odnosno građe korištene za izgradnju zidnih ploha. Primjerice, tragovi na komadima kućnog lijepa iz urušenja zida Objekta 6/10 upućuju na uporabu okruglih balvana/oblica, ali i tesanih dasaka kojima su ispunjavane zidne plohe između okomitih stupova, što je dodatna potvrda uporabe kanatne tehnike u izgradnji objekta (Sl. 26).

Elementi krovne konstrukcije iznimno su rijetko sačuvani u arheološkim kontekstima, a isti je slučaj i kod sisačkih željeznodobnih nastambi. Ipak, koristeći pojedine etnografske primjere moguće je ponuditi određena konstrukcijska rješenja za pretpovijesnu drvenu arhitekturu. Primjerice, prema rekonstrukciji J. Dulara, kod kanatne tehnike krovna konstrukcija odnosno sljemenska greda postavljena je na okomite stupove koji se nalaze na kraćim stranama građevine, a može biti dodatno poduprta stupovima smještenim u unutrašnjosti objekta.[93] Alternativna tehnika mogla bi biti tzv. škarasta krovna konstrukcija kod koje se krov bazira na dva ili više parova križno postavljenih i na zidnu konstrukciju fiksiranih greda.[94] Što se tiče materijala korištenog za pokrivanje krovova, etnografski primjeri upućuju na nekoliko mogućnosti, pri čemu za sisačke željeznodobne nastambe, uzevši u obzir podneblje i zemljopisno okruženje, vjerojatno treba pretpostaviti uporabu drvenih dasaka odnosno šindre ili slame. Primjerice, u hrvatskoj tradicijskoj gradnji često je korištena slama raži zbog dužine stabljike, ali i dobrih izolacijskih svojstava. Krovni je pokrov bio debeo od 15 do 30 cm, uz umjereno održavanje mogao je trajati i do 60 godina.[95]

92 Vojakovič 2013, 293–294, Tab. 89.

93 Dular 2008, Sl. 4, 5A.

94 Črešnar 2007, 331–332; Dular 2008, 340.

95 Zebec 2010, 158–159.

two species were defined: common oak (*Quercus robur*) and sessile oak (*Quercus petraea*).[91] In addition to oak, a few unidentified dicotyledons were recorded. In comparison, analyzes of wood carried out at the Tribuna site in Ljubljana on a large number of samples from all phases of settlement, yielded sporadic finds of beech (*Fagus*), maple (*Acer*) and alder (*Alnus)* but also confirmed the predominant use of oak (*Quercus sp.*) in housing construction.[92]

It has already been stated that the wooden walls of the dwellings were coated with a mixture of mud and organic material, which was confirmed in the excavations at Pogorelec by massive layers of collapsed walls with a large amount of daub, created when the dwellings were destroyed by fire, in all the described structures. Daub includes pieces with imprinted traces of the wooden base, that is, the material used to construct the wall surfaces. For example, the traces found on pieces of daub from a collapsed wall of Structure 6/10 indicate the use of not only round logs/slats but also cut beams/boards that were used to fill the space between the vertical columns. This is yet another confirmation of the use the postpad technique for the building of the structure (Fig. 26).

Elements of roof structures are very rarely preserved in archeological contexts, and such is the case with the Iron Age dwellings from Sisak. However, with the aid of particular ethnographic examples, it is possible to offer some structural solutions for prehistoric wooden architecture. For example, according to the reconstruction done by J. Dular in the case of the post pad technique, the roof structure, i.e., the ridge beam, was set on vertical posts that were situated at the shorter sides of the structure, and may have been additionally supported by posts installed in the structure's interior.[93] An alternative technique may have also been the so-called scissor roof construction, in which the roof is based on two or more pairs of crossed beams fixed to the wall construction.[94] With regard to the material used to cover the roofs, ethnographic examples point to several possibilities. Considering the climate and geographical environment, the Iron Age dwellings from Sisak were most likely covered by wooden planks, shingle or straw. For example, in traditional Croatian construction, rye straw was often used because of the length of the stem and its good insulating properties. The roof cover was 15 to 30 cm thick and could, with moderate maintenance, last up to 60 years.[95]

91 The analyses were conducted by Tomasz Ważny, Anastasia Christopoulou and Barbara Gmińska-Nowak (Nicolaus Copernicus University, Faculty of Fine Arts, Institute for the Study, Conservation and Restoration of Cultural Heritage).

92 Vojakovič 2013, 293–294, Tab. 89.

93 Dular 2008, Fig. 4, 5A.

94 Črešnar 2007, 331–332; Dular 2008, 340.

95 Zebec 2010, 158–159.

SL. 28
Flotacija kantom uzoraka s nalazišta Sisak-Pogorelac, (lijevo);
250 µm mreža - prikupljanje boba iz uzorka 178 (desno) (K. Reed)

FIG. 28
Bucket flotation of samples from Sisak-Pogorelac (left);
250µm mesh collecting broad beans from sample 178 (right) (K. Reed)

4. PROIZVODNJA I PRIPREMA HRANE U SISAČKOM ŽELJEZNODOBNOM NASELJU

THE PRODUCTION AND PREPARATION OF FOOD AT THE IRON AGE SETTLEMENT IN SISAK

Ivan Drnić, Siniša Radović, Kelly Reed, Emily Zavodny

4.1 BILJNI OSTATCI IZ ŽELJEZNODOBNOG NASELJA U SISKU (KELLY REED)

Biljke su oduvijek bile sastavni dio našeg svakodnevnog života. Korištene su za jelo, piće, odjeću, gorivo, u medicinske svrhe i za gradnju ili im je pridavana kulturološka, ideološka, odnosno ritualna važnost. Sve navedene aspekte ljudskog života moguće je istražiti primjenom okolišne arheologije. Postoji nekoliko pristupa za pronalazak biljnih ostataka unutar arheoloških konteksta. Mikroskopski ostatci mogu potjecati iz zbirke peludi, škroba i fitolita (silikatnih kostura biljnih stanica), dok makroskopski ostatci uključuju pougljenjene biljne sjemenke i drveni ugljen. Ovo će se poglavlje usredotočiti na pougljenjene biljne ostatke makroskopske veličine (poput žitarica, sjemenki, ljuski i voćnih koštica) s nalazišta Sisak-Pogorelac u svrhu rekonstrukcije nekadašnjih poljoprivrednih sustava, ekonomije, okoliša i ljudske aktivnosti.

Biljni materijal je na arheološkim nalazištima u Hrvatskoj najčešće očuvan u karboniziranom ili pougljenjenom obliku, iako su prisutni i drugi oblici očuvanosti, uključujući mineralizaciju i potapanje. Do karbonizacije dolazi uslijed slučajnog ili namjernog izlaganja organskog materijala toplini ili vatri, tijekom aktivnosti poput kuhanja, paljenja otpada ili korištenja goriva.[96] To znači da pronalazak karboniziranih ostataka može omogućiti izravnu poveznicu s ljudskim aktivnostima na arheološkom nalazištu.

U svrhu rekonstrukcije prihvatljive i reprezentativne slike o poljoprivrednim i kućnim aktivnostima potrebno je prikupiti uzorke iz širokog raspona struktura, poput kućnih podova, jama za skladištenje i jaraka.[97] Kako bi makroskopski biljni ostatci bili pronađeni, zemlja treba biti obrađena metodom koja se naziva flotacija. Ova metoda uključuje korištenje uređaja za flotaciju u kojem se sediment polaže na sito smješteno u vodi i lagano trese kako bi organski materijal, u ovom slučaju karbonizirani biljni ostatci, doplutao na površinu (eng. *light fraction, flot*), dok sediment i ostali teški materijali, poput keramike, tonu na dno (eng. *heavy fraction*). Na nalazištu Sisak-Pogorelac provedena je flotacija kantama pri čemu je korištena 250 μm mreža za prikupljanje organskog materijala i 1 mm mreža za prikupljanje taloga. Flotacija kantama podrazumijeva korištenje iste metode kao i u slučaju uređaja za flotaciju, ali je proces manjeg opsega (Sl. 28).

96 For discussion see Van der Veen 2007.

97 Hillman 1981.

PLANT REMAINS FROM SISAK IRON AGE SETTLEMENT (KELLY REED)

Plants are, and have been, an integral part of our daily lives whether being eaten, drunk, used for clothing, fuel, for medicinal purposes, utilised in construction or given cultural/ideological/ritual values. Through environmental archaeology we can examine all these aspects of human life. There are several approaches to recovering plant remains within archaeological contexts, such as from the collection of microscopic pollen, starches and photoliths (the silicate skeletons of plant cells), to the recovery of macro charred plant seeds and wood charcoal. This chapter will focus on the charred macro plant remains (such as cereal grains, seeds, nutshells and fruit stones) from Sisak-Pogorelac to reconstruct past agricultural systems, economies, environments and human activity.

The most common form by which plant material is preserved on archaeological sites in Croatia is through carbonisation or charring, although other forms of preservation can also be found including mineralisation and waterlogging. Carbonisation occurs when organic material is exposed to heat/fire either accidentally or deliberately, through activities such as cooking, burning rubbish or using fuel.[96] This means that the recovery of carbonised remains can provide a direct link to human activities at an archaeological site.

In order to reconstruct a reasonable and representative picture of the agricultural and domestic activities, samples need to be collected from a wide range of structures and features, such as house floors, storage pits and ditches.[97] In order to recover the plant macro remains the soil needs to be processed through a method called flotation. This involves using a flotation machine whereby sediment is placed on a sieve in water and gently agitated to allow the organic material, in this case the carbonised plant remains, to float to the surface (known as the light fraction or flot), while the sediment and other heavy materials, such as pottery, sink to the bottom (known as the heavy fraction or residue). At Sisak-Pogorelac, bucket flotation was conducted using a 250mm mesh to collect the flot and a 1mm mesh to collect the residue. Bucket flotation uses the same method as the flotation machine, except on a smaller scale (Fig. 28).

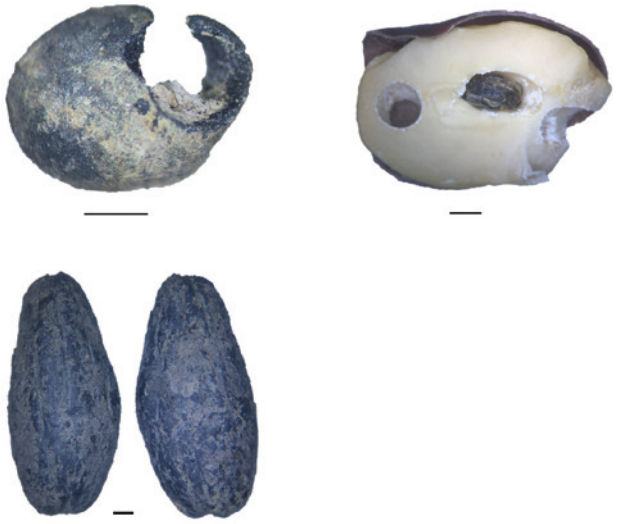
96 For discussion see Van der Veen 2007.

97 Hillman 1981.

SL. 29
Karbonizirani biljni ostatci iz tri uzorka s nalazišta Sisak-Pogorelac
(količine sjemena nisu umnožene na 100%) (K. Reed)

FIG. 29
Carbonized plant remains identified from three samples from Sisak-Pogorelac
(seed quantities have not been multiplied to 100%) (K. Reed)

Uzorak/Sample	60	178	36
Kontekst/Context	Posuda/Pot	Podnica/House floor	Jama/Pit
Volumen (litre)/Volume (litres)	4	22	160
Sortirani udio/Fraction sorted	0.75%	10%	12.5%
Usjevi/Crops			
Triticum monococcum			1
Triticum dicoccum			3
Triticum sp.			3
Panicum miliaceum	c. 780		47
Setaria italica	c. 10,070		4
Žitarice/Cerealia		4	24
Vicia faba (cjelovito/whole)		58	
Vicia faba (fragmenti/frags)		c.270	
Neident. mahunarke Pulse indet (fragmenti/frags)			2
Plodovi i orašasti plodovi **Fruits and nuts**			
Physalis alkekengi			1
Quercus sp. (polovice/halves)			4
Quercus sp. (fragmenti/frags)			129
Divlje vrste/korov **Wild/Weed species**			
Bromus sp.	1		
Chenopodium album			1
Echinochloa crus-galli			1
Gramanieae (veliki) fragmenti/ (large) frag	3		6
Gramanieae (mali/small)			1
Lolium sp.	1		
Poaceae (vrsta prosa/millet type)			102
Rumex crispus			1
Sambucus ebulus			1
Setaria sp.			40
Setaria glauca			1
Setaria viridis	5		
Neodredivi biljni ostaci Unidentified plant remains			116



SL. 30
Karbonizirano zrno boba (*Vicia faba*)
s rupom od insekta iz uzorka 178
s nalazišta Sisak-Pogorelac (lijevo);
Recentno zrno boba s insektom *in situ*
nakon ukopavanja u zrno (mjerilo = 2 mm) (desno)
(K. Reed)

FIG. 30
Carbonized broad bean (*Vicia faba*)
with insect hole from sample 178 (left);
Modern broad bean with insect *in situ* after
burrowing into the bean (Scale = 2mm) (right) (K. Reed)

SL. 31
Polovice žira (*Quercus sp.*) iz uzorka 36
s nalazišta Sisak-Pogorelac (mjerilo = 2 mm)
(K. Reed)

FIG. 31
Acorn (*Quercus sp.*) halves from sample 36
(Scale = 2mm) (K. Reed)

Biljni ostatci

Iako su arheobotaničke analize još u tijeku, ovdje će biti predstavljena tri ključna uzorka prikupljena tijekom terenskih istraživanja od 2012. do 2019. godine (Sl. 29). Zbog velike gustoće biljnih ostataka u svakom uzorku, obrađeni su poduzorci. Tekst koji slijedi uključuje cjelokupan broj biljnih ostataka uvećan za veličinu cijelog uzorka u svrhu predstavljanja sadržaja uzoraka. Prvi uzorak (U 60) prikupljen je 2013. iz lonca pronađenog na podu Objekta 2, a spaljena površina lonca upućuje na proces koji je omogućio konzervaciju biljnih ostataka. Analize sadržaja lonca otkrile su otprilike 1,342,667 zrna talijanskog prosa (*Setaria italica*) i 104,000 zrna usjevnog prosa (*Panicum miliaceum*).[98] Uzorak je toliko dobro očuvan da su sačuvane čak i pljevice (tanka listolika struktura koja okružuje zrno) koje su u nekim slučajevima i stopljene zajedno. Uzorak je relativno čist, bez ostataka ugljena.

Drugi uzorak potječe iz poda kuće (Objekt 9, SJ 538), istražene 2017. godine u Sondi 4. Uzorak 178 sadržavao je preko 600 zrna boba (*Vicia faba*). Relativno je čist s tek nekoliko ulomaka loše očuvanih djelića žitarica i nekoliko ulomaka ugljena. Zrna boba su dobro očuvana, a jedno zrno sadrži tragove korištenja koji potječu od kukca, moguće žiška (Sl. 30).

Treći uzorak pronađen je u jami (SJ 623) iskopanoj 2019. u Sondi 5. Jama je smještena uz temelje kuće i bila je zapunjena pocrnjelim organskim tlom punim karboniziranih biljnih ostataka. Uzorak 36 sadržavao je skup ulomaka žitarica i nekoliko ostataka korova ili divljih biljaka, dok se, zanimljivo, većina uzorka sastojala od žireva (*Quercus* sp.) (Sl. 31). Ovaj uzorak sadržavao je veliku količinu ugljena, a tijekom flotacije zabilježeno je i nekoliko ribljih kostiju.

98 Reed, Drnić 2016.

The plant remains

Archaeobotanical analyses is ongoing, but this section will outline three key samples collected from the 2012 - 2019 field seasons (Fig. 29). Due to the high density of plant remains in each sample, subsamples were examined. The description below includes the total numbers of plant remains multiplied up to the full sample size in order to provide a representation of the samples content. The first sample (U 60) was collected in 2013 from a pot that was found within the floor of Structure 2 (SU 105). The surface of the pot had been burnt, allowing the plant remains inside to be preserved. Analyses of the pot content revealed approximately 1,342,667 grains of foxtail millet (*Setaria italica*) along with 104,000 broomcorn millet (*Panicum miliaceum*) grains.[98] The sample was so well preserved that even the glumes (the thin leaf-like structure that surrounds the grain) had survived and in some cases had fused together. The sample was relatively clean with no charcoal remains.

The second sample is from a house floor of the Structure 9 (SU 538) excavated in 2017 within trench 4. Sample 178 contained over 600 broad beans (*Vicia faba*). The sample was relatively clean with only a few fragments of badly preserved cereal fragments and a few fragments of charcoal. The broad beans were well preserved and interestingly one bean also showed signs of insect infestation, possibly from a weevil (Fig. 30).

The third sample is from a pit (SU 623) excavated in 2019 within trench 5. The pit was located next to the foundations of a house and contained blackened organic soil that was full of carbonised plant remains. Sample 36 contained a range of cereal fragments and a few weeds/wild plant remains, but interestingly the majority of the sample consisted of acorns (*Quercus* sp.) (Fig. 31). This sample contained a large amount of charcoal and during floatation a few fish bones were also noted.

98 Reed, Drnić 2016.

Interpretacija

Karbonizirani biljni ostatci s položaja Sisak-Pogorelac otkrivaju poljoprivredne aktivnosti stanovnika, kao i njihovnu dnevnu prehranu. Mnogo dosad obrađenih uzoraka pretežno sadrži usjevno i talijansko proso, uz mali broj zrna drugih žitarica uključujući jednozrnu pšenicu (*Triticum monococcum*) i dvozrni pir (*Triticum dicoccum*). U drugim uzorcima zabilježeno je samo nekoliko ostataka pljeve, što sugerira da se obrada žitarica nije odvijala na nalazištu. Pljeva je mogla biti korištena i u druge svrhe, kao sastojak kućnog lijepa (analiza građevnog lijepa je u tijeku). Najvažnija mahunarka zabilježena na nalazištu je bob (*Vicia faba*), poznat i kao konjski bob. Uz žireve (*Quercus* sp.) iz uzorka 36, pronađeno je još samo nekoliko ostataka voćki te divljih biljaka ili žitarica.

Znanje o naravi poljoprivrede tijekom željeznog doba u Hrvatskoj trenutačno potječe samo s dva nalazišta: Kaptol-Gradac[99] i Nadin-Gradina,[100] gdje su identificirani dvozrni pir i pravi pir, zajedno sa šestorednim ječmom i malom količinom usjevnog prosa. U Karpatskoj kotlini je korišten sličan asortiman žitarica, što upućuje na većinsku kultivaciju dvozrnog pira, pravog pira i ječma, iako između pojedinih naselja postoje varijacije.[101]

Uzgoj i konzumacija prosa

Velika količina talijanskog prosa pronađenog u loncu na podu Objekta 2 sugerira da je navedeni lonac korišten za pohranu prerađenog žita namijenjenog za potrošnju ili korištenje kao sjemena za sjetvu usjeva sljedeće sezone. Žito je pohranjeno nakon žetve, prosijavanja i vijanja, ali prije uklanjanja iz ljuske.[102] Studije su pokazale da ljuske mogu zaštititi zrna od vlage, gljivica i insekata tijekom pohrane.[103] Ukoliko je žito konzumirano, pojedinačno je odljušteno po potrebi. Relativno mala količina usjevnog prosa unutar uzorka može sugerirati da je zapravo riječ o korovu unutar usjeva talijanskog prosa koje je preživjelo sjetvu zbog sličnog oblika i veličine.

Proso brzo raste i stoga ima kraću sezonu rasta u odnosu na druge žitarice, zbog čega je u smjeni žetvi u prošlosti korišten kao ljetna žetva.[104] Strabon (5.1.12) savjetuje korištenje prosa kao najveće prevencije gladi jer ono preživljava sve vremenske neprilike i nikad ne podbaci, čak i kad svako drugo žito loše rodi. Tijekom rimskog razdoblja od prosa je pravljen kruh, ono je konzumirano kao kaša, a smatralo se da ima i medicinska svojstva.[105] Do koje je mjere proso pridonijelo prehrani pretpovijesnog stanovništa u Hrvatskoj, može se ustanoviti analizom stabilnih izotopa ugljika

99 Hršak 2009.
100 Nye 1996.
101 Gyulai 2010, 142–8.
102 e.g. Moreno-Larrazabal *et al.* 2015.
103 Sigaut 1983.
104 e.g. Spurr 1983.
105 Murphy 2016.

Interpretation

The carbonised plant remains from Sisak-Pogorelac are beginning to reveal the agricultural activities of the inhabitants and what they may have been eating on a daily basis. Many of the samples to date have been dominated by millets, both foxtail and broomcorn millet, with only a small number of other cereal grains, including the wheats einkorn (*Triticum monococcum*) and emmer (*Triticum dicoccum*). Only a couple of chaff remains have been noted from other samples, suggesting that the processing of wheat may not have occurred at the settlement. The chaff could also be used for other purposes, such as an ingredient in wall daub (analyses of the building daub is pending). The main pulse recovered at the settlement is broad bean (*Vicia faba*), also called horse bean or fava bean. Apart from acorns (*Quercus* sp.) found in sample 36, only a few other fruit remains and wild/weed species are found.

Knowledge regarding the nature of agriculture during the Iron Age in Croatia is currently limited to two sites, Kaptol-Gradci[99] and Nadin-Gradina,[100] where emmer and spelt wheat, along with six-row barley and to a lesser extent broomcorn millet, were identified. In the Carpathian Basin, a similar cereal spectra existed suggesting a focus on the cultivation of emmer, spelt and barley, although variation exists between the settlements.[101]

Millet cultivation and consumption

The large deposit of foxtail millet found within the pot in the floor of Structure 2 suggests that the pot was used to store processed grains for either consumption or as seed corn for sowing the next season's crop. The grains were stored after threshing, sieving and winnowing, but before the final grain was removed from the husk.[102] Studies have shown that the husk can protect the grain against humidity, fungi and insects during storage.[103] The grains, if consumed, could then be dehusked piecemeal as and when needed. The relatively small proportion of broomcorn millet within the sample may suggest that it was a weed within the main foxtail millet crop and only remained through the sieving process owing to its similar shape and size.

Millet is fast growing and so requires a shorter growing season than other cereals, resulting in its use as a summer crop in crop rotation systems in the past.[104] Strabo (5.1.12) advised, 'millet is the greatest preventive of famine, since it withstands every unfavourable weather and can never fail, even though there be scarcity of every other grain'. During the Roman period, millet was made into bread, eaten as porridge and was even thought to have medicinal properties.[105] The extent to which millet may have con-

99 Hršak 2009.
100 Nye 1996.
101 Gyulai 2010, 142–8.
102 e.g. Moreno-Larrazabal *et al.* 2015.
103 Sigaut 1983.
104 e.g. Spurr 1983.
105 Murphy 2016.

i dušika u ljudskim kostima iskopanim na brončanodobnim i željeznodobnim lokalitetima u Hrvatskoj. *Lightfoot et al.* (2015) navode da su pojedinci pokopani na željeznodobnom groblju na položaju Vinkovaci-Nama pokazali jasan C4 signal, što upućuje na to da je proso bilo bitan sastojak prehrane. Ipak, treba napomenuti da navedeni signali mogu biti i rezultat prehrane životinjama hranjenima prosom. Spomenuta se studija bavila i socijalnom diferencijacijom između ukopa na Nadin-Gradina (obalna Hrvatska) i pokazala je da su pojedinci pokopani u jednostavnim jamama imali veći udio prosa u prehrani od onih pokopanih u grobovima omeđenima kamenom, što upućuje na to da je na ovom nalazištu proso bilo hrana za osobe nižeg statusa.[106]

Velika količina talijanskog prosa na položaju Sisak-Pogorelac, zabilježenog samo u malim količinama u Srbiji i Mađarskoj,[107] relativno je rijedak nalaz za ovo razdoblje. Dalje na sjeveru, u Austriji, dokazi o zalihama talijanskog i usjevnog prosa pronađeni su u Himmelreichu, Siebeneichu i Gangleggu,[108] dok su se u zapadnoj Europi usjevi talijanskog prosa do željeznog doba sijali u malim količinama.[109] Identifikacija ovog lonca ispunjenog prosom, kao i činjenica da je proso prisutno i u drugim uzorcima s položaja Sisak-Pogorelac, upućuju na to da su usjevi prosa bili redovito uzgajani i korišteni u željeznodobnom naselju. Ovo potvrđuju i navodi antičkih pisaca da Panonci "jedu i piju i ječam i proso" (Dio Cass. 49.36, 2–4), dok Strabon u raspravi o Japodima u susjednoj Dalmaciji sugerira da su se oni uglavnom prehranjivali pirom i prosom.

Važnost mahunarki

U sustavima usjevnog ratarstva bob je uzgajan i kao vrtni i kao poljski usjev, a potvrđena dobrobit uzgoja boba sastoji se od poboljšanja plodnosti tla jer se u tlu zadržava dušik. Još u 4. st. pr. Kr. Ksenofont (*Geoponica* ß.12) bilježi da uzgoj mahuna poboljšava iscrpljeno tlo. Katon (*Agr.* 37) i Plinije (*H.N.* 18.134, 137) također potvrđuju da određene mahunarke obogaćuju tlo, pa stoga nema potrebe za gnojivom. Plinije (*H.N.* 18.137) sugerira da je u rimskom razdoblju bob mogao biti uzgajan triput godišnje, u siječnju, ožujku i listopadu, iako se ovo vjerojatno odnosi na talijansku klimu. Osim toga, mahunarke su bogate proteinima i izvrstan su izvor topljivih vlakana i brojnih mikronutrijenata.

Sve u svemu, mahunarke nisu prisutne u velikom broju u arheobotaničkim nalazima budući da njihova obrada ne zahtijeva izlaganje vatri, što umanjuje mogućnost slučajne karbonizacije.[110] Otkriće velikog nalaza boba na podu Objekta 9 u Sondi 4 na položaju Sisak-Pogorelac rezultat je izgaranja tog objekta. Čist nalaz, s nekoliko ostataka drugih biljnih vrsta i malo ugljena, podržava pretpostavku da je riječ o ostatku zalihe boba za

106 Lightfoot *et al.* 2015.
107 van Zeist 2001/2002; Gyulai 2010.
108 Schmidl, Jacomet, Oeggl *et al.* 2007.
109 Bakels 2013.
110 Dennell 1976.

tributed to the diet of populations in Croatia has been observed through the examination of carbon and nitrogen stable isotopes of human bones excavated from Bronze and Iron Age sites within Croatia. In particular, Lightfoot *et al.* (2015) found that individuals from Iron Age Vinkovci-Nama cemetery (Continental Croatia) showed a clear C4 signal, indicating that millet was a notable part of the diet. Although it's worth noting that these signals can also come from the consumption of animals that have been fed on millet. The study also looked at social differentiation between burials at Nadin-Gradina (coastal Croatia) and showed that individuals buried in simple pits had higher levels of millet within the diet than those buried in stone-lined graves, implying that millet was a low-status food at this site.[106]

The large deposit of foxtail millet found at Sisak-Pogorelac is a relatively rare find in this period, only being found in small quantities in Serbia and Hungary.[107] Further north in Austria evidence of both broomcorn and foxtail millet stores been found at Himmelreich, Siebeneich and Ganglegg,[108] while in western Europe foxtail millet is believed to have become established as a minor crop by the Iron Age.[109] The identification of this pot full of millet as well as the fact that millet is continually present in other samples from Sisak-Pogorelac suggests that millet was a crop regularly grown and consumed at the Iron Age settlement. This is supported by accounts from ancient authors who suggested that the Pannonians "eat and drink both barley and millet" (Dio Cassius 49.36, 2–4), while Strabo discussing the Iapodians in neighbouring Dalmatia suggests they lived mostly on spelt and millet (Strabo VII, 4, 10).

The importance of pulses

In crop husbandry regimes, beans are cultivated as both a garden and field crop and the benefits of cultivating beans to improve soil fertility, by fixing nitrogen into the soil, is well-established. As early as the 4th century B.C., Xenophon notes (Geoponicaß.12) that legume cultivation replenishes exhausted soils. Cato (Agr. 37) and Pliny (H.N. 18.134, 137) also acknowledge that certain legumes enrich the soil so that fertilizer is not necessary. In the Roman period Pliny (H.N.18.137) suggest that broad beans can be grown three times per year, January, March and October, although this would have been under the Italian climate. Pulses are also high in protein and are an excellent source of soluble fibre and a range of micronutrients.

Generally pulses are considered to be under-represented in archaeobotanical assemblages as they do not require contact with fire during processing, reducing the possibility of accidental charring.[110] The recovery of a large deposit of broad beans within a house floor of the Structure 9 in trench 4 at Sisak-Pogorelac resulted from the structure burning down. The clean deposit, with

106 Lightfoot *et al.* 2015.
107 van Zeist 2001/2002; Gyulai 2010.
108 Schmidl, Jacomet, Oeggl *et al.* 2007.
109 Bakels 2013.
110 Dennell 1976.

SL. 32
Žitarice (proso), mahunarke (bob) i divlji plodovi (žir) uzgajani i prikupljani u sisačkom željeznodobnom naselju.

FIG. 32
Cerelas (millet), pulses (broad bean), and wild plants (acorn) grown and gathered at the Iron Age settlement in Sisak.

korištenje, vjerojatno čuvanog u keramičkoj posudi koja je slomljena pronađena na razini poda kuće. Ovaj zaključak također potvrđuje pronalazak rupe u jednom od zrna boba, što upućuje na prisutnost nametnika u skladištenim usjevima. Bob je u regiji uzgajan od brončanog doba[111] i vrlo je vjerojatno riječ o osnovnom usjevu željeznodobnog naselja.

few plant remains from other species and little charcoal, supports the idea that this deposit is the remains of store of broad beans for consumption, probably kept in a ceramic container found broken at the level of the house floor. This is also supported by the discovery of a hole in one of the broad beans, which suggests that pests were present within the stored crops. Broad bean has also been grown in the region from the Bronze Age,[111] so it is very likely that this was a staple crop at the Iron Age settlement.

111 Mareković *et al.* 2015.

111 Mareković *et al.* 2015.

Kruh od žira?

Relativno velika količina žira pronađenog u jami zanimljiv je nalaz i vjerojatno predstavlja ostatke otpada hrane iz obližnjih kuća. Postoji mnogo vrsta žira, slatkih i gorkih, ali u ovom slučaju nije bilo moguće identificirati vrste. Žirevi su nutritivno slični žitaricama, dobar su izvor ugljikohidrata, masti, proteina i vitamina (većinom A i C) i tijekom povijesti konzumirani su u obliku kruha, juha, kaša, a moguće i biljne kave.[112] Žirevi su pronađeni i na drugim željeznodobnim lokalitetima u Europi, a u antičkoj se literaturi spominju i kao krmno bilje, većinom za svinje, ali se također melju u brašno za pravljenje kruha. Na primjer, Strabon (3.3.7) spominje da je kruh od žira glavna hrana naroda sjeverne Španjolske. Ovaj navod potvrđuje relativno velik broj željeznodobnih naselja s nalazima ostataka žira.[113] Ipak, žir sadrži veliku koncentraciju taninske kiseline (ovisno o vrsti), što zahtijeva da prije konzumacije bode potopljen u vodu, kuhan ili pečen.[114] I rimski pisac Plinije (*N.H.* 6-7) i autor A. de Herrera (1513, *Cap.* XXIV *De las Encinas*) iz 14. st. raspravljaju o pečenju žira prije pripreme brašna.[115] U Hrvatskoj je žir zabilježen i u kasnobrončanodobnom naselju Kalnik-Igrišče.[116] Otkriće šumske mjehurice *(Physalis alkekengi),* male voćke bogate vitaminima A i C, koja divlje raste u poljima usjeva, na rubovima šuma, može upućivati na to da su ih lokalni stanovnici sakupljali zajedno sa žirom iz obližnjih šumskih područja.

Zaključak

Preliminarni rezultati analize karboniziranih biljnih ostataka s nalazišta Sisak-Pogorelac upućuju na raznoliku lokalnu prehranu koja je uključivala talijansko i usjevno proso, bob i žir. Široki raspon žitarica, pronađenih i u drugim kontekstima, ukazuje da su stanovnici uzgajali i prikupljali raznoliku biljnu hranu. Otkriće zrna boba s rupom koju je načinio kukac upućuje na prisutnost uskladištenih usjeva unutar kuća i iskopavanih struktura. Gorenje objekata omogućilo je odličnu očuvanost tri obrađena uzorka, što je na hrvatskim pretpovijesnim nalazištima rijetkost. Nažalost, znanje o uzgoju usjeva i vrstama jela koje su stanovnici ove regije konzumirali tijekom željeznog doba jako je ograničeno, pa je samim time ovo nalazište iznimno važno.

Acorn bread?

The relatively large number of acorns found in a pit is an interesting find and probably represents the remains of food waste from the nearby house(s). There are many species of acorn, both sweet and bitter and unfortunately here we have not been able to identify to species. Acorns are nutritionally comparable to cereals, being a good source of carbohydrates, fats, proteins and vitamins, mostly A and C and have been consumed in the form of bread, soups, porridge, or even as herbal coffee throughout history.[112] Acorns have been found on other Iron Age sites in Europe and are even mentioned in ancient literature as both fodder, mainly for pigs, but also ground into flour to make bread. For example, Strabo (3.3.7) mentions that acorn bread was a staple of the people of northern Spain. This statement is supported by the relatively large numbers of Iron Age settlements with acorn remains.[113] However, acorns contain high concentrations (depending on the species) of tannic acid, which require the acorns to be either soaked in water, boiled or roasted.[114] Both the roman author Pliny (N.H. 6-7) and the 14th century ADauthor A. de Herrera (1513, Cap. XXIV De las Encinas) discuss roasting acorns before making flour.[115] In Croatia, acorns are also recorded from the late Bronze Age settlement at settlement Kalnik-Igrišče.[116] The recovery of Chinese lantern *(Physalis alkekengi),* a small fruit rich in vitamin A and C that grows wild in crop fields, forest edges, etc, may suggest that the local inhabitants were gathering these along with the acorns from a local forested area.

Conclusions

The preliminary results of the carbonised plant remains recovered from Sisak-Pogorelac is beginning to show a varied local diet that included foxtail and broomcorn millet, broad beans and acorns. The diverse range of cereals also found in other contexts suggests that the inhabitants grew and collected a wide variety of plant foods. The discovery of a broad bean with a hole created by an insect supports the presence of stored crops within the houses/structures under excavation. The burning of these structures allowed these three samples to have excellent preservation, which is rare at prehistoric sites in Croatia. Unfortunately, very little is known about how Iron Age people grew their crops and the types of meals they would have eaten in this region, which makes this site extremely important.

112 Sekeroglu, Ozkutu, Kilic 2017.
113 Amado Rodríguez 2013.
114 Šálková *et al.* 2011.
115 Moreno-Larrazabal *et al.* 2014.
116 Mareković *et al.* 2015.

112 Sekeroglu, Ozkutu, Kilic2017.
113 Amado Rodríguez 2013.
114 Šálková *et al.* 2011.
115 Moreno-Larrazabal *et al.* 2014.
116 Mareković *et al.* 2015.

4.2 ŽIVOTINJSKI OSTATCI IZ ŽELJEZNODOBNOG NASELJA U SISKU (SINIŠA RADOVIĆ)

Tijekom arheoloških istraživanja često se pronalaze razni ostaci životinja. To mogu biti kosti i zubi kralješnjaka (najčešće sisavci, ribe i ptice), ali i ljušture i kućice mekušaca (školjke i puževi). Ovisno o kontekstu nalaza razlikuju se i načini kako su akumulirani ti ostaci. Primjerice, ostaci pronađeni unutar naselja mogu predstavljati prehrambeni otpad ljudi, ali mogu potjecati i od životinja koje su korištene u druge svrhe (kao radna snaga, za transport ili kao ukrasne životinje). Konačno, manji dio ostataka mogao je pripadati i uginulim ili ubijenim životinjama koje su, neovisno o ljudima, samo koristile isti prostor (glodavci, ptice, male zvijeri). Upravo prehrambeni otpad često predstavlja najbrojniju skupinu nalaza na arheološkim nalazištima.[117] Hrana je bitna za preživljavanje i čini sastavni dio kulturnog identiteta društva[118] pa se znatan dio gospodarstva temelji na prikupljanju i proizvodnji hrane. Detaljnom arheozoološkom analizom prikupljenih životinjskih ostataka moguće je odrediti vrstu životinja, životnu dob u trenutku smrti, dijelove tijela te ustanoviti oštećenja na kostima koja su nastala prilikom prerade trupla i pripreme za konzumaciju. Sintezom dobivenih podataka moguće je hipotetizirati o prehrambenim navikama ljudi u prošlosti. Arheozoološkim istraživanjima obuhvaćene su različite teme poput odnosa čovjeka i životinja, gospodarskog i simboličkog značenja pojedinih životinjskih vrsta, modela gospodarenja stadom i strategija lova te rekonstrukcije količine i značenja životinjskih proteina u svakodnevnoj prehrani. Iz istih razloga jasna je iznimna važnost arheozoooloških analiza životinjskih ostataka s arheoloških nalazišta.

Na prostoru sjeverne Hrvatske poznat je veći broj arheoloških nalazišta iz razdoblja starijeg i mlađeg željeznog doba, što je rezultiralo relativno jasnom kulturno-kronološkom stratigrafijom, ali je ekonomski aspekt ondašnjih zajednica manje poznat, osobito u kontekstu prehrambenih navika. Trenutne spoznaje o svakodnevnom životu i prehrani ljudi u željeznom dobu na prostoru sjeverne Hrvatske temelje se uglavnom na posrednim podacima, odnosno na analogijama s poznatim arheozoološkim podacima s istovremenih nalazišta u Europi. Općenito, na širem prostoru središnje Europe nije bilo znatnijih promjena u stočarstvu od kasnog brončanog prema željeznom dobu, iako su vidljive određene lokalne razlike.[119] I dalje dominira uzgoj goveda i svinja, ali se nerijetko njihov međusobni odnos razlikuje u korist jednih ili drugih iako su početkom željeznog doba goveda nešto brojnija.[120] Treba istaknuti relativno velik broj ostataka divljači na pojedinim nalazištima, koji upućuju na značenje lova[121] iako je stočarstvo bilo daleko važnije u gospodarstvu mlađeg željeznog doba.[122]

117 Davis 1987; Reitz, Wing 1999.

118 Gosden 1999.

119 Bökönyi 1974, 34.

120 Bartosiewicz 1991; Toškan, Dirjec 2010; Toškan, Bartosiewicz 2018.

121 Trebsche 2013.

122 Bökönyi 1991.

ANIMAL REMAINS FROM SISAK IRON AGE SETTLEMENT (SINIŠA RADOVIĆ)

The remains of different animals are often discovered in archaeological excavations. These can be the bones and teeth of vertebrates (most often mammals, fish and birds), but also the shells of mollusks (shellfish and snails). Depending on the context of discovery, the modes in which these remains accumulate change. For example, remains discovered within a settlement can be discarded human food or from animals that were used for other purposes (work, transport or as decorative animals). Finally, a small portion of the remains could come from animals that died of natural causes or were killed, having used the same space regardless of humans (rodents, birds, small beasts). Food waste is often the most numerous assemblage at archaeological sites.[117] Food is crucial for survival and is an integral part of a society's cultural identity.[118] A significant part of the economy is therefore based on the accumulation and production of food. A detailed archaeozoological analysis of collected animal remains can reveal the animal species, the age at death, parts of the body, as well as marks on bones made during the processing of the body and preparation for consumption. A synthesis of the acquired data can be the basis of hypotheses about the dietary habits of people in the past. Archaeozoological research includes different topics, such as man's relation to animals, the economic and symbolic meaning of certain animal species, the models of managing herds, hunting strategies, as well as the reconstruction of the amount and significance of animal protein in the everyday diet. All of this demonstrates the importance of archaeozoological analyses of animal remains from archaeological sites.

The large number of known Early and Late Iron Age sites in northern Croatia resulted in a relatively clear cultural and chronological stratigraphy, but the economic aspect of those communities is less known, especially when it comes to their dietary habits. Current insight into the everyday life and the diet of Iron Age populations in northern Croatia is mostly based on indirect data, i.e. on analogies with known archaeozoological data from contemporaneous sites in Europe. Generally speaking, in the wider area of central Europe, no significant changes occurred in cattle-breeding between the Late Bronze and the Iron Age, although there are some local differences.[119] The breeding of bovids and pigs was still predominant, but their interrelations often varied in favor of one or the other, even though bovids were somewhat more represented at the beginning of the Iron Age.[120] It should be noted that there is a relatively large number of wild animals at certain sites, which indicates the importance of hunting[121] despite the fact that cattle-breeding was significantly more important in the Iron Age economy.[122]

117 Davis 1987; Reitz, Wing 1999.

118 Gosden 1999.

119 Bökönyi 1974, 34.

120 Bartosiewicz 1991; Toškan, Dirjec 2010; Toškan, Bartosiewicz 2018.

121 Trebsche 2013.

122 Bökönyi 1991.

SL. 33
Kosti svinja iz željeznodobnog naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 33
Pig bones from the Iron Age settlement at the Pogorelac position in Sisak (I. Krajcar)

Posljednjih je godina porastao broj istraženih nalazišta na prostoru sjeverne Hrvatske, a prikupljanje životinjskih ostataka postalo je standard. Nažalost, zasad jedina ozbiljnija arheozoološka analiza provedena je na materijalu s groblja latenske kulture Zvonimirovo-Veliko polje kraj Virovitice, koja je pokazala da su u grobove prilagani samo ostaci svinja i kokoši.[123] S obzirom na to da je riječ o analizi sadržaja grobnih cjelina, odnosno ritualnog konteksta, a ne ostacima svakodnevnog života, rezultati nisu relevantni za analize prehrane. Ipak, treba imati na umu da su obje vrste morale biti bar donekle ekonomski isplative, odnosno trebalo je održavati njihov broj u dovoljnoj mjeri kako bi se mogla pokriti njihova uloga i u grobnom ritualu.[124] Također, u grobovima nisu evidentirani ostaci divljih životinja.

Tijekom novijih sustavnih arheoloških istraživanja nalazišta Pogorelac u Sisku otkriven je veći broj kosturnih ostataka životinja. Preliminarno su arheozoološki analizirani ostatci faune sakupljeni u Sondama 1 i 2. U analiziranom skupu nalaza iz Siska dominiraju kosti svinja (*Sus* sp.) (Sl. 33) uz relativno brojnije kosti jelena, dok su druge životinje znatno slabije zastupljene. Među ostacima svinja evidentirani su gotovo svi dijelovi tijela, iako prevladavaju dijelovi nogu, a najslabije su zastupljene kosti trupa. Ima i mladih i odraslih jedinki. Određen broj kostiju relativno je robusniji i nešto većih dimenzija pa se s oprezom može pretpostaviti da su možda pripadali divljim svinjama (*Sus scrofa*). Nažalost, veći dio materijala nije specifički određen pa zasad nije moguće detaljnije razmatrati odnos između divljih i domaćih svinja. Tragovi mesarenja na kostima upućuju na razne procese prerade trupla životinja (deranje kože, komadanje) i pripreme za konzumiranje (odvajanje mesa s kostiju). Manji broj ostataka, uglavnom ulomaka kostiju nogu, pripadao je govedima. Iako su kosti jako razlomljene, vjerojatno je riječ samo o domaćim govedima (*Bos taurus*). Nažalost, relativnu životnu dob nije bilo moguće odrediti. Ostale domaće životinje zastupljene su još malobrojnijim ostacima ovaca i koza te nekoliko cjelovitih metapodijalnih kostiju psa (*Canis familiaris*).

Ukoliko zanemarimo zasad nepotvrđen udio divljih svinja unutar skupa nalaza, divlje životinje relativno su dobro zastupljene među koštanim ostacima iz Siska. Prevladava jelen obični (*Cervus elaphus*) koji živi u otvorenim šumama s proplancima, a omiljena je lovna divljač od pretpovijesti do danas. Brojni prikupljeni ulomci kostiju udova i ulomci rogovlja svjedoče o povremenim epizodama lova (Sl. 34). Od druge divljači evidentirana je srna (*Capreolus capreolus*) iako sa svega jednim ulomkom baze roga sa sačuvanim vijencem. Zanimljiv je nalaz dviju donjih čeljusti sa zubima dabra (*Castor fiber*) (Sl. 35). Ovaj najveći europski glodavac nastanjuje vodotokove i relativno dublje vodene površine okružene šumom. Lovi se radi krzna, mesa i masti, a u Hrvatskoj je nestao krajem 19. st. Nažalost, na spomenutim čeljustima nisu evidentirani antropogeni tragovi, pa zasad nije moguće pouzdano tvrditi je li riječ o trofejnom ostatku lova ili slučajnom nalazu. Još su skromniji ostaci koji svjedoče o ribolovu, što je najvjerojatnije rezultat kvalitete analiziranog uzorka koji nije

123 Radović 2013.

124 Bökönyi 1974, 35.

Over the past few years, the number of researched sites in northern Croatia has increased, and the collecting of animal remains has become a standard. Unfortunately, the more detailed archaeozoological analysis has only been conducted on the material from the La Tène culture necropolis of Zvonimirovo-Veliko polje near Virovitica, which revealed that only the remains of pigs and chickens were placed in graves.[123] Seeing as this was an analysis of material from graves, i.e. ritual contexts, and not the remains of everyday activities, the results are not relevant to analyses of diet. However, it should be noted that both species must have been somewhat economically lucrative, i.e. their number must have been high enough for them to be used in burial rituals.[124] No remains of wild animals were found in the graves.

The recent excavations conducted at Pogorelac in Sisak yielded a large number of animal skeletal remains. Preliminary analyses were conducted on faunal remains from Trenches 1 and 2. The analyzed assemblage from Sisak is dominated by pig bones (*Sus sp.*) (Fig. 33), with a relatively large number of deer bones, while other animals are significantly less represented. The pig remains include almost all body parts, but parts of the legs are predominant, and bones from the body are the least represented. Both young and adult animals were recorded. A certain number of the bones are more robust and larger in size, and so it can be assumed with caution that they might have come from boars (*Sus scrofa*). Unfortunately, a large portion has not yet been ascribed to a species, and so it is impossible to go into detail about the relation between wild and domestic pigs. Traces of butchery found on the bones point to different processes of using the animals (removing the skin, cutting it into chunks) and food preparation (removing the meat from the bones). A smaller portion of the remains, mostly fragments of leg bones, belonged to bovids. Although the bones are very fragmented, they can most likely be ascribed to domestic bovids (*Bos taurus*). Unfortunately, it was impossible to determine the age of the animals. Other domestic animals include a small number of sheep and goats, as well as some complete metapodial bones of dogs (*Canis familiaris*).

If we ignore the as yet unconfirmed portion of boars in the assemblage, wild animals are relatively well-represented among the osseous remains from Sisak. The most numerous is red deer (*Cervus elaphus*), which lives in open forests on hilltops and has been a favorite among hunters from prehistory to this day. The numerous collected fragments of limb bones and antler fragments attest to occasional hunting episodes (Fig. 34). Other game includes doe (*Capreolus capreolus*), albeit with only one fragment of an antler with a preserved base and the beam. Two lower jaws of beavers (*Castor fiber*) are also very interesting (Fig. 35). The largest of the European rodents, the beaver lives at waterflows and relatively deep bodies of water surrounded by forests. It is hunted for its fur, meat and fat, and disappeared from Croatia at the end of the 19th century. Unfortunately, these jaws did not show any traces of anthropogenic origin, and so it is still impossible to say whether these were hunting trophies or

123 Radović 2013.

124 Bökönyi 1974, 35.

SL. 34
Kosti i rogovlje jelena iz željeznodobnog naselja s položaja Pogorelac u Sisku (S. Radović. I. Drnić)

FIG. 34
Deer bones and antlers from the Iron Age settlement from the Pogorelac position in Sisak (S. Radović, I. Drnić)

SL. 35
Donja čeljust dabra iz željeznodobnog naselja s položaja Pogorelac u Sisku (S. Radović)

FIG. 35
Lower jaw of beaver from the Iron Age settlement from the Pogorelac position in Sisak (S. Radović)

obuhvatio sitni koštani materijal prikupljen mokrim prosijavanjem i flotiranjem. Tako su zasad pronađena samo dva riblja kralješka. Iako nije bilo moguće odrediti o kojoj vrsti je riječ, evidentna razlika u veličini upućuje na vjerojatnost da su spomenuti kralješci pripadali dvjema različitim vrstama. Na kraju, nekoliko jako razlomljenih ptičjih kostiju vjerojatno potječe od pripadnika reda kokoški (Galliformes). Iako zbog razlomljenosti i nedostatka morfoloških obilježja zasad nije moguće tvrditi je li riječ o domaćoj ili divljoj peradi, može se s oprezom pretpostaviti da je bar dio ovih kostiju pripadao domaćim kokošima (*Gallus gallus*).

Rezultati provedenih analiza skroman su doprinos poznavanju gospodarstva sisačke zajednice tijekom mlađe faze starijeg željeznog doba i u mlađem željeznom dobu. Iako su analize još u tijeku i predstavljeni podaci su tek preliminarne naravi, taksonomski sastav u skladu je s očekivanim. Stočarstvo stanovnika ovog naselja temeljilo se na uzgoju svinja i goveda te u znatno manjoj mjeri i malih preživača. Razna oštećenja na kostima i tragovi rezanja svjedoče o konzumiranju svinjetine i govedine, koji su očito činili najveći udio mesnih proteina u svakodnevnoj prehrani. Ostaci jelena svjedoče o lovu na divljač kao čestoj aktivnosti. Osim nedvojbenog doprinosa mesnoj prehrani ondašnjih stanovnika naselja, lov na jelena ili divlju svinju vjerojatno je bio važan društveni događaj vezan uz posebne trenutke ili odabrane pojedince, odnosno skupinu ljudi. S druge strane, bez obzira na blizinu rijeke, čini se da ribolov nije bio toliko važan.

chance finds. Remains indicating fishing are even scarcer, which is probably a result of the quality of the analyzed sample, which did not include tiny bone material collected by wet sieving and flotation. Only two fish vertebrae have been recorded so far. Although it was impossible to determine the species of the fish, the evident difference in size points to the possibility that they belonged to two different species. Finally, several very fragmented bird bones were recorded, probably from the Galliformes order (chickens and the like). While it is impossible to establish whether these were domestic or wild birds, due to fragmentation and a lack of morphological features, it can cautiously be assumed that at least some of these bones belonged to domestic chickens (*Gallus gallus*).

The results of the conducted analyses are a humble contribution to our knowledge about the economy of the local community in the later phase of the Early Iron Age and during the Late Iron Age. Although the analyses are still ongoing, and the presented data is of preliminary nature, the taxonomic composition is in accordance with the expected. The cattle-breeding that went on in this settlement was based on pigs and bovids, and to significantly lesser extent small ruminants. The different marks on the bones attest to the consumption of pork and beef, which obviously made up the largest portion of animal protein in the everyday diet. Deer remains attest to frequent game hunting. Other than the unquestionable contribution to the meat diet of the inhabitants of the settlement, deer and boar hunting was probably an important social event that was connected with special moments or special individuals, i.e. group. On the other hand, regardless of the proximity of a river, it seems that fishing was not that important.

4.3 LOV (IVAN DRNIĆ)

HUNTING (IVAN DRNIĆ)

Lov kao strategija preživljavanja inherentna je ljudskoj vrsti od samih početaka i tek se od neolitičke revolucije, koja je uključivala razvoj poljoprivrede i domestifikaciju životinja, njegov udio kao načina pribavljanja hrane postupno smanjivao. Sa znatnijim ljudskim utjecajem na krajolik i uspostavom kompleksnijih, često hijerarhiziranih društava u mlađoj pretpovijesti, a posebno u klasičnim civilizacijama, lov je sve više poprimao simbolički, pa i ritualizirani karakter, iako postoje jasne naznake da je sve do mlađeg željeznog doba lov prakticiran za pribavljanje mesa,[125] što uostalom u određenoj mjeri vrijedi i za stanovnike sisačkog željeznodobnog naselja.

Naime, na osnovu analize životinjskih ostataka iz naseobinskih slojeva na Pogorelcu, koja je potvrdila prisutnost lovne divljači, pri čemu su zabilježeni ostatci jelena, divlje svinje, srne i dabra, može se pretpostaviti da je i lov ipak imao određenu ulogu kao jedna od strategija pribavljanja hrane, što je u kraju koji obiluje šumama, kao što je južna Panonija, razumljivo. Osim zbog prehrane, divljač je lovljena i zbog kože, krzna i rogova.[126] S obzirom na prisutnost lovnog pribora u bogatim, često kneževskim

Hunting, as a subsistence strategy, has been inherent to the human species from its very beginnings. Only with the Neolithic revolution, which included the development of agriculture and the domestication of animals, did it decline as a form of food acquisition. With the growing human impact on the landscape and the establishment of more complex, often hierarchical societies in later prehistory, especially the classic civilizations, hunting acquired a more ritualistic role. However, there are clear indications that it was a common means of procuring meat until the Late Iron Age,[125] and this is also true to a certain extent for the inhabitant of the settlement in Sisak.

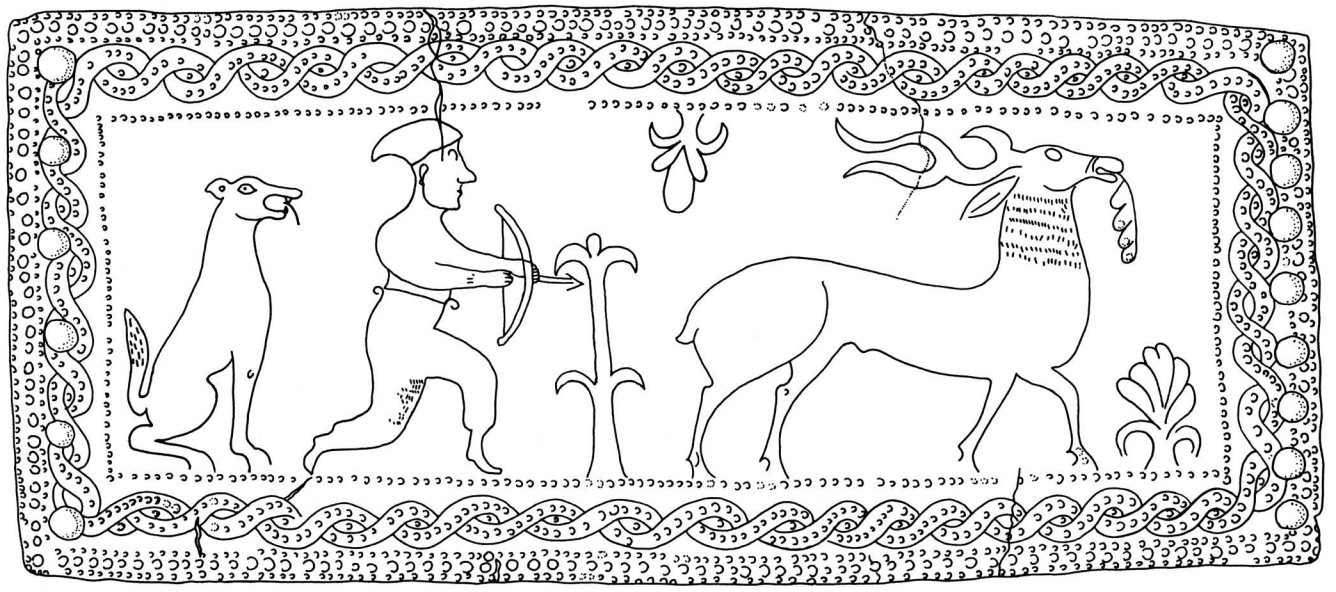
Based on the results of animal remains from the settlement layers discovered at Pogorelac, which confirmed the presence of game including red deer, boar, doe and beaver, it can be assumed that hunting also played a certain role as one of the strategies of food procurement, which in a land abundant with forests, such as southern Pannonia, is quite understandable. Besides being a food source, game was hunted for its hide, fur and antlers.[126] Considering the presence of hunting equipment

125 Trebsche 2013.

126 Green 1992, 54–55; Hansen 2013, 251–253; Trebsche 2013.

125 Trebsche 2013.

126 Green 1992, 54–55; Hansen 2013, 251–253; Trebsche 2013.



SL. 36
Prikaz lova s pojasne kopče iz Molnika (Slovenija) (Arhiv Narodnog muzeja Slovenije)

FIG. 36
The depiction of hunting from the belt buckle from Molnik (Slovenia) (Archives of the National Museum of Slovenia)

grobovima halštatskog kruga, kao što je primjerice slučaj s tumulom u Eberdingen-Hochdorfu, lov je često interpretiran kao aktivnost društvenih elita. Ipak, tome donekle proturječe prisutnost lovnog pribora (primarno vrhova strelica) i u siromašnijim grobovima, kao i sveprisutna pojava životinjskih kostiju na različitim željeznodobnim naseljima, od utvrđenih središta do nizinskih poljoprivrednih naselja, pri čemu životinjske kosti čine do 10% od ukupne količine, što upućuje na to da je lov predstavljao relativno redovitu aktivnost.[127] Ipak, zbog specifičnosti lova kao aktivnosti koja je često uključivala i konfrontaciju s opasnim životinjama kao što su veprovi, medvjedi, turovi i sl., pri čemu su se mogle iskazati osobine kao što su hrabrost, odvažnost i lukavstvo, lov je u željeznodobnim društvima, u kojima ratnici čine društvenu elitu, na simboličkoj razini zaista mogao imati legitimirajuću funkciju unutar društvene hijerarhije. S jedne strane lov je bio jedna od strategija pribavljanja hrane, a s druge razonoda i trening, odnosno priprema za ratovanje, što je bila jedna od primarnih aktivnosti željeznodobnih elita.[128] Naravno, simbolička komponenta lova nije odlika samo europskih željeznodobnih društava, već se lov kao elitna aktivnost može pratiti od prikaza bliskoistočnih vladara u lovu na lavove, preko klasičnih društava i europskog srednjeg vijeka pa sve do današnjih dana, pri čemu je arhetipski primjer tek nedavno zabranjen engleski lov na lisice.

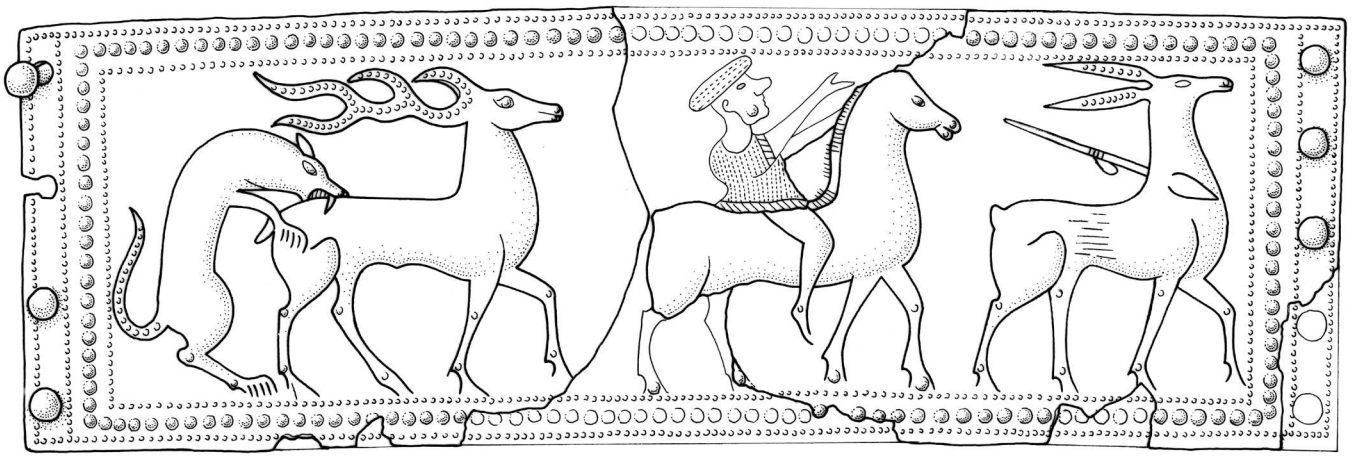
Prema sačuvanim prikazima s pojasnih kopči (Zagorje ob Savi, Molnik) (Sl. 36 – 37) te brončanih posuda (Klein Klein-Kröllkogel) lovilo se na konjima i pješice, a korišteni su luk i strijele te

in the rich, often princely graves of the Hallstatt circle, such as the Eberdingen-Hochdorf tumulus, hunting is often interpreted as an activity enjoyed by social elites. However, this is contradicted by the presence of hunting equipment (primarily arrowheads) in the less rich graves, as well as the widespread presence of animals bones at different Iron Age settlements, including fortified and lowland agricultural ones, in which animal bones make up to 10% of the total amount. This indicates that hunting was a relatively regular activity.[127] However, due to the specificity of hunting as an activity that often included confrontation with dangerous animals, such as boars, bears, aurochs and the like, whereby one could display traits such as bravery, boldness and cleverness, in Iron Age communities, where warriors were the social elite, hunting may have indeed served as a symbolic means of attaining legitimacy within the social hierarchy. Hunting, on the one hand, was a means of procuring food. On the other, it was a form of leisure and training, i.e. for war – one of the primary activities of Iron Age elites.[128] Of course, the symbolic component of hunting is not only a feature of European Iron Age communities. Hunting, as an elite activity, can be traced in the depiction of Middle Eastern rulers who hunted lions, in classical societies, the European Middle Ages and all the way up to the present day (the recent abolishment of fox hunting in England is an archetypal example).

Based on preserved depictions on belt buckles (Zagorje ob Savi, Molnik) (Fig. 36–37) and bronze vessels (Klein Klein-Kröllkogel), hunting was conducted both on horseback and on foot with

127 Hansen 2013; Trebsche 2013.
128 Xenophon, *Kynegetikos*, XII i dr.

127 Hansen 2013; Trebsche 2013.
128 Xenophon, *Kynegetikos*, XII, and others.



SL. 37
Prikaz lova s pojasne kopče iz Zagorja ob Savi (Slovenija) (Arhiv Narodnog muzeja Slovenije)

FIG. 37
The depiction of hunting from the belt buckle from Zagorje ob Savi (Slovenia) (Archives of the National Museum of Slovenia)

koplje. Relativno čest je i motiv lova na zečeve. Primjerice, prikaz sa situle iz groba 23 iz Welzelacha (Austrija) potvrđuje uporabu toljage (možda zvečka?) i mreže, a prikazi lova na veprove (brončana zdjela iz groba 137 u Dürrnbergu, korice bodeža iz Este) upućuju na uporabu koplja i sjekire.[129] Također, navedeni prikazi potvrđuju da je pas bio česta pratnja u lovu. U starijem željeznom dobu tobolci sa strijelama, čiji su vrhovi bili izrađeni od bronce ili kosti, zabilježeni su u grobovima jugoistočnoalpskog i jugozapadnopanonskog prostora, kao što je slučaj s gomilom 13 skupine Höchschusterwald u Kleinkleinu[130] te u Libni.[131] Za mlađe željezno doba arheološke potvrde lova su malobrojnije, ali lov na velika goveda, prema interpretaciji A. Green izumrle vrste - tura (*Bos primigenius*), posvjedočen je na dva prikaza s poznatog kotla iz Gundestrupa.[132] U kontekstu lovnog pribora možemo spomenuti grob 32 s Rospi Ćuprije u Beogradu, koji je osim uobičajenih predmeta ratničke opreme (koplje, štit), masivnog željeznog noža, škara kao toaletnog pribora i željezne fibule sadržavao željezni trakasti okov tobolca i željezni vrh strijele.[133]

the use of bows and arrows as well as spears. Rabbit hunting also appears quite often. For example, the depiction on the situla from grave 23 from Welzelach (Austria) confirms the use of a club (perhaps a rattle?) and a net, while depictions of boar hunting (on a bronze bowl from grave 137 at Dürrnberg and a sword scabbards from Este) point to the use of a spear and axe.[129] These depictions also show that dogs were often used in hunting. In the Early Iron Age, quivers with arrows, the tops of which were made of bronze or bone, have been recorded in graves in the eastern Alps and southwestern Pannonia, for example tumulus 13 from the Höchschusterwald group in Kleinklein,[130] and in Libna.[131] There is little archaeological evidence of hunting in the Late Iron Age. The hunting of large bovids – the extinct aurochs (*Bos primigenius*) according to A. Green's interpretation – is attested by two depictions from the famous Gundestrup cauldron.[132] In the context of hunting equipment, it is important to mention grave 32 from Rospi Ćuprija in Belgrade which, besides the standard warrior equipment (spear, shield), a massive iron knife, scissors as a toiletry, and an iron fibula, also contained the band shaped iron fitting of a quiver and an iron arrowhead.[133]

129 Za detaljan prikaz lova u halštatskom kulturnom krugu: Hansen 2013.

130 Bernhard, Guštin 2019.

131 Guštin 1976; Hellmuth 2007.

132 Green 1992, 44–45; Gaj Julije Cezar također spominje lov na turove kod Germana (Caesar, *De Bello Gallico* VI, 28).

133 Todorović 1963, Y 54: 5, 8..

129 For detailed depictions of hunting in the Hallstatt cultural circle: Hansen 2013.

130 Bernhard, Guštin 2019.

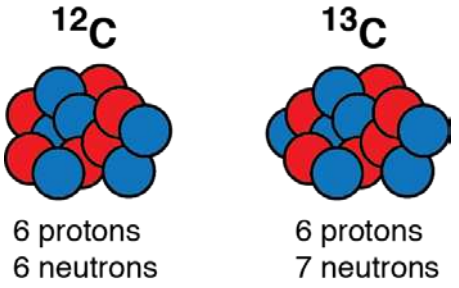
131 Guštin 1976; Hellmuth 2007.

132 Green 1992, 44–45; Gaius Julius Caesar mentions aurochs hunting among the Germanic tribes (Caesar, *De Bello Gallico* VI, 28).

133 Todorović 1963, Y 54: 5, 8..

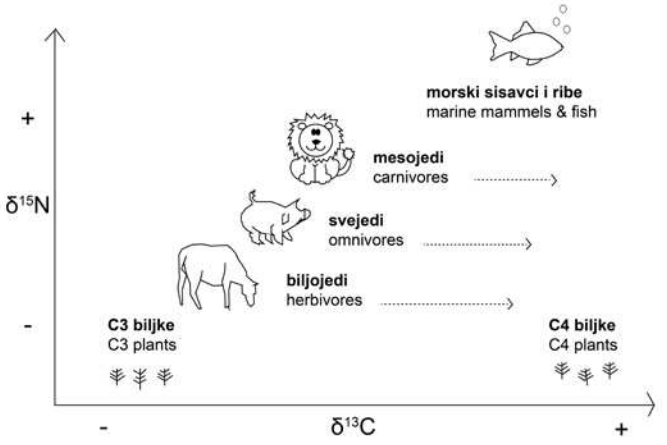
SL. 38
Stabilni izotopi ugljika (E. Zavodny)

FIG. 38
Stable carbon isotopes (E. Zavodny)



SL. 39
Očekivane vrijednosti stabilnih izotopa ugljika i dušika u različitim prehranama (E. Zavodny)

FIG. 39
General expected stable carbon and nitrogen isotope values according to different diets (E. Zavodny)



4.4 REZULTATI ANALIZE STABILNIH IZOTOPA UGLJIKA I DUŠIKA NA UZORCIMA IZ ŽELJEZNODOBNOG NASELJA U SISKU (EMILY ZAVODNY)

Što su stabilni izotopi?

Stabilni izotopi su inačice kemijskih elemenata koje se pojavljuju u prirodi. Svi izotopi kemijskog elementa imaju isti broj protona, ali svaki posjeduje različiti broj neutrona. Primjerice, ugljik (^{12}C) ima šest protona i šest neutrona, ali njegov stabilni izotop (^{13}C) ima 7 neutrona (Sl. 38). Tijekom našeg života, dok se hranimo, pijemo i dišemo, stabilni izotopi stalno kruže između naših tijela i okoliša. Navedeni ciklus ostavlja jedinstveni potpis slobodnih izotopa u našoj kosi, zubima i kostima. Mjerenjem udjela različih vrsta izotopa u ovim materijalima, arheolozi i drugi znanstvenici mogu donijeti zaključke o ljudima, životinjama i okolišu iz prošlosti. Na primjer, raspon stabilnih izotopa ugljika ($\delta^{13}C$) i dušika ($\delta^{15}N$) u kolagenu, organskom dijelu kosti, posebno je koristan za uvid u prehranu koju su ljudi ili životinje konzumirali zadnjih osam do deset godina života.

Vrijednosti stabilnih izotopa ugljika koriste se za procjenu udjela različitih vrsta biljaka u prehrani ljudi ili životinja.[134] Većina biljaka se na temelju provođenja fotosinteze (proces kojim biljke pretvaraju Sunčevu svjetlost u hranu) može podijeliti u dvije grupe, C_3 i C_4. Biljke s C_4 izotopom, poput prosa i kukuruza, statistički sadrže više ugljika nego biljke s C_3 izotopom, poput žita i trava. To znači da će životinje ili ljudi koji većinom jedu biljke s C_4 izotopom imati pozitivnije $\delta^{13}C$ vrijednosti od onih koji primarno jedu biljke s C_3 izotopom (Sl. 39).

Nadalje, mjerenjem $\delta^{15}N$ možemo procijeniti i trofičku razinu organizma ili poziciju koju je taj organizam imao u hranidbenom lancu. Jedinke s višim trofičkim razinama imaju veće vrijednosti $\delta^{15}N$ od onih s nižim trofičkim vrijednostima.[135] Morski sisavci i ribe također imaju visok $\delta^{15}N$. Zbog toga se na temelju ^{15}N može zaključiti je li jedinka jela više morske hrane od kopnenih biljaka i životinja (Sl. 39).

Sposobnost mjerenja stabilnih izotopa ugljika i dušika pomaže nam odgovoriti na mnogo različitih i zanimljivih pitanja o prošlosti. Što su ljudi jeli? Jesu li svi pripadnici zajednice imali istu prehranu ili je prehrana ovisila o starosti, spolu ili društvenom statusu? Kako su se ovi obrasci mijenjali tijekom vremena? Također, možemo proučavati i pojedine ekonomske prakse, poput uzgoja stoke. Prilikom upravljanja prehranom ili selidbom svojih životinja (ovaca, koza, krava ili svinja) stočari mijenjaju vrijednosti stabilnih izotopa životinja. Razlike u ovim vrijednostima tijekom vremena mogu istaknuti promjenu obrazaca stočarstva i omogućiti bolje razumijevanje svakodnevnog života.

134 DeNiro, Epstein 1978.

135 Schoeninger, DeNiro 1984.

STABLE CARBON AND NITROGEN ISOTOPE RESULTS FROM THE SISAK IRON AGE SETTLEMENT (EMILY ZAVODNY)

What Are Stable Isotopes?

Stable isotopes are naturally occurring variants of an element. While all isotopes of an element have the same number of protons, each one possesses a different number of neutrons. For example, the element carbon (^{12}C) typically has 6 protons and 6 neutrons, but its stable isotope (^{13}C) has 7 neutrons (Fig. 38). During our lifetime, stable isotopes are continually cycled between our bodies and environment as we eat, drink, and breathe. This cycle creates a unique stable isotope signature in our hair, teeth, and bones. By measuring the proportion of different types of isotopes in these materials, archaeologists and other scientists can make conclusions about past people, animals, and environments. For instance, the stable carbon ($\delta^{13}C$) and nitrogen ($\delta^{15}N$) isotope ratios of collagen - the organic part of bone - are especially useful for learning about the types of food people or animals ate within the last eight to ten years of their life.

Stable carbon isotope values are used to estimate the contributions of different plant types to the diet of people or animals.[134] Many plants can be divided into two groups – C_3 and C_4 – according to how they perform photosynthesis (the process by which plants convert sunlight into food). Isotopically, C_4 plants like millet and corn are statistically more enriched in carbon than C_3 plants such as wheats and grasses. This means that animals or people who eat primarily C_4 plants will have more positive $\delta^{13}C$ values than those who eat primarily C_3 plants (Fig. 39).

We can also estimate an organism's trophic level, or position they hold in a food web, by measuring their $\delta^{15}N$ signature. Individuals with higher trophic levels have larger $\delta^{15}N$ values than individuals in lower trophic levels.[135] For example, carnivores will have larger $\delta^{15}N$ values than herbivores. Marine mammals and fish also have very high $\delta^{15}N$ signatures. Using ^{15}N, then, we can conclude whether or not an individual ate more seafood than terrestrial plants and animals (Fig. 39).

The ability to measure carbon and nitrogen stable isotopes helps us to answer many different and interesting questions about the past. What did people eat? Did everyone in a community have the same diet, or did diet depend on a person's age, sex, or status? How did these patterns change over time? We can also study larger economic practices, such as livestock management. When farmers manipulate the diet or movement of their animals (sheep, goat, cow, or pig), they change the animals' stable isotope values. Differences in these values over time can highlight changing patterns of animal husbandry and lead to a broader understanding of everyday life.

134 DeNiro, Epstein 1978.

135 Schoeninger, DeNiro 1984.

SL. 40A
Vrijednosti stabilnih izotopa ugljika i dušika
(E. Zavodny)

FIG. 40A
Stable carbon and nitrogen isotope values
(E. Zavodny)

LAB #	VRSTA/SPECIES	$\delta^{13}C$	%C	$\delta^{15}N$	%N	C:N
SS-01	Ovca / Sheep	-21.0	45.4	9.0	16.3	3.3
SS-02	Svinja / Pig	-21.0	22.3	6.6	8.0	3.3
SS-03	Obični jelen / Red deer	-24.7	47.5	8.2	16.7	3.3
SS-04	Govedo / Cattle	-23.8	18.7	4.5	6.8	3.2
SS-05	Vepar / Wild Boar	-21.1	26.1	6.5	9.5	3.2
SS-06	Svinja / Pig	-21.5	18.8	7.5	6.8	3.2
SS-07	Svinja / Pig	-21.5	23.3	7.3	8.5	3.2
SS-09	Obični jelen / Red deer	-22.4	41.1	6.7	14.6	3.3
SS-10	Obični jelen / Red deer	-22.4	48.1	6.7	17.1	3.3
SS-11	Govedo / Cattle	-24.3	38.9	7.4	13.8	3.3
SS-12	Govedo / Cattle	-19.5	12.4	8.4	4.5	3.2
SS-13	Govedo / Cattle	-20.2	12.3	6.2	4.5	3.2
SS-14	Koza / Goat	-20.3	21.5	8.0	8.0	3.2
SS-15	Ovca/koza / Sheep/Goat	-20.7	45.3	10.9	16.1	3.3

SL. 40B
Srednje vrijednosti i rasponi stabilnih izotopa po vrstama
(E. Zavodny)

FIG. 40B
Stable isotope means and ranges by species
(E. Zavodny)

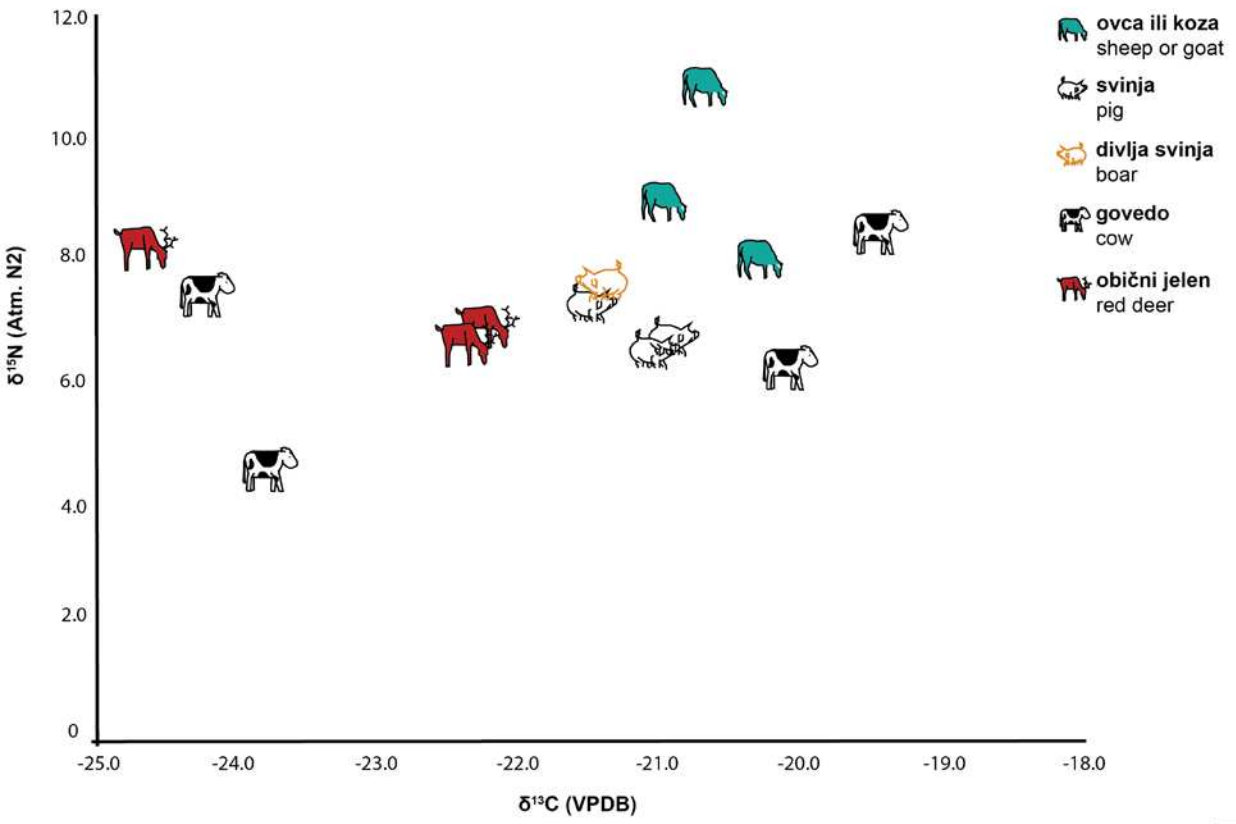
	$\delta^{13}C$ ‰ range	$\delta^{13}C$ ‰ mean	$\delta^{15}N$ ‰ range	$\delta^{15}N$ ‰ mean
Ukupna populacija /Total population	**-24.7 to -19.5**	**-21.7**	**4.5 to 10.9**	**7.4**
Pripitomljeno / Domesticated	**-24.3 to -19.5**	**-21.4**	**4.5 to 10.9**	**7.6**
Govedo / Cattle (n=4)	-24.3 to -19.5	-22.0	4.5 to 8.4	6.6
Ovca/koza / Sheep/Goat (n=3)	-21.0 to -20.3	-20.7	8.0 to 10.9	9.3
Svinja / Pig (n=3)	-21.5 to -21.0	-21.3	6.6 to 7.5	7.1
Divlje / Wild	**-24.7 to -21.1**	**-22.7**	**6.5 to 8.2**	**7.0**
Vepar / Boar (n=1)	-21.1	-	6.5	-
Obični jelen / Red deer (n=3)	-24.7 to -22.4	-23.2	6.7 to 8.2	7.2

SL. 41

Vrijednosti stabilnih izotopa ugljika i dušika životinja iz Siska (E. Zavodny)

FIG. 41

Stable carbon and nitrogen isotope values of animals from Sisak (E. Zavodny)



Stabilni izotopi u sisačkim uzorcima

U svrhu boljeg razumijevanja uzgoja životinja u Sisku tijekom željeznog doba analizirani su stabilni izotopi ugljika i dušika u ostatcima divljih i domesticiranih životinja. Uzorci su uzeti iz kostiju četrnaest životinja: četiri krave (*Bos taurus*), tri ovce i koze (*Ovis aeries* i *Capra hircus*), tri svinje (*Sus scrofa*), tri obična jelena (*Cervus elaphus*) i jedne divlje svinje. Svi uzorci su analizirani uz pomoć standardnih procedura u Laboratoriju za humanu paleoekologiju i geokemiju izotopa Sveučilišta Penn State (SAD). Detaljnija metodologija navedena je u drugoj literaturi.[136] Rezultati su prikazani na Sl. 40 – 41. Rasponi i prosječne vrijednosti za svaku vrstu navedeni su u Sl. 40.

Stable Isotopes at Sisak

In order to better understand how animals were managed at Sisak during the Iron Age, we analyzed wild and domesticated animals for stable carbon and nitrogen isotopes. The bones of 14 animals were sampled: four cows (*Bos taurus*), three sheep and goat (*Ovis aeries* or *Capra hircus*), three pigs (*Sus scrofa*), three red deer (*Cervus elaphus*), and one wild boar. All samples were analyzed using standard procedures at the Penn State University Human Palaeoecology and Isotope Geochemistry Laboratory (USA). More detailed methodology is outlined elsewhere.[136] Results are presented in Figs. 40–41. Ranges and averages for each species are presented in Fig. 40.

136 Zavodny *et al.* 2017; 2019.

136 Zavodny *et al.* 2017, 2019.

Metode uzgoja životinja tijekom željeznog doba

Sve vrijednosti $\delta^{13}C$ i $\delta^{15}N$ su nepromjenjive kod životinja koje žive u kopnenom C_3 okolišu, sličnom onome koji okružuje Sisak.[137] Divlje životinje, posebno obični jelen, imaju vidno negativnije vrijednosti ugljika od domesticiranih vrsta. Ova razlika vjerojatno je rezultat "efekta krova", poznatog trošenja izotopa ugljika kod jedinki koje žive u gustoj šumi.[138] Nekoliko krava ima slične niske vrijednosti izotopa ugljika te je moguće da su ove jedinke pasle ili brstile biljke na rubovima šuma i time također bile podložne "efektu krova". Kao grupa krave su također pokazale najveću varijabilnost u dušiku, što bi moglo poduprijeti tezu da su krave bile raspršenije krajolikom od drugih vrsta (veća područja ispaše, udaljeniji pašnjaci itd.).

Uzorci divlje svinje i obične svinje izotopski su vrlo slični, što upućuje na činjenicu da domesticirane svinje nisu jele znatno drugačiju hranu od svojih divljih srodnika. Ovo je ponešto neobično za pripadajuće vremensko razdoblje jer su analize stabilnih izotopa s drugih nalazišta pokazale da su svinje vjerojatno bile hranjene krmnim biljem ili otpatcima. Na primjer, tijekom brončanog i željeznog doba u Lici, svinje su imale visoke vrijednosti dušika te su vjerojatno bile hranjene otpatcima.[139] S druge strane, sve su svinje imale vrlo slične potpise stabilnih izotopa. Ovo upućuje na činjenicu da je svinjama na neki način bilo ograničeno kretanje, moguće zatvaranjem u tor blizu kuća.

Ovikapridi (ovce i koze) obično imaju više vrijednosti dušika od drugih vrsta. Sporedni proizvodi poljoprivrede poput lišća i stabljika često su korišteni kao krmna hrana te su tipično bogati $\delta^{15}N$ koji je povezan s voćem i žitom.[140] Visoke vrijednosti dušika koje su pokazali ovikapridi mogu upućivati na neku od metoda uzgoja koje su uključivale okupljanje u krda, zatvaranje u torove i korištenje izmeta kao gnojiva za usjeve. Dojenje također može uzrokovati pozitivnije vrijednosti dušika u individua koje sišu.[141] Buduća istraživanja starosti životinja pomoći će u potvrdi ili odbacivanju ove mogućnosti.

Unatoč paleobotaničkom dokazu postojanja prosa u Sisku,[142] nema vidljivih promjena izotopa (na primjer obogaćenog potpisa ugljika) koji bi upućivali na redovito hranjenje životinja prosom ili drugim C_4 biljkama. Ukoliko je proso bilo uzgajano u Sisku, životinje su vjerojatno bile odvojene od polja tijekom sezone rasta usjeva i nisu bile hranjene znatnom količinom poljoprivrednih nusprodukata.

137 DeNiro, Epstein 1978, 1981; Richards, Trinkaus 2009.

138 Bocherens *et al.* 2015.

139 Zavodny *et al.* 2019.

140 Szpak 2014.

141 Fuller *et al.* 2006.

142 Reed, Drnić 2016.

Animal Management Practices during the Iron Age

All $\delta^{13}C$ and $\delta^{15}N$ values are consistent with animals living in a terrestrial C_3 environment, similar to the one surrounding Sisak.[137] Wild animals, especially red deer, are observably more negative in carbon than domesticated species. This difference is likely the result of the "canopy effect," which is a known depletion of carbon isotopes in individuals living in dense forest.[138] Several cows have similarly low carbon values, and it is possible that these individuals grazed or browsed at the edges of forests and were also subject to the canopy effect. As a group, cows also exhibit the highest variability in nitrogen and this could further support the idea that cows were more dispersed on the landscape than other species (e.g., larger grazing areas, more distant pastures, etc).

Both the wild boar and pig samples are very similar isotopically, suggesting that domesticated pigs did not consume a radically different diet than their wild counterparts. This is somewhat unusual for the time period as stable isotope studies have shown that pigs at other sites were likely foddered or fed human refuse. For instance, during the Bronze and Iron Ages in Lika, Croatia, pigs had high nitrogen values and were likely fed scraps and waste.[139] All of the pigs, however, have very similar stable isotope signatures. This suggests they were somehow restricted in their movement, perhaps by being penned near houses.

Ovicaprids (sheep and goat) have generally higher nitrogen values than other species. Agricultural by-products often used as fodder, such as leaves and stems, are typically enriched in $\delta^{15}N$ relative to fruits and grains.[140] The high nitrogen values exhibited by ovicaprids may reflect this or other management practices that included stocking, penning, or foddering with crops fertilized with manure. Nursing can also cause more positive nitrogen values in suckling individuals.[141] Future aging studies would help to support or refute this possibility.

Additionally, despite paleobotanical evidence of millet at Sisak,[142] there are no observable isotopic shifts (i.e., enriched carbon signature) that would indicate animals were regularly foddered with millet or other C_4 plants. If millet was grown at Sisak, it appears that animals were separated from the fields during the growing season and did not eat any significant amount of the harvested agricultural by-products.

137 DeNiro, Epstein 1978, 1981; Richards, Trinkaus 2009.

138 Bocherens *et al.* 2015.

139 Zavodny *et al.* 2019.

140 Szpak 2014.

141 Fuller *et al.* 2006.

142 Reed, Drnić 2016.

SL. 42
Poljoprivredne alatke iz Siska
(srpovi, okov kose i motika)
(I. Krajcar)

FIG. 42
Agricultural tools from Sisak
(sickles, scythe fitting, hoe)
(I. Krajcar)

4.5 PRIPREMA I KONZUMACIJA HRANE I PIĆA (IVAN DRNIĆ)

Predstavljeni rezultati arheobotaničkih i zooarheoloških analiza jasno potvrđuju prisutnost pojedinih biljnih i životinjskih vrsta koje su stanovnici sisačkog željeznodobnog naselja koristili u prehrani. S druge strane, na načine uzgoja, pripreme i konzumacije namirnica upućuju predmeti koji su korišteni u različitim fazama tih procesa.

U obradi polja vjerojatno su korišteni plugovi sa zaprežnim životinjama, na što upućuje prizor oranja sa situle iz Sanzena,[143] iako je u obradi zemlje nedvojbeno korišten i manji alat, kao što je motika izrađena od kosti s perforacijom za nasad drške (Sl. 42). Nažalost, sisački je predmet bez jasnog arheološkog konteksta, ali slične alatke izrađene od rogova i kosti u velikom su broju zabilježene u željeznodobnom naselju u Donjoj Dolini i svjedoče o svojoj raširenoj uporabi.[144] Također, željezni dijelovi plugova (rala i crtala) dobro su posvjedočeni na brojnim mlađeželje znodobnim nalazištima zapadne i srednje Europe te potječu iz naselja i ostava, a u slučaju Posočja predstavljaju grobne priloge.[145]

U žetvi žitarica korišteni su metalni srpovi, a iz Siska su poznati jedan brončani primjerak koji potječe iz kasnog brončanog doba te jedan mlađi željezni srp s kraćim trokutastim jezičkom za nasad drške, pronađen u iskopavanju iz 1992. na položaju

143 Turk 2005, Sl. 39.
144 Truhelka 1904, 61–62, Sl. 36, T. 28, T. 29: 1–2, 6; T. 30; T. 32: 1.
145 Guštin 1991, T. 5: 10, T. 6: 1, T. 19: 3–7, T. 31: 1 i dalje.

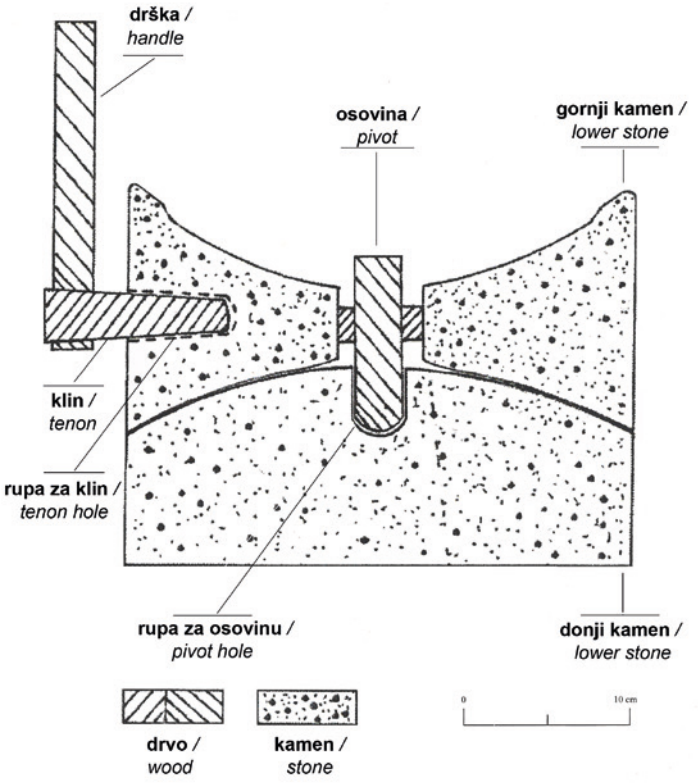
FOOD AND BEVERAGE PREPARATION AND CONSUMPTION (IVAN DRNIĆ)

The presented results of archaeobotanical and zooarchaeological analyses clearly confirm the presence of certain plant and animal species that were used by the inhabitants of the Iron Age settlement in Sisak as food. On the other hand, the modes of cultivating, preparing and consuming these ingredients are attested to by items that were used in the different stages of these processes.

Fields were probably ploughed with the help of animals, as suggested by a depiction of ploughing from the situla from Sanzeno,[143] although farming was undoubtedly also done with the help of smaller tools, such as a hoe made of bone with a perforation for hafting (Fig. 42). Unfortunately, this find from Sisak has no clear archaeological context. However, the large numbers of similar tools made of antler and bone discovered at the Iron Age settlement at Donja Dolina speak in favor of their widespread use.[144] Parts of iron ploughs (coulter and share) are also well documented at numerous Late Iron Age sites throughout western and central Europe. They have been found in settlements, hoards as well as graves in the case of the Posočje region.[145]

Grains were harvested with metal sickles, and Sisak yielded a bronze one dated to the Late Bronze Age and an iron sickle with a short triangular protrusion for hafting, which was discovered

143 Turk 2005, Fig. 39.
144 Truhelka 1904, 61–62, Fig. 36, Pl. 28, Pl. 29: 1–2, 6; Pl. 30; Pl. 32: 1.
145 Guštin 1991, Pl. 5: 10, Pl. 6: 1, Pl. 19: 3–7, Pl. 31: 1 and onwards.



SL. 43
Grafički prikaz rotacijskog žrvnja (Staubitz 2007)

FIG. 43
A graphic depiction of a rotary quern (Staubitz 2007)

Pogorelac-Keltsko (Sl. 42). U istraživanju mlađeželjeznodobnog naseobinskog horizonta na Pogorelcu pronađen je i okov kose D-oblika kakvi su uobičajeni za kasnolatenske kose (Sl. 42), s brojnim analogijama od slovenskog Posočja (Idrija pri Bači, Reka pri Cerknam)[146] do glasovitog opiduma Manching u Bavarskoj.[147]

Nakon vršidbe, žitarice su mljevene u brašno kamenim žrvnjevima čiji su ulomci u većem broju zabilježeni u istraživanju na Pogorelcu. Od pojave žitarica u ljudskoj prehrani pa sve do sredine 1. tisućljeća uglavnom su korišteni tehnički jednostavniji žrvnjevi koji su se sastojali od donjeg fiksnog dijela i kamenog rastirača, dok je od 5./4. st. pr. Kr., pod mediteranskim utjecajima vjerojatno s prostora Iberskog poluotoka, na prostoru srednje Europe započela uporaba tzv. rotacijskih žrvnjeva koji su znatno unaprijedili postupak mljevenja (Sl. 43).[148] Rotacijski žrvnjevi sastojali su se od dva dijela, oba okruglog oblika: donjeg fiksnog i gornjeg pokretnog s perforacijom u sredini čijom se rotacijom obavljalo mljevenje. Navedena perforacija služila je za fiksiranje gornjeg elementa i za sipanje zrnja u žrvanj. Među

146 Guštin 1991, T. 14: 2, T. 17: 4.
147 Jacobi 1974., kat. br. 1086–1097.
148 Wefers 2011a, 29; Wefers 2011b, 67.

in the 1992 excavations of Pogorelac-Keltsko and dates to the Late Iron Age (Fig. 42). The excavations of the Late Iron Age settlement phase at Pogorelac also yielded the D-shaped fitting of a scythe (a common feature of Late La Tène scythes), which has numerous analogies spanning from the Slovenian Posočje region (Idrija pri Bači, Reka pri Cerknam)[146] to the famous Manching oppidum in Bavaria.[147]

After the threshing, the grains were grinded into flour with querns, the likes of which have been discovered, albeit fragmented, at Pogorelac. From the time when grains entered the human diet until the middle of the 1st millennium BC, technically simpler grindstones composed of a fixed lower part and handstone were used. In the 5th/4th century BC, rotary querns, which significantly improved the grinding process, entered central Europe under Mediterranean influences, probably via the Iberian Peninsula.[148] Rotary querns were composed of two parts that were both round, the lower fixed and the upper movable with a perforation in the middle to allow the part to rotate and grind (Fig. 43). This perforation was used to hold the upper

146 Guštin 1991, Pl. 14: 2, Pl. 17: 4.
147 Jacobi 1974., cat. nr. 1086–1097.
148 Wefers 2011a, 29; Wefers 2011b, 67.

SL. 44
Ulomci rotacijskih žrvnjeva iz željeznodobnog naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 44
Fragments of rotary querns from the Iron Age settlement at the Pogorelac position in Sisak (I. Krajcar)

ulomcima žrvnjeva s Pogorelca, izrađenih od krupnozrnatnog kamena, nekoliko njih se sa sigurnošću može pripisati ovom naprednijem tipu (Sl. 44).

Hrana biljnog i životinjskog porijekla termički se obrađivala na nekoliko načina, što potvrđuju brojni nalazi iz sisačkog željeznodobnog naselja. Nedvojbeno su najbrojniji ulomci keramičkih posuda, uglavnom lonaca u kojima su namirnice kuhane nad otvorenim ognjištima (Sl. 45) ili uz korištenje tzv. pokretnih ognjišta izrađenih od pečene gline i često ukrašenih plastičnim trakama, koja su u velikom broju (iako u znatno fragmentiranom stanju) pronađena u iskopavanjima na Pogorelcu (Sl. 46).[149] Iako analize stijenki posuda iz Siska još nisu obavljene, na osnovu potvrđenih arheobotaničkih nalaza možemo pretpostaviti da su stanovnici kuhali kaše od pšeničnog brašna ili brašna dobivenog mljevenjem prosa, uz moguće dodatke povrća, grahorica (primjerice boba) te mesa.

Još jedan način pripreme hrane je uporaba peki pri čemu se hrana stavlja ispod keramičkog poklopca koji se prekriva drvenim žarom, o čemu svjedoče stotine ulomaka stijenki ovih predmeta,

element and pour grains into the querns. Several querns fragments of coarse stone from Pogorelac can be ascribed to this more advanced type (Fig. 44).

Both animals and plants were thermally processed in several ways, as attested by numerous finds from the Iron Age settlement in Sisak. Fragments of ceramic vessels are undoubtedly the most numerous and mostly include pots used to cook ingredients over an open flame (Fig. 45) or with the help of so-called 'movable hearths' made of fired clay and often decorated with plastic ribbons. Large amounts of the latter, though highly fragmented, have been discovered at Pogorelac (Fig. 46).[149] Although analyses of vessel walls have not yet been done on the material from Sisak, it can be assumed, based on confirmed archaeobotanical finds, that the inhabitants prepared porridge using wheat flour or flour made by grinding millet with possible additions of vegetables, pulses (for example, broad beans) and meat.

Another food preparation technique made use of ceramic baking lids, which were placed over food and subsequently covered with ember. This is attested by hundreds of fragments of such

149 Romsauer 2003; Grahek 2016, 182, Sl. 52.

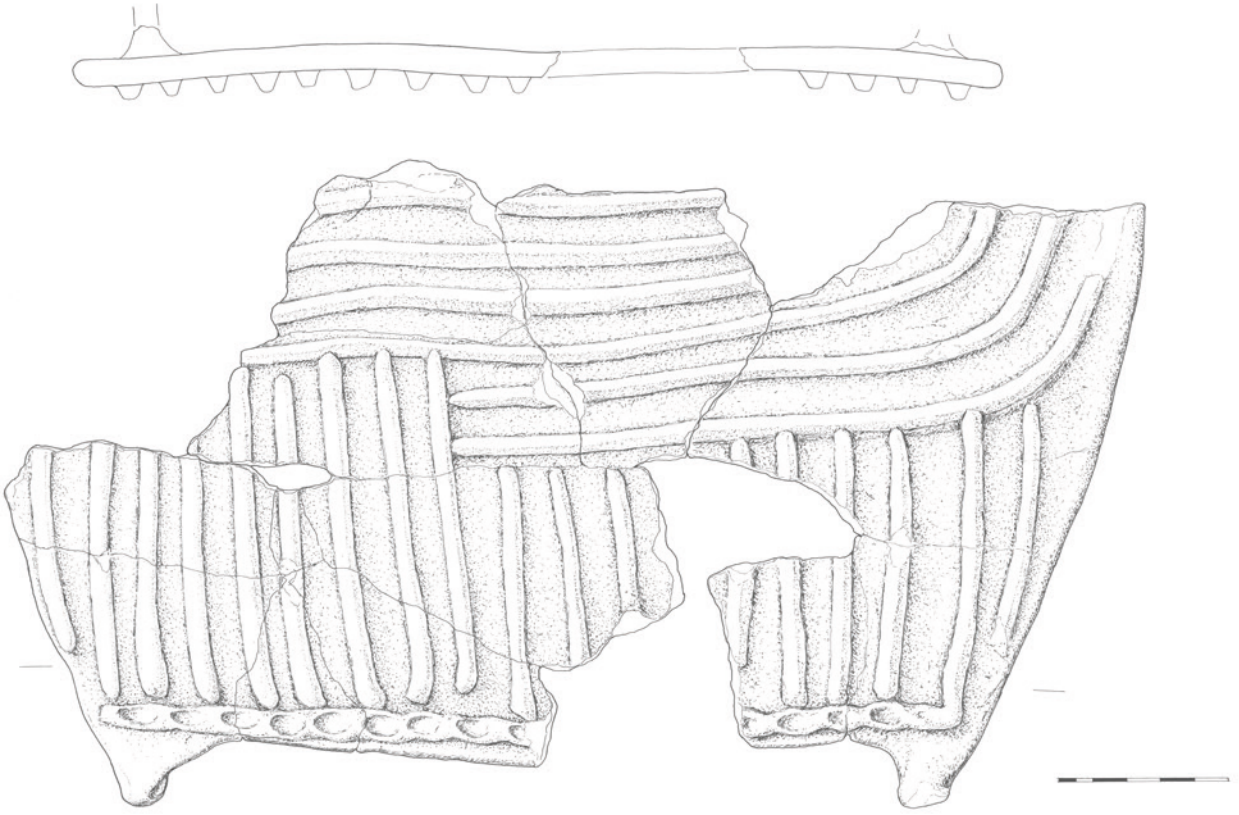
149 Romsauer 2003; Grahek 2016, 182, Fig. 52.

SL. 45
Lonac za kuhanje i peka iz
mlađeželjeznodobnih slojeva naselja
na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 45
A cooking pot and a baking lid
from the Late Iron Age layers of the settlement
at the Pogorelac position (I. Krajcar)

SL. 46
Dio keramičkog pokretnog ognjišta
s poda kuće u Sondi 5 na položaju
Pogorelac u Sisku (M. Galić)

FIG. 46
A part of a movable hearth
from the house floor in Trench 5
at the Pogorelac position in Sisak (M. Galić)



ali i masivnih ručki, izrađenih od grubozrnate glinene smjese (Sl. 45). Uporabom peki mogle su biti pripravljane sve vrste namirnica, uključujući i kruh.

Tijekom željeznodobnih gozbi meso je bilo pripravljano na još nekoliko načina koji su arheološki dobro potvrđeni. Jedan je pečenje na ražnjevima koji su pronalaženi kako u grobovima pod humcima starijeg željeznog doba, tako i u ravnim grobovima mlađeg željeznog doba, iz kojih su poznati i dijelovi kotlova, kao i masivne željezne vilice za vađenje kuhanog mesa. Zabilježeni su i primjeri željeznih rešetki, odnosno roštilja kakav je pronađen u poznatom grobu 92 s groblja na beogradskoj Karaburmi.[150] U analizi životinjskih kostiju spomenuto je da su na nekima od njih zabilježeni tragovi rezanja. Naime, u okviru latenske kulture, a u kontekstu konzumacije mesa često se spominju masivni željezni noževi trokutastog sječiva i povijene drške sa zadebljanjem ili obručem na završetku. Primjerice, u grobovima se ovi noževi često nalaze zajedno s prilozima mesa, najčešće svinja, koji predstavljaju uobičajene grobne priloge toga vremena.[151] Iz Siska su poznata dva opisana noža, jedan iz srednjolatenskog razdoblja s koničnim zadebljanjem na kraju drške i drugi, mlađi i znatno masivniji s obručem, iz kasnog latena (Sl. 47).[152]

Osim hrane biljnog porijekla i mesa, u prehrani stanovnika Segestike/Siscije zasigurno su se nalazili mlijeko i mliječni proizvodi na što upućuje postojanje goveđih kostiju te kostiju ovaca/koza prikupljenih u naseobinskim slojevima na Pogorelcu.[153] Također, na proizvodnju sira mogli bi ukazivati nalazi nekoliko keramičkih cjediljki koje se u arheološkoj literaturi često dovode u vezu s ovom aktivnošću.[154]

U konzumaciji pripremljene hrane vjerojatno su korištene keramičke zdjele različitih oblika, a za ispijanje tekućine manje zdjele, šalice i čaše (Sl. 48 – 49). Nikako se ne smije izgubiti iz vida da je znatan dio pribora za konzumaciju hrane bio izrađen od organskog materijala, primjerice drveta, na što upućuju brojni etnografski primjeri. U posebnim gozbama vjerojatno su korištene karakteristične zdjele vrlo kvalitetne proizvodnje, crne uglačane površine (možda imitacija metalnih posuda), čije su ručke bile ukrašene stiliziranim rogovima, ušima ili cijelim životinjskim glavama (Sl. 50). Gozbe, koje su u grčkoj i rimskoj kulturi poznate pod nazivom simpoziji, na kojima su osim hrane konzumirana i alkoholna pića kao što su pivo, medovina, a pod utjecajem Mediterana i vino, imale su istaknutu ulogu u željeznodobnim zajednicama kao važni društveni, ali i religiozni događaji.

lids as well as a massive handles made entirely of coarse-grained clay paste (Fig. 45). Baking lids could be used to prepare all kinds of food, including bread.

Meat was prepared during Iron Age feasts in several other, archaeologically well-documented ways. One of these is the use of roasting skewers, which have been discovered both in Early Iron Age graves under mounds and in Late Iron Age flat graves that also yielded parts of cauldrons and massive iron forks for extracting cooked meat. There are also examples of iron bars, i.e. grills, such as the one discovered in the well-known grave 92 from the Karaburma cemetery in Belgrade.[150] It was mentioned in the analysis of animal bones that some of them exhibited traces of cutting. Massive iron knives with triangular blades and curved handles with a thickening or ring at the end are often recorded in the context of meat consumption in the La Tène culture. In graves, for example, these knives are often found alongside meat used as a grave good, most often pigs, which were a common grave good in the period.[151] Two such knives have been discovered in Sisak, one from the Middle La Tène period with a conical thickening at the end of the handle, and another, later and much larger one with a ring dated to the Late La Tène (Fig. 47).[152]

In addition to food from plants and meat, the diet of the inhabitants of *Segestica*/*Siscia* certainly included milk and dairy products, as indicated by the presence of bovid and goat/sheep bones collected in the settlement layers at Pogorelac.[153] Several ceramic strainers often associated with cheese production in archaeological publications could also indicate such activity.[154]

Ceramic bowls of various shapes were probably used in the consumption of prepared foods. Smaller bowls, mugs and cups were used to consume liquids (Fig. 48–49). One must not forget that a considerable portion of the utensils used for food consumption were made of organic material, e.g. wood, as indicated by numerous ethnographic examples. Characteristic bowls of very high-quality were probably used at special feasts. These had black burnished surfaces (perhaps in imitation of metal vessels) and handles decorated with stylized horns, ears, or entire animal heads (Fig. 50). Feasts, commonly known in Greek and Roman culture as symposia, in which food and alcoholic beverages such as beer, mead, and under Mediterranean influences wine were consumed, played a prominent role in Iron Age communities, being both important social and religious events.

150 Todorović 1972, 31, T. 28: 19.

151 Radović 2013.

152 Burkovsky 2004, kat. br. 63; Dizdar, Drnić 2018, Sl. 2, 68–69.

153 Green 1992, 33–34.

154 Burkowsky 2004; Drnić, Miletić Čakširan 2014.

150 Todorović 1972, , 31, Pl. 28: 19.

151 Radović 2013.

152 Burkovsky 2004, cat. no. 63; Dizdar, Drnić 2018, Fig. 2, 68–69.

153 Green 1992, 33–34.

154 Burkowsky 2004; Drnić, Miletić Čakširan 2014.

SL. 47
Željezni nož za rezanje mesa
i brusni kamen iz Siska (I. Krajcar)

FIG. 47
The iron knife for cutting meat
and a whetstone from Sisak (I. Krajcar)

SL. 48
Stolno posuđe iz kasnohalštatskih slojeva
naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 48
Tableware from the Late Hallstatt layers of the settlement
at the Pogorelac position in Sisak (I. Krajcar)

SL. 49
Stolno posuđe iz kasnohalštatskih slojeva
naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 49
Tableware from the Late Hallstatt layers
of the settlement at the Pogorelac position in Sisak (I. Krajcar)

SL. 50
Fino keramičko posuđe za piće iz kasnohalštatskih slojeva naselja
na položaju na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 50
Fine ware used for drinking from the Late Hallstatt layers
of the settlement at the Pogorelac position in Sisak (I. Krajcar)

5. STANOVNICI INHABITANTS

Ivan Drnić

Priča o sisačkom željeznodobnom naselju pripovijest je o njegovim stanovnicima čiji su životi i pojedinačne sudbine zauvijek nestale u tišini pretpovijesti. Ipak, tragovi njihovog postojanja, utjelovljeni u različitim aspektima materijalne kulture, dozvoljavaju arheolozima zasigurno manjkav, ali iskren pokušaj rekonstrukcije njihovog postojanja, načina na koji su se prehranjivali, gradili nastambe i organizirali naselje, što su proizvodili i s kime su trgovali ili ratovali te kako su se odijevali. Iznimno važan aspekt materijalne kulture jest odjeća i u proširenom smislu nošnja, s obzirom na to da ona, osim čisto funkcionalne namjene zaštite tijela, često služi kao sredstvo prijenosa simboličkih poruka unutar vizualnog sustava pojedine društvene skupine ili između različitih skupina. Brojne antropološke, etnološke i sociološke studije potvrdile su iznimnu važnost nošnje u društvenoj komunikaciji, pri čemu ona može predstavljati materijalni izraz pripadnosti određenoj društvenoj, statusnoj, rodnoj pa čak i etničkoj skupini. Uz određen oprez, zbog najčešće samo djelomične sačuvanosti nošnje, te su spoznaje primjenjive i u arheološkom kontekstu. Primjerice, unutar željeznodobnih zajednica nošnja je bila važno sredstvo izražavanja ženskog identiteta uporabom različitih funkcionalnih i dekorativnih elemenata kao što su igle, fibule, pojasevi, narukvice, ogrlice, ukrasi za kosu itd., ali i dijelova izrađenih od organskih materijala, kao što je tkanina, koji najčešće nisu sačuvani u arheološkim kontekstima. S obzirom na to da su identiteti višeslojne odnosno kompleksne kategorije, nošnjom su se, osim rodnog, izražavali i drugi identiteti, primjerice pripadnost društvenoj eliti kroz uporabu predmeta od plemenitih metala ili starosna pripadnost koja je zasigurno igrala važnu ulogu u pretpovijesnim društvima.

The story of the Iron Age settlement in Sisak is a story about its inhabitants, whose lives and individual fates have disappeared in the silence of prehistory. However, traces of their existence, manifested in different aspects of material culture, allow archaeologists to make flawed, but honest attempt at reconstructing various facets of their existence. From material evidence we can reconstruct what they ate, how they constructed their dwellings and organized their settlement, as well as what they produced, who they traded with or waged war against, and how they dressed. Clothing, and, in the wider sense, attire, is an exceptionally important aspect of material culture because, other than having the purely functional role of protecting the body, it also often serves as a means of transferring symbolic messages within the visual system of a certain social group, or between different groups. Numerous anthropological, ethnological and sociological studies have confirmed the exceptional importance of attire in social communication, whereby it can represent the material expression of belonging to a certain social, status, gender, and even ethnic group. With a certain amount of caution, due to the fact that parts of attire are usually only partially preserved in the material record, insight into this social communication is possible in an archaeological context. For example, within Iron Age communities, attire was a very important means of expressing female identity through different functional and decorative elements such as pins, fibulas, belts, bracelets, necklaces, hair decorations, etc., as well as elements of organic materials, such as fabric, which are rarely preserved in archaeological contexts. Seeing as identities are multi-layered, i.e. complex categories, one's attire was also used to express identities other than purely gender one. For example, affiliation with social elite was communicated through the use of items made of precious metals, and a sense of belonging to a certain age group, which must have played an important role in prehistoric societies, was also communicated through various pieces of attire.

5.1 Ženska nošnja

The female attire

Za razliku od relativno brojnih naseobinskih podataka iz mlađe faze starijeg i mlađeg željeznog doba, istovremena groblja, koja predstavljaju najvredniji izvor informacija za rekonstrukciju nošnje, u potpunosti su nepoznata na prostoru današnjeg Siska. Za rekostrukciju nošnje važni su i figuralni prikazi, među kojima prednjače oni iz okvira situlske umjetnosti. Kombinacijom funerarnih i figuralnih podataka, uz korištenje analogija iz mediteranskog kulturnog kruga, smatra se da je osnovni ženski odjevni

Unlike the relatively numerous settlement-related data from the later phase of the Early and Late Iron Age, the contemporaneous cemeteries, which are the most valuable source of information for the reconstruction of attire, are completely lacking in Sisak. Figural depictions are also important for the reconstructions of attire, and those from situla art are certainly at the forefront of this. Based on a synthesis of funerary and figural data, along with analogies from the Mediterranean cultural circle, it

SL. 51
Elementi ženske nošnje
kasnohalštatskog razdoblja iz Siska
(I. Krajcar)

FIG. 51
Elements of female attire
from the Late Hallstatt period
from Sisak (I. Krajcar)

SL. 52
Rekonstrukcija ženske nošnje
stanovnice kasnohalštatskog naselja u Sisku
(S. Bogojević Narath)

FIG. 52
A reconstruction of the female attire
of an inhabitant of the Late Hallstatt settlement
in Sisak (S. Bogojević Narath)

predmet bila haljina, grčkog naziva *peplos*, koja se na ramenima pričvršćivala fibulama, a u struku stezala pojasom.[155] Uz haljinu korišteni su i dugi šalovi ili neka druga pokrivala za glavu.

Ipak, relativno velik broj slučajnih nalaza, od kojih neki potječu i iz rijeke Kupe, kao i usporedba sa susjednim zajednicama kod kojih je ovaj aspekt materijalne kulture dobro istražen, primjerice dolenjskom halštatskom skupinom i kasnije mokronoškom na zapadu te grupom Donja Dolina-Sanski most na istoku, dozvoljavaju pokušaj rekonstrukcije ženske kasnohalštatske nošnje iz razdoblja od sredine 6. do sredine 4. st. pr. Kr., kao i one kasnolatenske iz druge polovice 2. i 1. st. pr. Kr. Važno je istaknuti da su zbog karaktera nalaza predložene rekonstrukcije nošnji hipotetske (Sl. 51 – 52, 54 – 55).

Ono što odlikuje skupine predmeta iz Siska koji su predstavljali elemente nošnje u dva navedena razdoblja jest njihova eklektičnost, odnosno prisustvo predmeta koji potječu iz različitih kulturnih sredina: jugoistočnih Alpa, južne Panonije i zapadnog Balkana. To je potpuno razumljivo ako se uzme u obzir zemljopisni položaj sisačkog željeznodobnog naselja, kao i njegova istaknuta uloga u komunikacijskoj mreži tog vremena. U kasnohalštatskom razdoblju ipak su najzastupljeniji predmeti iz jugoistočnoalpskog kulturnog kruga, pri čemu brojem prednjače različiti oblici fibula tipa Certosa. Ovaj tip, koji je ime dobio prema jednoj od bolonjskih željeznodobnih nekropola, pojavljuje se gotovo istovremeno na estenskom, svetolucijskom i dolenjskom prostoru odražavajući kulturno jedinstvo sjevernoitalskog i jugoistočnoalpskog prostora krajem 6. st. pr. Kr.[156] Najveći broj poznatih primjeraka potječe iz krajeva južno od rijeke Po, zapadnih i istočnih Alpa te južne Panonije, uključujući i sisačko naselje, te zapadnog Balkana, a brojni su primjerci, razumljivo, poznati i sa šireg europskog prostora.

Od sisačkih primjeraka čak četiri fibule pripadaju petoj skupini, obliku rasprostranjenom od srednje i sjeverne Italije pa sve do jugoistočne Panonije i središnjeg Balkana (Glasinac), s najvećim brojem primjeraka s područja dolenjske skupine, gdje im vjerojatno treba tražiti porijeklo.[157] Zabilježene su u grobovima starijeg i mlađeg certoškog stupnja dolenjske skupine, odnosno od kraja 6. do polovice 5. st. pr. Kr. kada ih, uostalom, nalazimo i u grobnim cjelinama južne Panonije i zapadnog Balkana.[158] Slijede dva primjerka desete skupine (inačice e i h) koje su prisutne na prostoru od sjeverne Italije do istočnojadranskog zaleđa i južne Panonije sa Siskom kao najistočnijim nalazištem.[159] Na prostoru dolenjske halštatske grupe ova se varijanta pojavljuje u mlađem certoškom te negovskom horizontu, odnosno od sredine 5.

155 Grömer 2009.

156 Ključan rad za proučavanje ovih fibula objavila je 1977. godine B. Teržan u *Arheološkom vestniku* u kojemu su svi poznati primjerci podijeljeni u trinaest skupina s nizom inačica.

157 Teržan 1977, 352–353, 375–380, Sl. 18.

158 Brunšmid 1902, 68, Sl. 22; Teržan 1977, Sl. 4. Za ostale primjerke: Teržan 1977, 324; Vasić 1999, T. 50: 837A, 838–840, 842; Blečić Kavur, Jašarević 2016, 226–227, Sl. 3.

159 Teržan 1977, 331–332, Sl. 4: e, Sl. 31.

can be said that the basic female piece of clothing was a dress, called *peplos* in Greek, that was tied with fibulas on the shoulders, and was fastened at the waist by belts.[155] Long scarves and other head covers were worn alongside the dress.

However, a relatively large number of preserved chance finds, some recovered from the Kupa River, along with a comparison with the neighboring communities where this aspect of material culture has been thoroughly researched, such as the Dolenjska Hallstatt group and the later Mokronog group in the west, as well as the Donja Dolina-Sanski Most group in the east, allow us to attempt to reconstruct female attire from the Late Hallstatt period (mid-6th to mid-4th century BC), and the Late La Tène period (mid-2nd to 1st century BC). It is important to note that, due to the character of the finds, the suggested reconstructions of attire are hypothetical (Fig. 51–52, 54–55).

The groups of finds from Sisak that represent elements of attire in the two listed periods are characterized by their eclecticism; the presence of items that originate from different cultural backgrounds, in this case being the southeastern Alps, southern Pannonia, and the western Balkans. This is completely understandable if one considers the geographical position of the Iron Age settlement in Sisak, as well as its prominent role in the communication network of the time. In the Late Hallstatt period, items from the southeastern Alpine cultural circle are the most numerous, especially different forms of Certosa type fibulas. This fibula type, which got its name from one of the Iron Age necropolises in Bologna, appears at almost the same time in the territories of Este, Santa Lucia, and Dolenjska, thereby reflecting a cultural unity of northern Italian and southeastern Alpine areas at the end of the 6th century BC.[156] The largest number of known finds originates from areas south of the Po River, the western and eastern Alps, and southern Pannonia, including the settlement in Sisak. Understandably, numerous examples have also been discovered in the wider area of Europe.

Four out of all finds from Sisak are ascribed to the fifth group, a form that was used in central and northern Italy, southeastern Pannonia and the central Balkans (Glasinac), with the largest number being recorded in the area of the Dolenjska group, where they probably originate from.[157] These have also been recorded in graves from the early and late Certosa phase of the Dolenjska group, i.e. from the end of the 6th and the beginning of the 5th century BC, when they also appear in graves across southern Pannonia and the western Balkans.[158] These are followed by two finds of the tenth group (variants e and h) that appear in northern

155 Grömer 2009.

156 The key paper for the study of these fibulas was published in 1977 by B. Teržan in *Arheološki vestnik*, where all of the known finds are divided into thirteen groups with a series of variants.

157 Teržan 1977, 352–353, 375–380, Fig. 18.

158 Brunšmid 1902, 68, Fig. 22; Teržan 1977, Fig. 4. Za ostale primjerke: Teržan 1977, 324; Vasić 1999, Pl. 50: 837A, 838–840, 842; Blečić Kavur, Jašarević 2016, 226–227, Fig. 3.

i 4. st. pr. Kr., kada fibule desete skupine predstavljaju jedan od zastupljenijih oblika tipa Cerosa.[160] U fundusu GMS-a nalaze se dvije fibule sedme skupine, pri čemu veći primjerak pripada inačici VIIa, a manji inačici VIIb. Ove fibule rasprostranjene su na prostoru od sjeverne Italije (Este), preko Posočja i Notranjske s najvećim brojem primjeraka u Dolenjskoj, a nekoliko primjeraka potječe iz Sanskog Mosta i Kompolja.[161] Kronološki pripadaju mlađoj fazi certoškog stupnja dolenjske halštatske skupine.[162] Slijedi jedan primjerak inačice Ic, karakteristične za prostor sjeveroistočne jadranske obale i zaleđa te japodske nekropole u dolini Une (Jezerine, Ribić).[163] Zajedno s varijantom VIIf, B. Teržan uvrštava ovu inačicu među najmlađe oblike tipa Certosa, a njihovu uporabu smješta od 4. do u 2. st. pr. Kr. Posljednji sisački primjerak pripada inačici h skupine XIII, karakterističnoj ne za sjevernu Italiju ili Dolenjsku, već za prostor južne Panonije i zapadnog Balkana te Transdanubiju, a te su fibule korištene u razdoblju od kraja 5. do u prvu četvrtinu 4. st. pr. Kr.[164] Iako dio navedenih predmeta zasigurno predstavlja importe, proizvodnja fibula tipa Certosa u sisačkom kasnohalštatskom naselju nedvosmisleno je potvrđena nalazima kalupa za lijevanje fibula XIII skupine,[165] kao i poluproizvodom koji bi mogao pripadati inačicama d ili e skupine VII.

Osim fibula, kasnohalštatska nošnja sadržavala je i ogrlice sastavljene od manjeg ili većeg broja raznobojnih staklenih, jantarnih, ponekad i koštanih perli različitih oblika. Primjerice, u Sisku susjednim kulturnim grupama, kao što su dolenjska i japodska, u grobovima žena zabilježeni su ostatci ogrlica sastavljenih od nekoliko komada pa sve do nekoliko stotina različitih perli kod najraskošnijih primjeraka.[166] Također, na groblju Kapiteljska njiva u Novom mestu pojedinačne staklene perle zabilježene su i u grobovima s oružjem. Među sisačkim staklenim perlama nalazimo različite oblike, od jednostavnijih jednobojnih, najčešće tamnoplavih, ali i zelenih, zatim tamnoplavih ukrašenih bijelom valovitom linijom do tehnički kompleksnijih žutih ili zelenih primjerka ukrašenih tzv. "očima" plavo-bijele boje, a u jednom slučaju i žutim bradavičastim zadebljanjima (Sl. 51). Zabilježeno je nekoliko primjeraka koji zbog svoje morfologije zapravo predstavljaju privjeske. To su tri amforasto oblikovana privjeska s malim željeznim petljama za vješanje, kao i jedan piriformni primjerak od smeđeg stakla ukrašen bijelim bradavičastim zadebljanjima koji je vjerojatnije imao perforaciju u gornjem dijelu. Većina sisačkih perli potječe iz rijeke Kupe, a sedam primjeraka je pronađeno u istraživanju kasnohalštatskog naseobinskog sloja na Pogorelcu.[167] Osim staklenih, među sisačkim materijalom se nalazi i pet jantarnih perli, jedna veća, narebrena i četiri manje okrugle, odnosno plosnate. Jantar je u pretpovijesnim, ali i klasičnim društvima predstavljao egzotičnu i vrijednu sirovinu

160 Teržan 1977, 365; Gabrovec 1987, 67–68, Sl. 6: 17.

161 Teržan 1977, 325–327, 380–381, karta 44.

162 Dular 2003, 136.

163 Teržan 1977, 320, karta 20.

164 Teržan 1977, 338, 340, Sl. 5: h; Dizdar 2014, 45–50.

165 Balen 2003.

166 Bakarić, Križ, Šoufek 2006.

167 Drnić, Groh 2018, 91, T. 9: 10.

Italy, the eastern Adriatic hinterland and southern Pannonia, with Sisak as the easternmost site.[159] In the Dolenjska Hallstatt group, this variant appear in the later Certosa and Negova phase, i.e. the period from the middle of the 5th and the 4th century BC, when fibulas of the tenth group represent one of the most common types of Certosa fibulas.[160] The Sisak Municipal Museum keeps two fibulas of the seventh group, whereby the larger find is ascribed to the VIIa, and the smaller to the VIIb variant. These fibulas were used in northern Italy (Este), and the Posočje and Notranjska regions, with most of them coming from Dolenjska, and several from Sanski Most and Kompolje.[161] Chronologically, these belong to a later part of the Certosa phase of the Dolenjska Hallstatt group.[162] These are followed by one find of the Ic variant, characteristic of the northeastern Adriatic coast and its hinterland, and the Iapodian necropolis in the Una River valley (Jezerine, Ribić).[163] Along with variant VIIf, B. Teržan lists this variant among the youngest forms of the Certosa type, and dates them to the time between the 4th and the 2nd century BC. The last find from Sisak is ascribed to the h variant of the group XIII, characteristic not of northern Italy or Dolenjska, but of southern Pannonia, the western Balkans and Transdanubia. These fibulas were used in the period between the end of the 5th and the first quarter of the 4th century BC.[164] Even though some of the listed finds must have been imported, the production of Certosa type fibulas has definitively been confirmed in the Late Hallstatt settlement at Sisak by the finds of molds for casting fibulas of the group XIII,[165] as well as by semi-products that could belong to variants d or e of the group VII.

Other than fibulas, the late Hallstatt attire also included necklaces composed of small or large numbers of differently colored glass, amber and sometimes bone beads of different shapes. For example, in the cultural groups that neighbored Sisak, such as the Dolenjska and Iapodian, female graves have yielded the remains of necklaces composed of anywhere between several beads, to several hundred different beads in the wealthiest examples.[166] Additionally, in the Kapiteljska Njiva cemetery in Novo Mesto, individual glass beads have been recorded in the graves with weapons. The beads from Sisak appear in different shapes, including simple single-colored ones (most often dark blue, but also green, and dark blue with a white wavy line), as well as more complex yellow or green ones decorated with, so called, blue-white "eyes" (in one case with yellow knob-like protrusions) (Fig. 51). Several finds can, due to their morphology, actually be defined as pendants. These include three amphora-shaped pendants with small iron hoops for hanging, and one piriform one, made of brown glass and decorated with white knob-like protrusions that probably had a perforation in the upper part. Most of the beads from Sisak

159 Teržan 1977, 331–332, Fig. 4: e, Fig. 31.

160 Teržan 1977, 365; Gabrovec 1987, 67–68, Fig. 6: 17.

161 Teržan 1977, 325–327, 380–381, map 44.

162 Dular 2003, 136.

163 Teržan 1977, 320, map 20.

164 Teržan 1977, 338, 340, Fig. 5: h; Dizdar 2014, 45–50.

165 Balen 2003.

166 Bakarić, Križ, Šoufek 2006.

koja je pristizala na jug s Baltičkog mora, odakle potječe većina tzv. arheološkog jantara, drevnim jantarnim putem koji je završavao na prostoru sjevernog Jadrana. Osim dekorativnih, jantaru su pripisivana i iscjeljiteljska, apotropejska i magijska svojstva. U kontekstu hrvatske arheologije svakako najpoznatija nalazišta jantarnih predmeta potječu s japodskog prostora Like i Gorskog kotara, pri čemu brojem i kvalitetom izrade predmeta prednjači nekropola u Prozoru kod Kompolja.[168]

Ženska nošnja u razdoblju kasnog halštata na prostoru jugoistočnih Alpa, južne Panonije i zapadnog Balkana često je uključivala i obručasti nakit, najčešće narukvice i nanogvice različitih oblika, a rjeđe i ukrase za glavu ili kosu (tzv. sljepoočničarke) te prstenje. Ovom razdoblju vjerojatno pripadaju i dvije gotovo identične narebrene brončane nanogvice prebačenih krajeva iz Siska (Sl. 51). Na prostoru dolenjske halštatske skupine narebreni obručasti nakit otvorenih krajeva u većem se broju pojavljuje od druge polovice 7. st. pr. Kr. (stupanj Stična 2) i zadržava se u različitim varijantama sve do negovskog stupnja, odnosno do u 4. st. pr. Kr. Pojedini primjerci, kao oni iz groba 126 s Kapiteljske njive u Novome mestu datiranog u kraj 4. i 3. st. pr. Kr., potvrđuju da je ovaj nakit korišten i u mlađem željeznom dobu.[169]

Znatne promjene u ženskoj nošnji nastupaju u mlađem željeznom dobu s pojavom latenske kulture kao dominantnog stila krajem 4. i početkom 3. st. pr. Kr. To se prije svega odnosi na pojavu novih oblika fibula koje u kasnijim fazama razvoja na prostoru Pokuplja, Like i zapadnog Balkana dobivaju i različite lokalne i regionalne inačice (Sl. 53). Osim fibula, nošnja mlađeg željeznog doba sastojala se i od različitih oblika pojaseva od kojih su najčešće sačuvane samo pojasne kopče, kao i obručastog nakita među kojim se nalaze i tipične latenske staklene narukvice te ogrlice od različitih staklenih i jantarnih perli. Među elementima ženske mlađeželjeznodobne nošnje iz Siska brojnošću dominiraju predmeti iz njegove završne faze (LT D), odnosno druge polovice 2. i 1. st. pr. Kr. Stoga je hipotetički prikaz nošnje stanovnice Segestike/Siscije zasnovan upravo na tom materijalu (Sl. 55). Među fibulama iz ovoga razdoblja najbrojniji su brončani primjerci tipa Podzemelj koji su uglavnom poznati s pokupskih nalazišta (Podzemelj, Viničica, Sisak), uz pojedine primjerke iz Dolenjske, doline Une i srednje Posavine. To su fibule srednjolatenske sheme s širokom spiralom, poluovalnim obrisom luka i nizom čvorastih zadebljanja na kraju prebačene noge, prije spojnice (Sl. 54).[170] Kao što pokazuju istovremeni grobovi s grobalja iz doline Une (Jezerine, Ribić), ženska nošnja je često sadržavala tipološki različite oblike fibula pa se u hipotetičkoj segestanskoj nošnji lako mogla naći i srebrna fibula tipa Picugi, varijante Rakitno, s raskovanim lukom koji se širi prema spirali sastavljenoj od petnaest navoja povezanih vanjskom tetivom (Sl. 54). Ove su fibule koristile zajednice s prostora Pokuplja, Posavine i zapadnog Balkana.[171]

168 Bakarić, Križ, Šoufek 2006.

169 Križ 2005, 52–53, T. 16: 5–6.

170 Božič 2001, 188–190, Sl. 21–25; Tonc 2015, 230; Drnić 2018, 161–163, karta 6, T. 81: 3–8; T. 82; T. 83: 1–3.

171 Tonc 2015, 243–244.

were recovered from the Kupa River, and seven have been found during the excavations of the Late Hallstatt layer at Pogorelac.[167] Other than glass, the material from Sisak also includes five amber beads: one larger, ribbed one, and four smaller, round and flat ones. In prehistoric and classical societies, amber was an exotic and valuable raw material that came south from the Baltic Sea – a place where most of the so called 'archaeological amber' originates from – through the ancient amber route that ended at the northern Adriatic. Other than having a decorative function, amber was also ascribed healing, apotropaic, and magical properties. In the context of Croatian archaeology, the most famous sites that yielded amber finds are in the Iapodian territory of Lika and Gorski Kotar, with the Prozor near Kompolje necropolis standing out both in quantity and quality.[168]

In the Late Hallstatt period in the southeastern Alps, southern Pannonia and the western Balkans, the female attire often included hoop-shaped jewellery (bracelets and ankle rings), and rarely head or hair decorations (so called temple rings) and rings. Two almost identical ribbed bronze ankle rings from Sisak can probably also be ascribed to this period. On the territory of the Dolenjska Hallstatt group, hoop-shaped jewellery with open ends appears in large numbers from the second half of the 7th century BC (the Stična 2 phase), and different variants stay in use until the Negovska phase, i.e. the 4th century BC. Some examples, like those from grave 126 at Kapiteljska Njiva in Novo Mesto, dated to the end of the 4th and the 3rd century BC, confirm that this jewellery was also used during the Late Iron Age.[169]

Significant changes in the female attire occurred in the Late Iron Age with the appearance of La Tène culture as the dominant style at the end of the 4th and the beginning of the 3rd century BC. This primarily refers to the emergence of new types of fibulas that later developed into different local and regional variants in the area of Pokuplje, Lika, and the western Balkans (Fig. 53). Other than fibulas, Late Iron Age attire also included different types of belts, of which mostly only the buckles are preserved, as well as hoop-like jewellery, including the typical La Tène bracelets and necklaces made of different glass and amber beads. The elements of Late Iron Age female attire from Sisak is dominated by finds from its final phase (LT D), i.e. the second half of the 2nd and the 1st century BC. Therefore, the hypothetical depiction of the attire of the inhabitants of *Segestica/Siscia* is based precisely on this material (Fig. 55). The fibulas from the period mostly include bronze ones of the Podzemelj type, which are mostly known from sites in the Pokuplje region (Podzemelj, Viničica, Sisak), but also from Dolenjska, the Una River valley, and the central Posavina region. These are fibulas of the Middle La Tène scheme with a wide spiral, a semicircular bow and a line of knot-like protrusions at the end of the foot, right before the clasp (Fig. 54).[170] As shown by contemporaneous graves from the Una River valley

167 Drnić, Groh 2018, 91, Pl. 9: 10.

168 Bakarić, Križ, Šoufek 2006.

169 Križ 2005, 52–53, Pl. 16: 5–6.

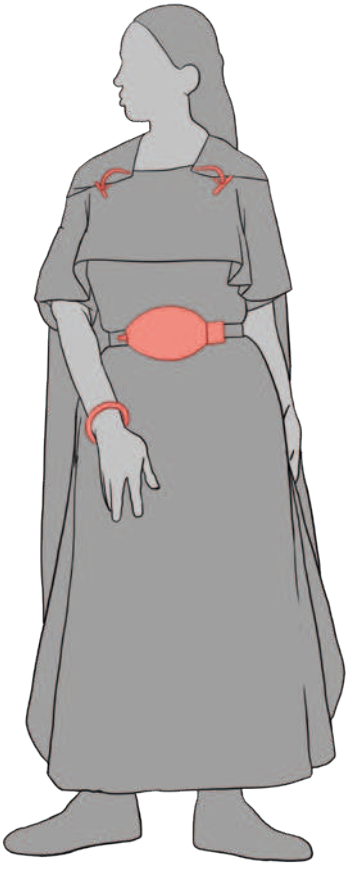
170 Božič 2001, 188–190, Fig. 21–25; Tonc 2015, 230; Drnić 2018, 161–163, map 6, Pl. 81: 3–8; Pl. 82; Pl. 83: 1–3.

SL. 53
Latenske fibule iz Siska
(I. Krajcar)

SL.53
La Tène fibulas from Sisak
(I. Krajcar)

SL.54
Elementi kasnolatenske ženske nošnje iz Siska
(I. Krajcar)

FIG. 54
Elements of the Late La Tène female
attire from Sisak (I. Krajcar)



SL. 55
Rekonstrukcija nošnje stanovnice
kasnolatenskog naselja u Sisku
(S. Bogojević Narath)

FIG. 55
A reconstruction of the attire
of an inhabitant of the Late La Tène
settlement in Sisak (S. Bogojević Narath)

Osim fibula, kao najbrojnijih elemenata nošnje, iz Siska potječe i nekoliko pojasnih kopči pri čemu čak tri primjerka pripadaju tipu Laminci (Sl. 54). Glavna karakteristika ovih kopči je njihova kompozitna konstrukcija sastavljena od željezne ploče na koju je pričvršćen iskucavanjem ukrašen brončani ili u rijetkim slučajevima srebrni lim. Ovaj široko rasprostranjeni oblik pojavljuje se u velikom broju u kasnolatenskom razdoblju u nekoliko regija koje se pripisuju različitim kulturno-etničkim entitetima: južnoj Panoniji (Panonci, Skordisci), Transilvaniji i Vlaškoj (Dako-Geti), dok se specifični, izduženo trokutasti primjerci pojavljuju u Moldaviji, na prostoru rasprostranjenosti kulture Poinesti-Lukasevka koja se dovodi u vezu s germanskim Bastarnima.[172]

Kasnolatenskoj nošnji mogu se pribrojiti i latenske narukvice izrađene od stakla. Ovi predmeti pojavljuju se u prvoj polovici 3. st. pr. Kr. (LT C1) i dobrim dijelom zamjenjuju metalne narukvice. Iz Siska je poznato nekoliko ulomaka i jedan cijeli primjerak, od kojih se dva ulomka D-presjeka, izrađena od kobaltno plavog stakla, mogu datirati u kasni laten (Sl. 54).[173] Kao i u slučaju kasnohalštatskog razdoblja, i nošnja završne faze željeznog doba ima eklektičan sastav s elementima karakterističnim za latensku kulturu (staklene narukvice), zatim lokalnim interpretacijama latenskih oblika (fibule) te predmetima južnopanonske/istočnokarpatske tradicije (kopče tipa Laminci) (Sl. 55).

5.2 RATNICI STARIJEG ŽELJEZNOG DOBA

U društvenoj hijerarhiji zajednica starijeg željeznog doba ratnici su zauzimali poseban položaj, pa se u arheološkoj literaturi za opis ove skupine često koristi termin ratnička elita. Pripadnike ratničkih elita različitih (često vrlo udaljenih zajednica) na prostoru od zapadne i srednje Europe preko Apeninskog poluotoka i Balkana sve do Grčke, povezivala je specifična ideologija koja je arheološki dobro posvjedočena, primarno kroz grobni ritual koji je često uključivao i monumentalnu grobnu arhitekturu (tumuli), te kroz nekoliko kategorija predmeta koji predstavljaju materijalnu manifestaciju navedenog ratničkog etosa. Uz nezaobilazne elemente ratničke opreme, to su setovi za gozbe, sastavljeni od keramičkog i metalnog posuđa, željeznih ražnjeva i preklada, zatim toaletni pribor (britve, pincete) i lovno oruđe (vrhovi strijela i rjeđe dijelovi tobolaca).[174] Osim kroz grobni ritual, važnost ratničkih elita u društvima starijeg željeznog doba zabilježena je

172 Majnarić-Pandžić 1990, 59–60; Drnić 2009; 2018, 173–17, T. 87: 7, T. 88: 1–2; Guštin 2011.

173 Dizdar 2006, 76, 82, 86, T. 5: 8, T. 6: 1–3.

174 O statusu lova u željeznodobnim društvima bit će više rečeno u sljedećem poglavlju.

(Jezerine, Ribić), the female attire often contained different types of fibulas, so the hypothetical Segestan attire would have easily included the silver fibula of the Rakitno variant of the Picugi type, with a forged bow that widens towards the spiral that is composed of fifteen coils connected by a chord. These fibulas were used by communities from the Pokuplje and Posavina regions, as well as from the western Balkans.[171]

Other than fibulas, the most common elements of the attire, Sisak also yielded several belt buckles, three of which can be ascribed to the Laminci type (Fig. 54). The main characteristic of these buckles is their composite construction, made up of an iron plate with an attached punctuated bronze or, very rarely, silver, sheet. This widespread form is exceptionally numerous during the Late La Tène period in several regions that are ascribed to different cultural and ethnical groups; such as southern Pannonia (Pannonians, Scordisci), Transylvania and Wallachia (Daco-Getae), with distinct elongated triangular examples appearing in Moldova, a region occupied by the Poinesti-Lukasevka culture that is connected to the Germanic Bastarnae.[172]

La Tène bracelets made of glass can also be added to Late La Tène attire. These finds appeared in the first half of the 3rd century BC (LT C1) when they largely replaced metal bracelets. Sisak yielded several fragments and one complete find, two of which, made of cobalt blue glass with D-shaped cross-sections, can be dated to the Late La Tène period (Fig. 54).[173] Just like in the Late Hallstatt period, attire in the final phase of the Late Iron Age was eclectic, and includes elements characteristic of the La Tène culture (glass bracelets), local interpretations of La Tène forms (fibulas), and finds made in the southern Pannonian/eastern Carpathian traditions (the Laminci type belt buckles) (Fig. 55).

EARLY IRON AGE WARRIORS

In the social hierarchy of Early Iron Age communities, warriors held a special position, so this group is often described in archaeological literature as the warrior elite. The members of warrior elites from different (and often very distant) communities in western and central Europe, the Apennine Peninsula, the Balkans, and Greece, were connected by a specific ideology that has been archaeologically well recorded. This is primarily through burial rituals that often included monumental grave architecture (tumuli), as well as through several categories of items that reflect the material manifestation of the described warrior ethos. Along with the unavoidable finds of warrior equipment, these include feasting sets comprising of ceramic and metal vessels, iron grills and firedogs, toiletries (razors, tweezers), and hunting weapons (arrowheads and, less often, parts of

171 Tonc 2015, 243–244.

172 Majnarić-Pandžić 1990, 59–60; Drnić 2009; 2018, 173–17, Pl. 87: 7, Pl. 88: 1–2; Guštin 2011.

173 Dizdar 2006, 76, 82, 86, Pl. 5: 8, Pl. 6: 1–3.

SL. 56
Prikaz borbe ratnika na pojasnoj kopči iz Vača (Slovenija)
(Arhiv Naturhistorisches Museum Wien)

FIG. 56
The depiction of a warrior fight on the belt buckle from Vače (Slovenia)
(Archives of the Naturhistorisches Museum in Vienna)

i kroz različite figuralne prikaze, pri čemu se kvalitetnom izričaja nedvojbeno ističe tzv. situlska umjetnost s često kompleksnim figuralnim kompozicijama prikazivanim najčešće na brončanim posudama, tzv. situlama, ali i na pojasnim kopčama te u jednom slučaju i na kacigi iz Magdalenske gore.[175]

Osnovni set navalnog naoružanja starijeg željeznog doba na prostoru jugoistočnih Alpa i južne Panonije činili su sjekira te jedno ili više kopalja, a iznimno i jednosjekli mač (mahaira, falkata). Osim u grobovima, sastav ratničke opreme i naoružanja posvjedočen je i na figuralnim prikazima, primarno u kontekstu situlske umjetnosti. Primjerice, na pravokutnoj pojasnoj kopči iz Vača prikazana je borba dvojice ratnika-konjanika u pratnji dva pješaka, pri čemu su muškarci naoružani kopljima i sjekirama te opremljeni kacigama i štitovima (Sl. 56).[176]

quivers).[174] Other than through the burial ritual, the importance of warrior elites in Early Iron Age societies was also communicated through different figural depictions. In this regard, situla art stands out for its quality, and it often includes complex figural compositions which are commonly depicted on bronze vessels (the so called 'situals'), but also on belt buckles and, in the case of Magdalenska Gora, a helmet.[175]

The basic set of Early Iron Age offensive weaponry in the southeastern Alps and the western Balkans included an axe, one or several spears, and, exceptionally, a single-bladed sword (mahaira, falcata). Other than in graves, warrior equipment and weaponry are also shown in figural depictions, primarily in the context of situla art. For example, the rectangular belt buckle from Vače depicts a fight between two warrior-riders accompanied by two

175 Turk 2005, 19–29, Sl. 17.

176 Turk 2005, 38–40, Sl. 58.

174 The status of hunting in Iron Age societies will be further discussed in the following chapter.

175 Turk 2005, 19–29, Fig. 17.

Iz Siska je poznato desetak sjekira koje se na osnovu morfoloških karakteristika mogu datirati u željezno doba. Među njima najbrojniju skupinu s devet poznatih primjeraka čine željezne tuljaste sjekire (Sl. 57) koje se pojavljuju već na prijelazu brončanog u željezno doba, završetkom 9. i početkom 8. st. pr. Kr., o čemu svjedoči primjerak iz paljevinskog groba 1 iz Ptuja.[177] Rijetke su u početnoj fazi starijeg željeznog doba kada su zastupljenije sjekire s ručicama i zaliscima. Tijekom 7. st. pr. Kr. tuljaste sjekire postaju sve brojnije, primjerice u grobnim cjelinama dolenjske halštatske skupine njihova se prisutnost povećava od stupnja Stična, a u uporabi su sve do negovskog stupnja u kojemu se pojavljuju i sjekire s ušicama.

Među sisačkim materijalom nalaze se i dvije morfološki starije sjekire. To su željezna sjekira s ručicama kakve se u Europi pojavljuju od 10. st. pr. Kr., a pokazuju najveću koncentraciju na prostoru srednje Europe.[178] Drugi oblik predstavlja sjekira sa zaliscima na kojoj se nalazi zanimljiv detalj! Na dijelu za nasađivanje drške, između zalizaka, urezan je motiv slova X omeđen dvjema paralelnim linijama (Sl. 59). Slični simboli zabilježeni su i na drugim sjekirama sa zaliscima, kao na primjerku iz tumula 2 s groblja Kaptol-Gradci, datiranog u sredinu 7. st. pr. Kr.,[179] a gotovo identičan simbol nalazi se na oštećenoj sjekiri iz ostave iz Treffelsdorfa u Austriji.[180]

Iz Siska potječe i veći broj željeznih vrhova kopalja, ali njihove morfološke karakteristike pokazuju da većina njih potječe iz mlađeg željeznog doba, i to iz 2. i 1. st. pr. Kr.[181] Jedini predmet koji bi se s određenom sigurnošću mogao datirati u starije željezno doba je kratki vrh s izraženim središnjim rebrom kakvi su poznati iz grobova dolenjske halštatske skupine (Sl. 57).[182] S obzirom na dužinu i masu vrhova, moguće je pretpostaviti jesu li koplja bila korištena u borbi izbliza ili su korištena za bacanje kao sulice, a u bitkama starijeg željeznog doba koplja su korištena na oba načina.

Obrambeno naoružanje halštatskih ratnika činili su kaciga, oklop, štit i štitnici za potkoljenice, tzv. knemide. Jedini poznati primjerak iz Siska predstavlja ilirska kaciga pronađena u rijeci Kupi, a kao potvrda mjestu nalaza svjedoči i nedostatak uobičajene zelene brončane patine (Sl. 57). Tu kacigu karakteriziraju zaobljena kalota, izduženi, trokutasto oblikovani obrazni štitnici koji zatvaraju pravokutni otvor za lice te kratki štitnik za vrat. Nosač za krijestu, smješten po sredini kalote, omeđen je dvama rebrima između kojih su urezane tri paralelne linije, a uz rub kacige nalazi se traka ukrašena pravilnim nizom umetnutih kuglica. Na vrhovima obrazina nalaze se dvije perforacije koje su služile vezanju kacige prilikom nošenja.[183] Navedene karakteristike definiraju sisački primjerak kao III A1a inačicu ilirskih kaciga, s raspršenom distribucijskom slikom od Makedonije na jugu do Banata na sjeveroistoku,

177 Dular, Lubšina Tušek 2014, 11–13, T. 1: 1.

178 Wesse 1990; Burkowsky 2004, 41, kat. br. 2; Potrebica 2013, 102–103.

179 Potrebica 2013, 103, Sl. 49.

180 Mayer 1976, 167–168, 172, kat. br. 843, T. 62: 843.

181 Dizdar, Drnić 2018, 78–83.

182 Križ 1997, T. 48: 4.

183 Burkowsky 2004, 41, kat. br. 1.

footmen, whereby the men bear spears and axes, as well as helmets and shields (Fig. 56).[176]

Sisak yielded about ten axes that can, based on morphological features, be dated to the Iron Age. The most numerous group, with nine finds, includes iron socketed axes (Fig. 57), which appeared at the transition from the Bronze to the Iron Age, (end of the 9th and the beginning of the 8th century BC), as attested to by the find from incineration grave 1 from Ptuj.[177] These were rare in the initial phase of the Early Iron Age, when trunnion axes and winged axes were more common. During the 7th century BC, socketed axes became more numerous. For example, in the graves of the Dolenjska Hallstatt group, their numbers increase from the Stična phase, and they remain in use until the Negova phase, when shaft-hole axes appear.

The material from Sisak also includes two morphologically earlier axes. These include an iron trunnion axe, which appeared in Europe from the 10th century BC, and most often in central Europe.[178] The second form is an winged axe that has an interesting detail! The hafting section, between the wings, has an incised X motif, surrounded by two parallel lines (Fig. 59). Similar symbols were recorded on other winged axes, like the one from tumulus 2 from Kaptol-Gradci necropolis, dated to the middle of the 7th century BC,[179] and the damaged axe from the Treffelsdorf hoard in Austria that has an almost identical symbol.[180]

Sisak yielded a large number of iron spearheads, but their morphological characteristics show that most of them can be dated to the Late Iron Age, i.e. the 2nd and the 1st century BC.[181] The only one that can, with some certainty, be dated to the Early Iron Age, is a short spearhead with an accentuated central rib (Fig. 57), the likes of which are known from the graves of the Dolenjska Hallstatt group.[182] Through the consideration of the length and mass of the spearheads, it is possible to assess whether certain spears were used in close combat, or if they were thrown as projectiles. In Early Iron Age battles, spears were used in both of these described ways.

The defensive weapons of Hallstatt warriors included a helmet, a shield, and protectors for the lower legs (greaves). The only know example from Sisak is an Illyrian type helmet recovered from the Kupa River, indicated by the lack of the common green patina (Fig. 57). The helmet is characterized by a rounded calotte, elongated triangular cheek-guards that close the rectangular face opening, and a short neck-guard. The crest holder, situated in the middle of the calotte, is surrounded by two ribs, with three incised parallel lines in-between. The edge of the helmet is decorated with a ribbon that has a line of small

176 Turk 2005, 38–40, Fig. 58.

177 Dular, Lubšina Tušek 2014, 11–13, Pl. 1: 1.

178 Wesse 1990; Burkowsy 2004, 41, cat. nr. 2; Potrebica 2013, 102–103.

179 Potrebica 2013, 103, Fig. 49.

180 Mayer 1976, 167–168, 172, cat. no. 843, Pl. 62: 843.

181 Dizdar, Drnić 2018, 78–83.

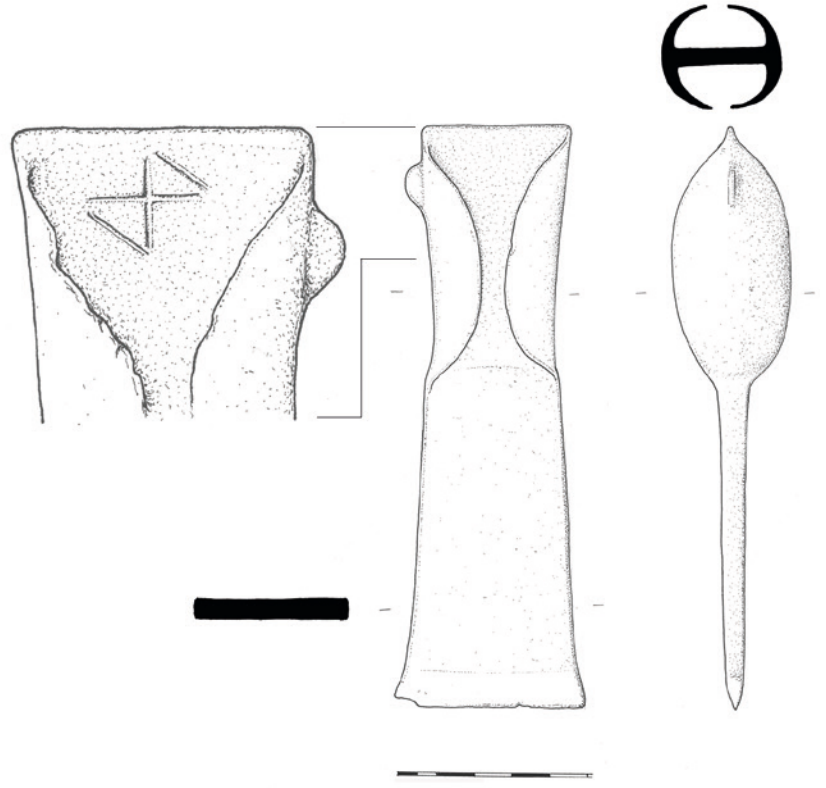
182 Križ 1997, Pl. 48: 4.

SL. 57
Elementi kasnohalštatske ratničke
i konjske opreme iz Siska (I. Krajcar)

FIG. 57
Elements of the Late Hallstatt warrior
and horse-riding gear from Sisak (I. Krajcar)

SL. 58
Rekonstrukcija ratnika iz sisačkog
kasnohalštatskog naselja (S. Bogojević Narath)

FIG. 58
A reconstruction of a warrior
from the Late Hallstatt settlement in Sisak
(S. Bogojević Narath)



SL. 59
Sjekira sa zaliscima iz Siska
(I. Krajcar, M. Galić)

FIG. 59
The winged axe from Sisak
(I. Krajcar, M. Galić)

odnosno Dolenjske i Kvarnera na sjeverozapadu.[184] Predloženi kronološki okvir za proizvodnju i uporabu ove inačice ilirskih kaciga druga je polovica 6. i početak 5. st. pr. Kr., premda bi sastav poznatog groba "braće po oružju" s Kapiteljske njive u Novom mestu (VII/19), datiranog u stariju fazu negovskog stupnja, upućivao na njihovo korištenje i u drugoj polovici 5. st. pr. Kr. (Sl. 60).[185] Iako usamljen i bez detaljnijeg arheološkog konteksta, nalaz ilirske kacige iz Siska omogućuje nam nekoliko važnih zaključaka o kasnohalštatskoj zajednici koja je obitavala na ušću rijeke Kupe u Savu. Naime, zajedno s primjercima iz Putićeva kod Travnika[186] i Novog mesta, ova kaciga markira komunikacijski pravac koji je iz zapadnog Balkana preko Pokuplja završavao u tada moćnim središtima dolenjske halštatske skupine. Tim su pravcem prenošena ne samo materijalna dobra, nego i ideje, koncepti, prakse i ideologije svojstvene ratničkim elitama starijeg željeznog doba na širem jugoistočnoeuropskom prostoru.[187] Stoga prisustvo opisane kacige u sisačkom kasnohalštatskom naselju upućuje na postojanje društvenog sloja ratnika koji je mogao "konzumirati" takav vrijedan i u kontekstu jugozapadne Panonije prestižan predmet. Naime, u vrijednosnom sustavu željeznog doba kacige nisu samo dio obrambenog naoružanja, već one nose jasnu simboličku poruku o visokom položaju nositelja u ratničkoj hijerarhiji, a posljedično i unutar društvene strukture u cjelini.[188] U nedostatku grobova pripadnika sisačke željeznodobne zajednice, koji bi barem djelomično naznačili konture društvene strukture, ilirska kaciga upućuje na mogućnost postojanja spomenute hijerarhije.

Važan aspekt ratničke opreme starijeg željeznog doba činila je i konjska oprema. U arheološkim su kontekstima pronalaženi njeni različiti elementi: žvale, razvodnici remenja, ukrasne falere i dugmad. Jedini nalaz iz Siska koji možemo smjestiti u navedeno razdoblje predstavljaju žvale s lučno oblikovanim obraznim elementima (psalijama) izvijenih krajeva u obliku slova S (Sl. 57). U njihovom središnjem dijelu nalaze se po dvije okrugle ušice, dok je usni dio sastavljen od dvije šipke pravokutnog presjeka koje završavaju većim ušicama. Iz navedenog opisa jasno je da se radi o skitskim žvalama 6. inačice koju su, kao nadopunu Parduczovoj tipologiji skitskih žvala, 1975. godine izdvojili B. Teržan i M. Guštin.[189] Prema njihovoj interpretaciji inačica 6, koja je karakteristična isključivo za prostor dolenjske halštatske skupine, razvija se iz inačica 2 i 3 skitskih žvala koje krajem 6. i u prvoj polovici 5. st. pr. Kr. (certoški stupanj) nalazimo diljem Karpatske kotline, uključujući i Dolenjsku, otkada postoje snažniji utjecaji iz njenog istočnog dijela na jugoistočnoalpski prostor. Žvale inačice 6 nešto su mlađe, a poznati primjerci potječu iz grobnih cjelina negovskog stupnja (druga polovica 5. i 4. st. pr. Kr.). Iz sisačke perspektive svakako najzanimljiviji primjerak je onaj iz prethodno spomenutog groba "braće po oružju" VII/19 s Kapiteljske

184 Teržan 1995; Blečić 2007; Blečić Kavur, Pravidur 2012, 46–54, Sl. 7.

185 Egg 1999. U istom grobu nalazila se i kaciga ilirskog tipa znatno brojnije i rasprostranjenije inačice III A2a.

186 Fiala 1897, 661, T. 2; Vasić 2010, 43, T. 3: 2.

187 Blečić Kavur, Pravidur 2012.

188 Blečić 2007; Potrebica 2013, 96–111.

189 Guštin, Teržan 1975, 191, Karta 1.

inset globules. The tops of the cheek-guards have two perforations that were used to fasten the helmet while using it.[183] The listed characteristics define the find from Sisak as a III A1a variant of Illyrian helmets, which were widely distributed, from Macedonia in the south, to the Banat region in the northeast, i.e. Dolenjska and Kvarner in the northwest.[184] The suggested chronological frame for the production and use of this variant of Illyrian helmets is the second half of the 6th and the beginning of the 5th century BC. However, the composition of the famous "brothers in arms" grave from Kapiteljska Njiva in Novo Mesto (VII/19), dated to the earlier phase of the Negova phase, points to the type being in use also in the second half of the 5th century BC (Fig. 60).[185] Albeit unique and without an archaeological context, the find of an Illyrian helmet in Sisak allows for several important conclusions about the Late Hallstatt community that lived at the Kupa and Sava interfluve. Namely, along with the finds from Putićevo near Travnik[186] and Novo Mesto, this helmet marks the communication path that connected the western Balkans, the Pokuplje region and the, then powerful, centers of the Dolenjska Hallstatt groups. This path was used to transfer not only material goods, but also ideas, concepts, practices, and ideologies characteristic to Early Iron Age warrior elites of the wider area of southeastern Europe.[187] Therefore, the presence of the described helmet in the Late Hallstatt settlement in Sisak points to the existence of a social class of warriors that could "consume" such valuable and, in the context of southwestern Pannonia, luxurious item. Namely, in the Iron Age value system, helmets were not only a part of offensive weaponry, but also carried a clear symbolic message about the high position of their owner in the warrior hierarchy, and, consequently, within their social structure as a whole.[188] Considering the lack of graves ascribed to the Iron Age community in Sisak that could at least provide the contours of their social structure, the Illyrian helmet points to the possible existence of such a hierarchy.

Horse-riding equipment was an important aspect of Early Iron Age warrior gear. Archaeological contexts can yield several of its components: bits, strap dividers, decorative phaleras and buttons. The only find from Sisak that can definitively be dated to the said period are bits with arch-shaped cheek elements (psalia), with bent ends in the shape of the letter S (Fig. 57). Their central parts have two round loops, and the lip part is composed of two rods in a rectangular cross-section that end in larger hoops. This description clearly shows that these are Scythian bits of variant 6, which was defined in 1975 by B. Teržan and M. Guštin (as an addition to Parducz's typology of Scythian bits).[189] According to their interpretation, variant 6, which is characteristic

183 Burkowsky 2004, 41, cat. no. 1.

184 Teržan 1995; Blečić 2007; Blečić Kavur, Pravidur 2012, 46–54, Fig. 7.

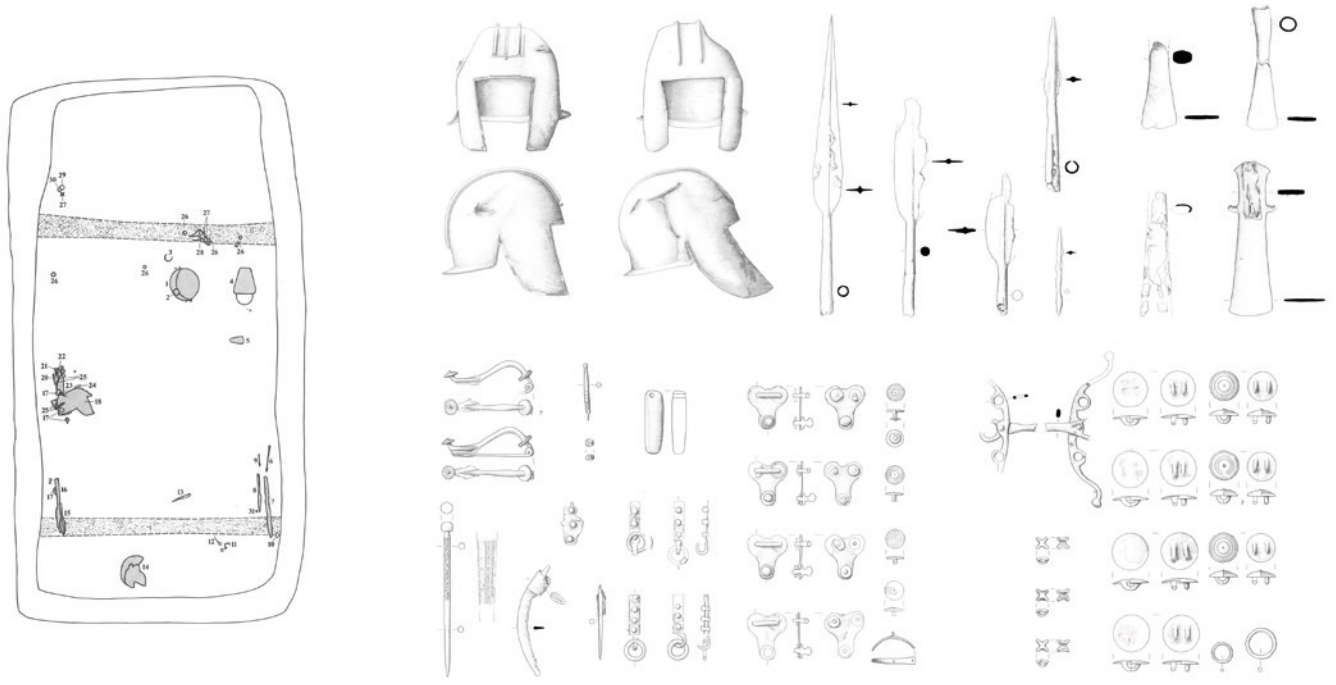
185 Egg 1999. The same grave also contained an Illyrian type helmet of the significantly more common and widespread III A2a variant.

186 Fiala 1897, 661, Pl. 2; Vasić 2010, 43, Pl. 3: 2.

187 Blečić Kavur, Pravidur 2012.

188 Blečić 2007; Potrebica 2013, 96–111.

189 Guštin, Teržan 1975, 191, Map 1.



SL. 60
Grob "braće po oružju" VII/19
s Kapiteljske njive u Novom mestu
(Slovenija) (Egg 1999)

FIG. 60
The "brothers in arms" grave VII/19
from Kapiteljska Njiva in Novo Mesto
(Slovenia) (Egg 1999)

njive u Novom mestu (Sl. 60).[190] Upravo ta grobna cjelina iz druge polovice 5. st. pr. (starija faza negovskog stupnja) sadrži nekoliko elemenata koji su zabilježeni među malobrojnim nalazima ratničke i konjske opreme iz Siska: dvije ilirske kacige, tri tuljaste i jednu sjekira s ručicama, vrhove kopalja i skitske žvale. Iz tog je razloga i poslužila kao inspiracija za idealnu rekonstrukciju opreme sisačkog kasnohalštatskog ratnika.

Osim naoružanja i opreme, u ratničkim se grobovima često nalaze i funkcionalno-dekorativni dijelovi nošnje, kao što su igle koje na jugoistočnoalpskom prostoru od početka kasnog halštata bivaju postupno zamjenjivane fibulama, ali se u balkanskom kulturnom krugu zadržavaju tijekom 5. i 4. st. pr. Kr.

U kontekstu komunikacija s balkanskim prostorom zanimljivi su nalazi dvije dvojne igle koje, kao dio muške nošnje, pripadaju istom kulturnom i kronološkom miljeu Balkana i istočne jadranske obale kao i ilirske kacige III skupine, s kojima su se nalazile zajedno u nekoliko ratničkih grobova.[191] Iako su konkretni zaključci nemogući bez jasno definiranih arheoloških cjelina, prisutnost igala i kacige u Sisku mogla bi upućivati na prijenos "paketa", a ne samo pojedinih predmeta kojima je na vizualnoj razini izražavan ratnički identitet. Na prvom sisačkom primjerku glatka žica na glavi je svinuta tri puta u obliku slova M što ju

exclusively of the Dolenjska Hallstatt group, developed from variants 2 and 3 of Scythian bits which were used at the end of the 6th and the first half of the 5th century BC (the Certosa phase) across the Carpathian Basin (including Dolenjska region).

During that period stronger influence from the eastern part of the Carpathian Basin to the southeastern Alpine regions can be observed. Bits ascribed to variant 6 are somewhat later, and examples have been recorded in graves of the Negova phase (second half of the 5th and the 4th century BC). In the case of Sisak, the most interesting find is the aforementioned one from the "brothers in arms" grave (VII/19) from Kapiteljska Njiva in Novo Mesto.[190] To be more explicit, this grave assemblage, dated to the second half of the 5th century BC (an earlier part of the Negova phase), contains several elements that have been recorded among the rare finds of warrior and horse-riding equipment from Sisak: two Illyrian helmets, three socketed and one trunnion axe, spearheads and Scythian bits. This is precisely why it was used as inspiration for the reconstruction of the Late Hallstatt warrior equipment from Sisak.

Apart from weapons and equipment, warrior graves often contain finds and functional-decorative elements of attire, such as pins. In the southeastern Alps, these were gradually replaced by

190 Egg 1999, Sl. 10: 1.

191 Blečić Kavur, Miličević Capek 2011, 34–40.

190 Egg 1999, Fig. 10: 1.

svrstava u Vasićev tip 4, inačicu a (Sl. 57).[192] Ovaj iznimno popularan oblik pojavljuje se na cijelom balkanskom prostoru te istočnoj jadranskoj obali, a pojedini primjerci zabilježeni su i znatno šire, od središnje Italije (Picenum), preko sjeverne Afrike do južne Rusije i Male Azije. Potpuno suprotno, drugi primjerak predstavlja unikat među dvojnim iglama balkanskog prostora (Sl. 57). Njegova je glava križno oblikovana s tri petlje, što je karakteristika primjeraka koje je R. Vasić definirao kao tip 5c.[193] Ipak, od navedenog tipa razlikuje se time što su oba kraka nakon vodoravnih petlji koljenasto savijena, za razliku od većine predmeta kod kojih se krakovi nastavljaju okomito. To sisački primjerak donekle približava malobrojnom tipu 5d sa samo dva poznata primjerka čija se glava sastoji od pet petlji,[194] premda ih on ima samo tri, pa bi, stoga, sisačku iglu trebalo definirati kao hibridni oblik između tipova 5c i d! Svi poznati primjerci ovog tipa dvojnih igala, osim jednog iz Amfipolisa u Grčkoj, potječu iz Bosne (Glasinac, Debelo Brdo, Sanski Most) i Hercegovine (Livno, Plana), što jasno upućuje na porijeklo sisačkog primjerka, pri čemu se kao najizglednije ishodište nameće kasnohalštatski centar u Sanskom Mostu s kojim je sisačka željeznodobna zajednica održavala određene kontakte.

Što se tiče odjeće, situlska umjetnost prikazuje ratnike u kraćim tunikama (Sl. 56, 58), dok su one kod muških sudionika procesija i gozbi nešto duže. Prikaz lovca s pojasne kopče iz Molnika potvrđuje i upotrebu hlača (Sl. 36)[195] koje će postati znatno popularnije u mlađem željeznom dobu kada su uz tuniku i plašt (lat. *sagum*) činile sastavni dio muške nošnje.[196] Osim spomenutih igala dio muške nošnje stanovnika sisačkog željeznodobnog naselja činile su i fibule, primjerice neke od opisanih inačica tipa Certosa, korištene za pričvršćivanje plašta. U ratničkim grobovima s prostora jugoistočnih Alpa i zapadanog Balkana često se nalaze i kameni brusovi (Sl. 57) te manji željezni noževi koji su mogli biti korišteni u svakodnevnim aktivnostima. Obje vrste predmeta poznate su iz naseobinskih slojeva s Pogorelca.

192 Vasić 1982, 241–250.
193 Vasić 1982, 254–255.
194 Vasić 1982, 255.
195 Turk 2005, 32, Sl. 45.
196 Čisťakova *et al.* 2019, 250.

fibulas from the beginning of the Late Hallstatt phase, but they remained in use in the Balkans during the 5th and 4th centuries BC.

In regards to communications with the Balkans, two double pins are extremely important because, as a part of the male attire, they belong to the same cultural and chronological milieu of the Balkans and the eastern Adriatic coast, just like Illyrian helmets of the III group (which have been found alongside double pins in several warrior graves).[191] Although it is impossible to make finite conclusions without clearly defined archaeological contexts, the presence of pins and a helmet in Sisak could point to the presence of a "package", and not only individual objects that visually expressed the warrior identity. On the first pin from Sisak, the smooth wire on the head is bent three times in the shape of an M, which defines it as Vasić's type 4, variant a.[192] This exceptionally popular form appears across the entire Balkans and the eastern Adriatic coast, with some finds appearing in an even wider area, in central Italy (Picenum), northern Africa, southern Russia and Asia Minor. Conversely, the second pin find is a unique item among double pins from the Balkans (Fig. 57). Its head is in the shape of a cross and has three loops, which is a characteristic of R. Vasić's type 5c.[193] However, it is different from the said type because both of its ends are knee-shaped, unlike most finds whose ends are vertical. This makes the find from Sisak more similar to the rare type 5d, that was only recorded in two cases that have five loops on the head.[194] The one from Sisak has three loops, so it should be defined as a hybrid form between the 5c and d types! All known examples of this type of double pins, other than one from Amphipolis in Greece, were found in Bosnia (Glasinac, Debelo Brdo, Sanski Most) and Herzegovina (Livno, Plana), which clearly indicates the origin of the find from Sisak. It seems more likely that the find from Sisak originates from the Late Hallstatt center in Sanski Most, with which the Iron Age community from Sisak had developed contacts.

When it comes to clothes, the depictions within situla art depict warriors as wearing shorter tunics (Fig. 56, 58), unlike participants of processions and feasts, who are known to wear longer ones. Additionally, the depiction of a hunter from the Molnik belt buckle confirms the use of pants (Fig. 36),[195] a piece of attire which would become significantly more popular in the Late Iron Age when they, along with a tunic and a cape (Lat. *sagum*), became an integral part of male attire.[196] Other than the aforementioned pins, fibulas were also a component of male attire for the inhabitants of Iron Age settlement in Sisak, including some of the described variants of the Certosa type that were used to fasten capes. Warrior graves from the southeastern Alps and the western Balkans also often contain whetstones (Fig. 57). and smaller iron knives that could have been used in everyday activities. Both types of finds have been recorded in the habitational layers at Pogorelac.

191 Blečić Kavur, Miličević Capek 2011, 34–40.
192 Vasić 1982, 241–250.
193 Vasić 1982, 254–255.
194 Vasić 1982, 255.
195 Turk 2005, 32, Fig. 45.
196 Čisťakova *et al.* 2019, 250.

6. SEGESTIKA I SISCIJA KAO PROIZVODNI CENTAR

6. *SEGESTICA* AND *SISCIA* AS A PRODUCTION CENTER

Ivan Drnić, Julia Fileš Kramberger, Tena Karavidović

6.1 PROIZVODNJA KERAMIČKIH POSUDA (IVAN DRNIĆ)

Priču o keramičkim posudama najbolje je započeti s osnovnom sirovinom potrebnom za njihovu izradu, a to je glina. Glina je vrsta tla nastala raspadanjem vulkanskih stijena koje je uzrokovano djelovanjem vode i zraka te mehaničkim, kemijskim i organskim raspadanjem. Sastoji se od mineraloških čestica aluminosilikata i raznih primjesa kao što su kremen, željezni, kalcijevi i drugi spojevi te humus. Keramika predstavlja prvi sintetički stvoreni materijal u ljudskoj povijesti, a sam pojam *keramika* etimološki potječe iz grčkih riječi *keramos*, glina te *keramikos* koja označava gotov odnosno pečen proizvod.

Prva faza u izradi keramičkih posuda je prikupljanje sirovine.[197] U arheološkim istraživanjima pronalažene su jame, tzv. gliništa, za koje se smatra da su nastale vađenjem gline, što se može potvrditi analizom sirovine s nalazišta te usporedbom sa sastavom pečenih posuda. Prikupljena glina često je puna nečistoća, primjerice pijeska, vapnenca i organskog materijala, koje se moraju odstraniti, što se izvodilo na nekoliko načina: uklanjanjem loših primjesa rukom, sušenjem, mljevenjem i prosijavanjem te namakanjem i ispiranjem. Suprotan proces je dodavanje različitih primjesa u glinenu sirovinu kako bi se poboljšala tehnička svojstva posuda (čvrstoća, temperaturna otpornost, manja poroznost ili masa). Najčešće primjese su pijesak, mrvljena keramika (tzv. grog) te različiti organski materijali. Mineral koji je često korišten kao dodatak glinenoj smjesi u mlađem željeznom dobu, osobito loncima za kuhanje, je grafit, čime se smanjivala poroznost i povećavala otpornost posuda na toplinu.

Postoji nekoliko načina izrade keramičkih posuda: ručno, na lončarskom kolu i u kalupu, pri čemu su prva dva zastupljena među posuđem iz Siska.[198] U ranijim razdobljima pretpovijesti keramičke posude su izrađivane ručno, ali i nakon pojave naprednijih tehnika, kao što je lončarsko kolo, određen broj posuda proizvodio se na ovaj način, prvenstveno zbog jednostavnosti samog procesa. To je vidljivo i u keramičkom repertoaru sisačke mlađeželjeznodobne zajednice u kojemu je većina posuda, prvenstveno one namijenjene svakodnevnoj uporabi, kao što su lonci za kuhanje i zdjele za konzumaciju hrane i pića (tzv. stolno posuđe), izrađivane na ovaj način. Dvije su osnovne tehnike kojima su se ručno izrađivale keramičke posude:

197 Rice 1987; Miloglav 2016, 31–32, 45–46.

198 Rice 1987; Horvat 1999, 17–23.

THE PRODUCTION OF CERAMIC VESSELS (IVAN DRNIĆ)

It is best to start the story of the ceramic vessels with the basic raw material that was used to make them – clay. This type of soil forms through the decay of volcanic rock, which is caused by the effects of water and air, and its mechanical, chemical and organic disintegration. It is composed of mineral particles of aluminosilicates and other inclusions, such as lint, iron, calcium and other compounds and humus. Pottery was the first synthetically created material in human history. The familiar term *ceramics* derives from the Greek words *keramos* 'clay' and *keramikos*, the finished, i.e. fired product.

The first phase in the production of ceramic vessels is the procurement of the raw material.[197] Archaeological research has uncovered 'clay pits', which as their name suggests were made by extracting clay. This assumption can be confirmed through a comparative analysis of the raw materials on a site and the composition of its ceramic vessels. The clay collected is often full of impurities, for example sand, limestone and organic material, all of which needs to be removed. This was done in several ways: removing the bad inclusions by hand, drying, crushing and sieving, as well as soaking and washing out. An opposite process is the addition of different inclusions into the raw clay to enhance the technical properties of the vessel (firmness, temperature resistance, lesser porosity or mass). The most common inclusions include sand, crushed pottery (i.e. grog), and different organic material. The mineral graphite was often used as an addition to the clay paste in the Late Iron Age, especially in cooking pots. It reduced the vessel's porosity and increased its heat resistance.

There are several ways of making ceramic vessels: by hand, on a potter's wheel, and in a mold.[198] The first two methods were recorded in the ware from Sisak. In earlier periods of prehistory, ceramic vessels were made by hand, but, because of the simplicity of the process, a certain percentage was produced in this way even after more advanced techniques, such as the potter's wheel, appeared. This was recorded in the repertoire of ceramic finds of the Late Iron Age population of Sisak, which produced most of its vessels in this way, especially those used on an everyday basis, such as cooking pots and bowls used for

197 Rice 1987; Miloglav 2016, 31–32, 45–46.

198 Rice 1987; Horvat 1999, 17–23.

SL. 61
Proizvodnja keramičkih posuda
u sisačkom mlađeželjeznodobnom naselju
(S. Bogojević Narath)

FIG. 61
The production of pottery
at the Late Iron Age settlement in Sisak
(S. Bogojević Narath)

SL. 62
Keramičke posude izrađene na lončarskom
kolu iz Siska (I. Krajcar)

FIG. 62
Ceramic vessels made on the potter's wheel
from Sisak (I. Krajcar)

Tehnika gnjetenja i izvlačenja, kada se od jednog komada gline modelira posuda tako da se u materijalu načini udubljenje, a zatim se stiskanjem i izvlačenjem gline te vrtnjom oblikuju stijenke posude. Ova se tehnika koristila za izradu manjih posuda jednostavnih oblika.

Tehnika oblikovanja pomoću pripremljenih glinenih traka ili prstenova koji se spajaju slaganjem ili spiralnim namotavanjem kako bi se izgradila stijenka posude. Na ovaj način mogu se izrađivati posude većih dimenzija i složenijeg obrisa.

Druga naprednija tehnika izrade posuđa uporabom lončarskog kola prvi puta je zabilježena u Europi krajem 2. tisućljeća pr. Kr., u proto-geometrijskom razdoblju Grčke. U sljedećim stoljećima uporaba lončarskog kola se grčkom i feničkom kolonizacijom Mediterana proširila dalje na zapad. Intenzivnim trgovačkim i kulturnim vezama koje su uspostavljene s kontinentalnom Europom u 6. i početkom 5. st. pr. Kr. preko grčkih emporija u južnoj Francuskoj ovu naprednu lončarsku tehnologiju prihvatile su i zajednice sjeverno od Alpa, a tehnologija se početkom mlađeg željeznog doba u 4. i 3. st. pr. Kr. proširila na područje srednje Europe, uključujući i južnu Panoniju. Tehnologija uporabe lončarskog kola širila se i drugim pravcima, primjerice zajednice u istočnom dijelu Karpatske kotline (Skiti) već su u 5. st. pr. Kr. koristile ovu tehnologiju, koja se proširila iz grčkih kolonija na Crnom moru. Uporaba lončarskog kola zahtijevala je i znatnu zanatsku specijalizaciju, a posljedično je omogućavala proizvodnju većeg broja posuda standariziranih oblika (Sl. 62).

Nakon izrade kod određenog broja keramičkih posuda uslijedila je završna obrada površine glačanjem i ukrašavanjem različitim tehnikama.[199] Iz Siska je poznato nekoliko alatki koje se mogu dovesti u vezu s ovom proizvodnom fazom: keramičke glačalice i nazubljeni plosnati kameni oblutak korišten za utiskivanje niza točkica u stijenku (Sl. 63).

Prije pečenja keramičke posude moraju proći proces sušenja. Naime, prilikom pripreme gline ona se miješa s vodom kako bi joj se poboljšalo svojstvo plastičnosti, važno za oblikovanje posuda. Nakon oblikovanja posude mehanički vezana voda koja okružuje čestice gline mora ispariti jer bi para, koja se oslobađa na povišenoj temperaturi, u procesu pečenja oštetila stijenke. Proces sušenja mogao je trajati od nekoliko dana do nekoliko tjedana, a ovisio je o nekoliko čimbenika kao što su sastav gline, prisutnost i vrsta primjesa u glini, temperatura i vlaga okoline u kojoj se posude suše, veličina i oblik posude te debljina stijenke. Prebrzo sušenje može uzrokovati deformacije i pucanja u strukturi koje mogu biti odmah vidljive ili se manifestiraju u procesu pečenja.

199 Rice 1987; Horvat 1999, 24–40.

the consumption of food and beverages (the so-called 'table ware'). Two basic techniques were employed in the production of ceramic vessels by hand:

The slab technique, wherein a vessel is shaped from one chunk of clay by making a hole in the material and then squeezing it and pulling out clay while rotating it to create the vessel walls. This technique was used to make smaller vessels of a simple shape.

The coil technique, wherein previously shaped clay ribbons or rings are combined by stacking or coiling them to form the vessel walls. It is possible to make larger and more complex shaped vessels with this technique.

The second, more advanced technique of producing ceramic vessels with the help of a potter's wheel was first recorded in Europe at the end of the 2nd millennium BC, in the proto-geometric period in Greece. In the following centuries, due to the Greek and Phoenician colonization of the Mediterranean, the use of the potter's wheel spread further west. The intensive trading and cultural ties established across continental Europe in the 6th and the beginning of the 5th century BC via the Greek emporia in southern France helped spread this advanced pottery technology among the communities north of the Alps. At the beginning of the Late Iron Age, in the 4th and 3rd century BC, this technology spread across central Europe, including Pannonia. The technology of the potter's wheel also spread in other directions. For example, communities in the eastern part of the Carpathian Basin (Skits) were already using this technology, which had spread from the Greek colonies on the Black Sea, in the 5th century BC. The use of the potter's wheel also required significant craft specialization, and, as a result, it facilitated the production of a greater number of vessels with a standardized shapes (Fig. 62).

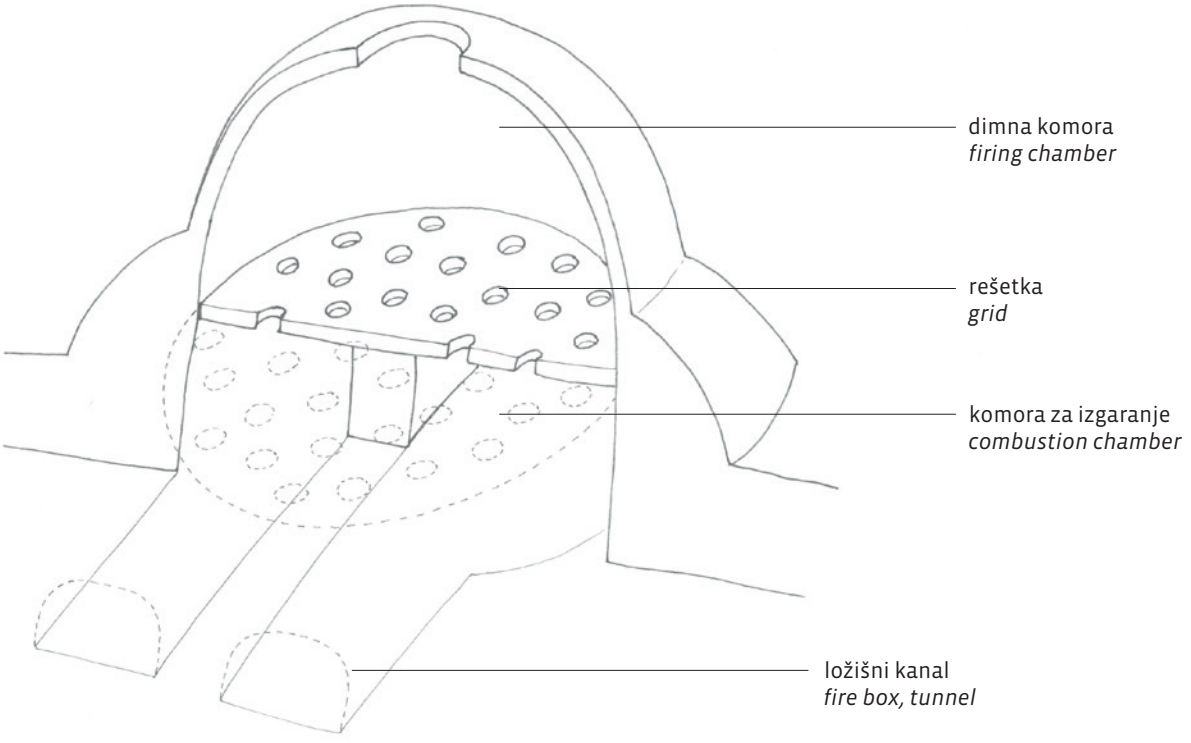
After shaping the vessels, the surfaces of a certain number were polished and decorated with different techniques.[199] Sisak yielded several tools linkable to this phase of production: ceramic polishers and a serrated flat pebble that was used to impress a series of dots into the vessel walls (Fig. 63).

Before firing, the vessels had to undergo a process of drying. Clay is mixed with water during its preparation to improve its plasticity, which is important for the shaping of the vessel. After shaping, the mechanically linked water that surrounds the clay particles must evaporate as otherwise the steam released during firing will damage the vessel walls. The drying process could last between a few days and a few weeks depending on several factors, such as clay composition, the presence and kinds of inclusions, the temperature and moisture in the space where the vessels were drying, the size and shape of the vessel, and the thickness of its walls. Drying too quickly can cause deformations and breakage in the structure. These may become visible immediately or manifest during the firing process.

199 Rice 1987; Horvat 1999, 24–40.

SL. 63
Alatke korištene u proizvodnji keramičkih posuda iz Siska (glačalica i nazubljeni oblutak) (I. Krajcar)

FIG. 63
Tools used in the production of pottery from Sisak (polisher and a serrated pebble) (I. Krajcar)



SL. 64
Grafički prikaz dvodijelne okomite peći (M. Galić)

FIG. 64
A graphic depiction of a updraught kiln (M. Galić)

Pečenje

Keramičke posude, prethodno osušene na zraku, slagale su se u prostor za pečenje nakon čega se zatvarala kupola peći, a u ložištu je paljena vatra. Pečenje keramike kemijski je proces sagorijevanja glinenih minerala i organskih tvari zagrijavanjem, a odvija se u tri stupnja:

1. Isparavanje vode u obliku vodene pare iz stijenki posuda na temperaturama do 120 ^{0}C.

2. Termičko raspadanje glinenih minerala i sintetiranje na temperaturi između 430 i 850 ^{0}C. Organski materijal u glini raspada se na temperaturi između 500 i 700 ^{0}C te izlazi na površinu stijenki gdje se oslobađa u obliku ugljik-dioksida (CO_2). Sinteriranje je proces prelaska gline u keramiku u kojem se pri povišenim temperaturama čestice u glini počinju mijenjati, taliti i međusobno spajati, a rezultat je tvrđa, gušća i manje propusna stijenka.

3. Vitrifikacija je proces u kojem se u stijenki keramičke posude počinju stvarati staklaste strukture kao rezultat taljenja silikatnih minerala i kisika, što utječe na veću tvrdoću i manju poroznost. Odvija se na temperaturama između 900 i 950 ^{0}C te 1050 i 1150 ^{0}C kada dolazi do termičke deformacije keramike.

Eksperimentalna arheološka istraživanja su pokazala da je za postizanje temperature od 800 ^{0}C bilo potrebno oko 225 kg drveta te dodatnih 75 kg za podizanje na 1000^0. Nedostatak kisika odnosno njegovo prisustvo u peći utjecali su a proces pečenja keramike koji je mogao biti oksidacijski ili redukcijski, o čemu je ovisila boja površine i presjeka posuda koja je mogla varirati od oker i crvene do sive i crne. Po završetku pečenja uslijedio je dug proces hlađenja nakon kojeg se peć otvarala. Grublje posude su bile spremne za upotrebu dok su one finije išle na završnu obradu, primjerice dodatno glačanje površine ili bojanje.

Firing

Ceramic vessels, after their drying through air exposure, were placed in the kiln to be fired. The dome of the kiln was then closed, and a fire was lit in the fire box/tunnel. The firing of ceramics is a chemical process that involves the heating of clay minerals and organic matter. It occurs in three stages:

1. The evaporation of water from the vessel walls in the form of steam at temperatures of up to 120 ^{0}C.

2. The thermal decay of clay minerals and synthetization at temperatures between 430 and 850 ^{0}C. The organic material in clay disintegrates at temperatures between 500 and 700 ^{0}C. It then comes to the surface of the vessel walls, where it is released as carbon dioxide (CO_2). Synthetization is the process of clay turning to pottery. At elevated temperatures, the particles in the clay start to change, smelt and merge, resulting in harder, denser and less porous vessel walls.

3. Vitrification is the process in which glassy structures start to appear in the vessel walls due to the smelting of silica minerals and oxygen. This increases hardness and reduces porosity. It occurs at temperatures between 900 and 950 ^{0}C, and 1050 and 1150 ^{0}C. The latter temperature range leads to the thermal deformation of the pottery ads to the thermal deformation of the pottery.

Experimental archaeological research has shown that it took about 225 kg of wood to reach a temperature of 800 ^{0}C, and an additional 75 kg to raise it to 1000^0. The presence or lack of oxygen in the kiln affected the firing process and could lead to oxidation or a reduction atmosphere. This affected the color of the surface and the cross-section, which could vary from ochre and red to grey and black. Firing was followed by a long process of cooling and the opening of the kiln. Coarse vessels were ready for use, while finer ones were further processed, for example withmore surface polishing or coloring.

SL. 65
Ostatci okomite keramičarske peći
s položaja Državni arhiv u Sisku
(J. Burmaz)

FIG. 65
The remains of a updraught kiln
from the Državni Arhiv position in Sisak
(J. Burmaz)

SL. 66
Ostatci okomite keramičarske peći.
s položaja Frankopanska b.b. u Sisku
(R. Škrgulja)

FIG. 66
The remains of a updraught kiln
from the Frankopanska b.b. position in Sisak
(R. Škrgulja)

Lončarske peći

S pojavom keramike razvijale su se i različite tehnike pečenja.[200] Kod jednostavnijeg načina pečenja posude su polagane izravno u vatrište i pokrivane gorivom (drvo, ugljen, suha trava, balega) ili su pečene u prethodno iskopanoj jami. Problem ovog načina pečenja je otežano kontroliranje uvjeta, temperature i prisutnosti kisika te izravni dodir posude s gorivom, što može utjecati na boju i pucanje stijenki. Ova je metoda je prikladnija za pečenje grubljih posuda izrađenih od gline s dosta primjesa. Izgradnjom zaštitnih stijenki oko vatrišta nastaju prve peći, što je zabilježeno već u mlađem kamenom dobu, koje su omogućile bolju kontrolu nad procesom pečenja, postizanje viših temperatura te racionalniju upotrebu goriva. Prva upotreba dvostrukih peći, tzv. okomitog tipa, u kojima su ognjište i prostor za pečenje bili odvojeni rešetkom, zabilježeno je na Bliskom istoku u 4. tisućljeću pr. Kr., a na srednjoeuropskom prostoru u početnoj fazi mlađeg željeznog doba na prijelazu 5. u 4. st. pr. Kr. (Sl. 64) [201] Uporaba konstrukcijski složenijih peći u međuriječju Save i Drave prvi je puta zabilježena u mlađem željeznom dobu i to u okvirima latenske kulture, pri čemu najstariji primjerci potječu iz kraja 3. i prve polovice 2. st. pr. Kr.[202] Razvojem keramičkih peći nije nestao i primitivniji način pečenja koji se zbog jednostavnosti i praktičnosti zadržao sve do modernog vremena. Iz Siska su poznati ostatci dvije dvodijelne keramičarske peći iz mlađeželjeznodobne faze naselja na lijevoj obali rijeke Kupe, jedna s položaja Državni arhiv (Sl. 65), a druga iz Frankopanske ulice b.b. (Sl. 66). U oba slučaja sačuvana su ukopana ložišta i rešetke kojima su kupole bile odvojene od ložišta.[203] Dvodijelne peći okomitog tipa sastoje se od nekoliko konstrukcijskih elemenata (Sl. 64):

1. vatrišni/ložišni kanal
2. jednostruka ili dvostruka komora za izgaranje
3. rešetka
4. dimna komora

Pottery kilns

With the appearance of pottery, various firing techniques developed.[200] In simpler modes of firing, the vessels were placed directly into the fire and were either covered by fuel (wood, charcoal, dry grass, excrement) or fired in dug out pits. The problem with this mode of firing is that it is more difficult to control the conditions, namely the temperature and the presence of oxygen, and the vessel is in direct contact with the fuel, which can affect its color and lead to wall breakage. This method is more appropriate for firing coarse vessels made of clay with a lot of inclusions. The first kilns were created by building protective walls around the combustion chamber. These had already appeared in the Neolithic period, allowed for better control over the firing process and made it possible to achieve both higher temperatures and a more rational expenditure of fuel. The first use of double chamber or updraught kilns, wherein the furnace and firing area are separated by a grid, was recorded in the Middle East in the 4th millennium BC and in central Europe in the initial phases of the Late Iron Age, between the 5th and 4th century BC (Fig. 64).[201] The earliest use of more complex kilns at the Sava and Drava Interfluve was recorded in the Late Iron Age in the context of the La Tène culture. The earliest examples date to the end of the 3rd century BC and the beginning of the 2nd.[202] The development of pottery kilns did not stop the use of more primitive firing methods, which due to their simplicity and practicality remained popular modern times. Sisak yielded the remains of two updraught kilns from the Late Iron Age phase of the settlement on the left bank of the Kupa River – one from the Državni Arhiv (Fig. 65) and the other from the Frankopanska Ulica b.b. position (Fig. 66). In both cases, the dugout furnace and the grids separating the dome from the furnace were preserved.[203] Updraught kilns, consist of several elements (Fig. 64):

1. fire box/tunnel
2. single or double combustion chamber
3. grid
4. firing chamber

200 Rice 1987; Miloglav 2016, 54–57.

201 Mangel, Ther, Gregor 2015. Autori upućuju na postojanje nekoliko struktura s ložištem i kupolom odvojenih rešetkom i u ranijim razdobljima, odnosno u starijem željeznom dobu i početkom latenske kulture (Ha C–LT A), ali za njih pretpostavljaju druge namjene, kao što je pripravljanje hrane, a ne pečenje keramičkih posuda!

202 Tomanič-Jevremov, Guštin 1996, 267–277.

203 Drnić, Miletić Čakširan 2014, 156–157, Sl. 3; Škrgulja 2018, 120–121, Sl. 12.

200 Rice 1987; Miloglav 2016, 54–57.

201 Mangel, Ther, Gregor 2015. The authors point out that there were several structures with a furnace and dome that were separated by a grid in earlier periods too, i.e. in the Early Iron Age and the beginning of the La Tène culture (Ha C–LT A). They suggest, however, that these were used for other purposes, such as food preparation, not the firing of ceramic vessels!

202 Tomanič-Jevremov, Guštin 1996, 267–277.

203 Drnić, Miletić Čakširan 2014, 156–157, Fig. 3; Škrgulja 2018, 120–121, Fig. 12.

SL. 67
Velika keramička posuda za skladištenje namirnica iz kasnohalštatskog sloja naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 67
The large storage vessel from the Late Hallstatt settlement layer at the Pogorelac position in Sisak (I. Krajcar)

Oblici keramičkog posuđa iz Siska

Keramičko posuđe iz željeznodobnog naselja u Sisku korišteno je u svim segmentima svakodnevnog života, a funkcionalno se može svrstati u nekoliko osnovnih oblika: lonce, zdjele, šalice, čaše, vrčeve, pehare i poklopce. Većina keramičkih posuda izrađena je ručno, čak i u mlađem željeznom dobu kada je sisačka zajednica bila upoznata s tehnologijom proizvodnje na lončarskom kolu. U ovoj skupini nalaze se veliki, masivni lonci, odnosno posude za zalihe, koji su služili za skladištenje namirnica ili tekućine (Sl. 67 – 68), zatim lonci za kuhanje (Sl. 45) te zdjele, čaše i šalice za konzumaciju hrane i pića (Sl. 48 – 49) i naposljetku poklopci. Iako tehnički nisu posude, u skupinu ručno izrađenih keramičkih predmeta spadaju i peke, korištene u pripremi hrane (Sl. 45). Među keramičkim posuđem izrađenim rukom izdvaja se skupina koja se na osnovi izrade može definirati kao fina keramika (Sl. 50). Nju karakteriziraju dobro pročišćena glinena smjesa, kvalitetno pečenje, uglavnom u redukcijskoj atmosferi (iako su zabilježeni i rijetki komadi pečeni oksidacijski), najčešće crna površina tretirana glačanjem te karakterističan ukras izveden urezivanjem, plitkim žlijebljenjem, ubadanjem i boranjem, a rjeđe i utiskivanjem te kaneliranjem. Također, na ručkama zdjela, koje sačinjavaju glavninu ove skupine, često se nalaze stilizirani, plastično izvedeni prikazi životinjskih glava ili njihovi detalji (rogovi ili uši). Proizvodnja ove kvalitetne keramike, koja se bez sumnje odvijala u kasnohalštatskoj fazi sisačkog naselja, upućivala bi na specijalizaciju u proizvodnji, koja je podrazumijevala ovladavanje naprednijim tehnikama pripreme glinene smjese i pečenja te standardiziranje ukrasa.

Keramički oblici izrađivani na brzom lončarskom kolu relativno su malobrojni u keramografiji sisačke zajednice,[204] a njihova pojava u kontekstu sisačkog naselja ima i znatnu kronološku važnost (Sl. 62). Naime, posuđe izrađeno na lončarskom kolu pojavljuje se na prostoru jugoistočnih Alpa i južne Panonije krajem 4. i početkom 3. st. pr. Kr. s utjecajima latenske kulture. Pri tome, usvajanje nove tehnologije nije ostvareno jednakom dinamikom u svim dijelovima tog prostora, što se odražava u zastupljenosti ulomaka posuda izrađenih na kolu, kao i u tipološkoj raznolikosti u keramičkom materijalu s pojedinih lokaliteta. Tako je ovaj tip keramike znatno zastupljeniji na područjima na kojima su živjele zajednice s dominantnim elementima La Tène u materijalnoj kulturi (primjerice slovenska Štajerska i jugoistočna Panonija), dok je njihov postotak u keramografiji zajednica na perifernim prostorima, kao što su Pokuplje i srednji tok rijeke Save, osjetno manji.

Iz tehnološke perspektive keramičke posude izrađene na lončarskom kolu načinjene su od dobro pročišćene gline, uglavnom bez primjese ili uz primjesu manje količine vrlo finog pijeska. U ovoj skupini zastupljeni su lonci korišteni uglavnom za držanje tekućine (Sl. 62), različiti oblici zdjela (Sl. 62) te posude za konzumaciju pića, kao što su vrčevi i pehari, s analogijama na prostoru

204 Naime, ukupan postotak svih ulomaka posuda izrađenih na kolu koje potječu iz istraživanja na položajima Pogorelac i Povijesni arhiv ne prelazi 5%.

The forms of pottery from the Iron Age settlement in Sisak

The ceramic vessels from the Iron Age settlement in Sisak were used in all areas of everyday life and can be divided into several basic shapes based on their function: pots, bowls, cups, beakers, jugs, goblets and lids. Most of these vessels were made by hand – even those from the Late Iron Age, when the population of Sisak was familiar with the potter's wheel. This group includes large, massive pots, i.e. storage vessels for raw foods (Fig. 67–68), cooking pots (Fig. 45), lids, as well as bowls, beakers and cups for food and beverage consumption (Fig. 48–49). Although technically not vessels, baking lids, which were used in food preparation, also fall into the category of handmade vessels (Fig. 45). Another group stands out among the pottery shaped by hand. Based on its mode of production, this can be defined as fineware (Fig. 50). It is characterized by a well-purified clay paste, high-quality firing (mostly in a reduction atmosphere though there are rare examples of firing in an oxidation atmosphere), most commonly a black surface achieved by polishing and decorations made by incising, shallow grooving, stabbing and indenting, less often by impressing and channeling. The handles on the bowls, which make up the majority of this group, also often have stylized, plastically shaped depictions of animal heads or their features (horns or ears). The production of this high-quality pottery, which unquestionably took place in the Late Hallstatt phase of the settlement in Sisak, points to a specialization in the production. This required the mastery of more advanced techniques of clay paste preparation, firing and a standardization of decoration.

Pottery forms made on a fast-rotating potter's wheel are relatively rare in the ceramic material from Sisak,[204] but their presence in the context of the Sisak settlement, however, is of chronological significance (Fig. 62). The potter's wheel appeared in the southeastern Alps and southern Pannonia at the end of the 4th century BC and the beginning of the 3rd under the influence of the La Tène culture. It should be noted that new technologies were not equally accepted in all parts of that territory, as reflected in both the ratio of fragments of vessels made on the potter's wheel and the typological variety among pottery from individual sites. This type of pottery is therefore significantly more common in territories that were inhabited by populations whose material culture was dominated by La Tène elements (for example, Slovenian Styria and southeastern Pannonia), while their percentage in the pottery production of populations in peripheral areas, such as the Pokuplje region and the central flow of the Sava River, is significantly smaller.

From a technological perspective, ceramic vessels made on the potter's wheel are made of well-purified clay, mostly with little to no very fine sand. This group includes pots that were mostly used for holding liquids (Fig. 62), different shapes of bowls (Fig. 62), and vessels for the consumption of beverages, such as jugs

204 The total percentage of vessel fragments made on a wheel from the excavations at Pogorelac and Povijesni Arhiv does not exceed 5%.

SL. 68
Keramičke posude za skladištenje namirnica i tekućine iz kasnohalštatskog sloja naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 68
Ceramic vessels used to store food and liquids from the Late Hallstatt settlement layer at the Pogorelac position in Sisak (I. Krajcar)

susjedne mokronoške skupine.[205] Među mlađeželjeznodobnim posuđem zabilježeni su i lonci koji su nakon ručne izrade doradivani na sporom lončarskom kolu. To su lonci karakterističnog oblika za latensku kulturu - zadebljalog ruba ispod kojega se često nalazi žlijeb, dok im je tijelo ukrašeno tzv. češljastim ukrasom (Sl. 69). Ovi su lonci često izrađivani od glinene smjese s primjesom grafita, a jedan ulomak te sirovine pronađen je u iskopavanju Sonde 1 na Pogorelcu, što bi upućivalo na lokalnu proizvodnju ovog tipa posuđa.

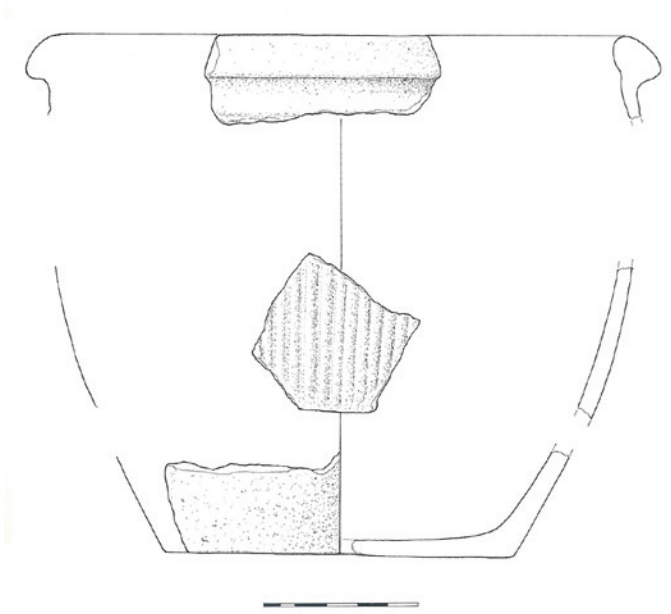
Umješni (ili oni manje vješti) majstori keramičari iz sisačkog željeznodobnog naselja ukrašavali su keramičke posude različitim tehnikama i motivima koje uključuju plastična zadebljanja i aplikacije koje imaju ne samo dekorativnu, nego i funkcionalnu ulogu (drške, trake, aplikacije). Slijede tehnike u kojima se površina posuda mehanički tretira urezivanjem, žlijebljenjem, glačanjem, utiskivanjem, ubadanjem, boranjem, fasetiranjem itd. te naposljetku bojanje i grafitiranje koje je među sisačkim materijalom vrlo rijetko. Naime, na nekoliko posuda, uglavnom lonaca, zabilježeni su tragovi crne boje na bazi organske smole kojom je bila prekrivena cijela površina posude, a za koju se, osim dekorativne, pretpostavlja i funkcionalna namjena u svrhu impregnacije stijenki posuda (Sl. 68). O kompleksnijim motivima na keramičkom posuđu bit će nešto više rečeno u poglavlju o umjetnosti i duhovnoj kulturi.

and goblets, which have analogies in the neighboring Mokronog group.[205] Late Iron Age pottery also includes pots that after being shaped by hand were further processed on a slow-rotating potter's wheel. These pots have a shape that is characteristic of the La Tène culture, with a thickened rim, often with a gauge underneath it, and a body decorated with the comb-like decoration (Fig. 69). These pots were often made from clay paste with graphite inclusions. A chunk of this raw material was discovered in the excavations of Trench 1 at Pogorelac, which potentially indicates that this type of vessel was produced locally.

Proficient (or less skilled) potters from the Iron Age settlement in Sisak decorated vessels with different techniques and motifs, including plastic protrusions and applications that played both decorative and functional roles (handles, ribbons, applications). Other techniques involved the mechanical treatment of the surface by incising, grooving, polishing, impressing, stabbing, indenting, faceting, etc., as well as painting and graphite coating, which appears very rarely among the material from Sisak. Only a few vessels, mostly pots, display traces of black paint made from organic resin, which was applied to the entire surface of the vessel. This paint had a decorative function as well as a practical one, in that it impregnated the vessel walls (Fig. 68). More will be said on the more complex motifs on ceramic vessels in the chapter on art and spiritual culture.

205 Knez 1992; Kerman 2011; Grahek 2016 i dr.

205 Knez 1992; Kerman 2011; Grahek 2016 and others.



SL. 69
Lonac zadebljalog ruba ukrašen češljastim ukrasom iz mlađeželjeznodobnog horizonta naselja na položaju Pogorelac u Sisku (M. Galić)

FIG. 69
The pot with a thickened rim decorated with comb-like decorations from the Late Iron Age phase of settlement at the Pogorelac position in Sisak (M. Galić)

Važno je naglasiti da je pečenjem gline, osim keramičkih posuda, izrađivan čitav niz uporabnih predmeta, kao što su predmeti vezani uz ognjište i pripremu hrane (peke, pokretna ognjišta, prekladi) (Sl. 45 – 46, 113), alatke za proizvodnju tkanina (pršljeni, utezi, kalemi) (Sl. 74 – 75, 77 – 78), kalupi za lijevanje brončanih predmeta (Sl. 81), a posebnu skupinu čine i minijaturne posude koje često imitiraju stvarne oblike, za koje se smatra da predstavljaju dječje igračke, iako su i druge namjene sasvim moguće (Sl. 70).[206]

Na osnovu analize keramičkog posuđa iz Siska može se zaključiti da se u ovoj vrsti materijala mogu pratiti svi stilski i tehnološki trendovi i promjene u proizvodnji, od završetka kasnog brončanog doba (Ha A2 – Ha B), preko starije i mlađe faze starijeg željeznog doba (Ha C – D), do mlađeg željeznog doba (LT B2 – D). Upravo se kroz keramički materijal najbolje odražava postupan razvoj i transformacija sisačke zajednice koja je s jedne strane održavala tradiciju autohtone keramografije, ali je također usvajala pojedine tehnološke inovacije (uporabu lončarskog kola, okomite peći), kao i regionalne stilske trendove, stvarajući i razvijajući ovaj specifičan aspekt materijalne kulture u razdoblju dugom tisuću godina.

It is important to note that clay was fired to produce not only ceramic vessels but a whole series of items, such as those connected with the fireplace and food preparation (baking lids, movable hearths, fire dogs) (Fig. 45–46, 113), tools used in fabric production (whorls, weights, spools) (Fig. 74–74, 77–78), molds for casting bronze items (Fig. 81), as well as a special group of miniature vessels that often imitate the shapes of large ones and are thought to have been children's toys, though they may have fulfilled other purposes as well (Fig. 70).[206]

Based on the analysis of ceramic vessels from Sisak, it can be concluded that this type of material displays all the stylistic and technological trends, as well as the changes in production, from the end of the Late Bronze Age (Ha B), the early and late phases of the Early Iron Age (Ha C–D), and the Late Iron Age (LT B2–D). The ceramic material best reflects the gradual development and transformation of the Sisak community. It held onto the tradition of autochthonous pottery production but also adopted certain technological innovations (the use of the potter's wheel, vertical kilns) and regional stylistic trends, thereby creating and developing this specific aspect of its material culture over a millennium-long period.

206 Balen-Letunić, Rendić-Miočević 2012, 13–29; Drnić, Miletić Čakširan 2014, 173, Sl. 11; Rustoiu 2016.

206 Balen-Letunić, Rendić-Miočević 2012, 13–29; Drnić, Miletić Čakširan 2014, 173, Fig. 11; Rustoiu 2016.

SL. 70
Minijaturne keramičke posude iz
željeznodobnog naselja na položaju
Pogorelac u Sisku (I. Krajcar)

FIG. 70
Miniature ceramic vessels
from the Iron Age settlement at the
Pogorelac position in Sisak (I. Krajcar)

6.2 GLINOM DO TKANINE. PRIBOR ZA IZRADU TKANINE IZ ŽELJEZNODOBNOG NASELJA S POLOŽAJA POGORELAC U SISKU (JULIA FILEŠ KRAMBERGER)

Da bi se zaštititi od atmosferskih prilika i hladnoće, ljudi su u davnoj pretpovijesti počeli koristiti materijale iz svoje okoline u koje su se umatali s ciljem zadržavanja tjelesne temperature i sprječavanja bolesti i smrti. Od prvotne upotrebe životinjskih koža i krznenih pokrivala do proizvodnje finih plašteva od svile ili pamuka prošla su tisućljeća, a negdje na tome putu čovjek je otkrio kako od tankih niti istkati tkaninu i njome se zaogrnuti.

Tkanina je sve donedavno izrađivana samo od prirodnih, propadljivih materijala. Budući da se nakon korištenja vrlo brzo raspada, izuzetno se rijetko može naći na arheološkim nalazištima u prvotnom obliku, i to samo pod određenim uvjetima.[207] Stoga postoji vrlo malo podataka o odjeći i drugim tekstilnim predmetima iz arheoloških razdoblja, koji se temelje na nalazima same tkanine. No, pribor za izradu tkanine često se sastoji od dijelova izrađenih od pečene gline, kosti ili kamena (utezi za tkalački stan, pršljenovi za vreteno) ili pak metala (igle za šivanje ili škare).[208] Ti materijali znatno sporije propadaju prolaskom vremena i često se pronalaze na arheološkim nalazištima. Ponekad se informacije o tkanini i odjeći mogu dobiti iz pisanih izvora i likovnih

207 King 1978, 89; Peacock 2003, 33.

208 Peacock 2001, 186; Belanová, Štolcová, Grömer 2010, 10; 186; Rahmstorf 2015.

FROM CLAY TO FABRIC. TOOLS FOR THE PRODUCTION OF FABRIC FROM THE SISAK-POGORELAC POSITION (JULIA FILEŠ KRAMBERGER)

In order to protect themselves from the harsh cold weather in prehistory, people started to wrap themselves in materials from their surroundings. This would prevent the loss of body temperature and stave off sickness and death. Millennia have passed since the initial use of animal hides and fur covers, and the later production of fine capes of silk or cotton. Somewhere along the way, man discovered how to weave fabric out of thin threads and clothe himself with it'.

Until recently, fabric was only made from natural, perishable materials. Seeing as it fell apart shortly after use, it is very rarely found on archaeological sites in its original form and only under certain conditions.[207] There is therefore very little data on clothing and other textiles from archaeological periods in the form of finds of fabric as such. The equipment that was used in fabric production, however, often contains parts made of fired clay, bones, stone (loom weights, spindle whorls) or metal (sewing needles or shears).[208] These materials disintegrate significantly slower with the passage of time and are often discovered on archaeological sites. It is occasionally possible to get information

207 King 1978, 89; Peacock 2003, 33.

208 Peacock 2001, 186; Belanová-Štolcova, Grömer 2010, 10; Rahmstorf 2015.

prikaza u obliku figurica ili motiva izvedenih na zidovima kuća ili pak metalnim i keramičkim posudama (Sl. 36 – 37, 56),[209] ali ukoliko to nije slučaj, često će se znanje o tkanini temeljiti upravo na priboru koji se koristio za njezinu izradu.

Na temelju nekoliko "sretnih" nalaza organskih ostataka te niti ili vlakana utisnutih u glinu, sa sigurnošću se može reći da je u Europi već u razdoblju kasnog paleolitika, odnosno starijeg kamenog doba, čovjek eksperimentirao sa sukanjem i predenjem vlati trave ili vlakana iz stabljika biljaka te počeo proizvoditi niti, užad, mreže i košare.[210] U mlađem kamenom dobu počeo je pažljivo birati biljke i životinje pogodne za uzgoj te je na taj način osigurao stalan priljev sirovine za izradu niti. U tome je periodu eksperimentirao i ovladao predenjem na vretenu i tkanjem cijelih tkanina, što je potvrđeno najstarijim nalazima tkalačkih stanova i pršljenova u Europi.[211] U bronČanom i željeznom dobu tkanje na tkalačkom stanu uobičajilo se kao način proizvodnje tekstila diljem Europe te su eksperimentiranjem nastali vrlo raznoliki uzorci, boje i oblici. Sve to može se potvrditi odlično očuvanim komadićima tkanine sačuvanim u rudniku soli u Hallstattu u Austriji,[212] ali i spomenutim keramičkim pršljenovima i utezima za tkalački stan naađenima u gotovo svakom srednjoeuropskom naselju iz toga vremena.[213]

Pribor za izradu tkanine

Pršljenovi su maleni, okrugli predmeti s rupom u sredini koji su služili kao utezi na štapiću vretena kojim se prela nit iz sirovine poput vune ili lana (Sl. 71). Sam štapić vretena najčešće je u pretpovijesti bio izrađen od drva pa se na arheološkim nalazištima vrlo rijetko pronalazi,[214] zbog toga što drvo, kao i tkanina, brzo propada. Veličina i masa pršljena najčešće se može povezati s debljinom niti koja je njime predena.[215] Stoga su ove karakteristike ključne pri analizi, ali ipak je potrebno uzeti u obzir i njihov oblik koji djelomično utječe na duljinu i brzinu vrtnje.[216] Da bi se dobili ovi podaci, potrebno je mjeriti i analizirati svaki pojedini pronađeni pršljen.

Nakon što su niti bile upredene, njima se dalje tkala tkanina od koje su se izrađivali raznoliki uporabni ili pak ukrasni predmeti, poput odjeće, krpa za brisanje, pokrivala za namještaj, itd. U pravilu se tkanina proizvodi pomoću dva sustava niti: okomitih (osnova) i vodoravnih (potka). Te se niti međusobno isprepliću pod pravim kutom na različite načine po utvrđenim pravilima, čime se postižu različite vrste tkanja poput platnenog ili kepernog, ali i tkanine različite gustoće, elastičnosti i izgleda.[217] U prošlosti se

209 Siennicka, Ulanowska, Rahmstorf 2018, 2; Rahmstorf 2015, 2; Grömer 2013b, 32–33.

210 Soffer *et al.* 1998, 64; Piqué *et al.* 2018, 262.

211 De Diego *et al.* 2018, 69; Grömer 2014.

212 Grömer *et al.* 2013.

213 Belanová, Štolcová, Grömer 2010; Grömer 2013a, 36; Gleba, Mannering 2012, 9.

214 Andersson Strand 2012, 32.

215 Andersson Strand 2012, 33.

216 Grömer 2005, 112–113.

217 Verberg 2019; Grömer 2013b, 60–62.

on fabric and clothing production in written sources and artistic depictions (figurines, motifs on house walls, or metal and ceramic items) (Fig. 36–37, 56).[209] However, when such is unavailable, knowledge of the fabrics is based entirely on the equipment that was used to produce it.

With the aid of several "lucky" finds of organic remains and threads or fibers impressed upon clay, it can be said with certainty that humans in Europe experimented with the weaving and spinning of leaves of grass or fibers from plant stalks and were already producing thread, ropes, nets and baskets in the Late Paleolithic period, i.e. the Early Stone Age.[210] In the Late Stone Age, they started to carefully choose plants and animals that were suitable for cultivation, thereby creating a steady flow of raw materials for thread production. They experimented and mastered the use of spindles and the weaving of complete fabrics during this period, as attested by the oldest finds of looms and spindle whorls in Europe.[211] Weaving on a loom became the most common way of producing textiles across Europe during the Bronze and Iron ages with experimentation leading to the creation of very diverse patterns, colors and shapes. All of this is confirmed by the exceptionally well-preserved pieces of fabric discovered at the Hallstatt salt mine in Austria[212] and the aforementioned ceramic whorls and loom weights found in almost every settlement in central Europe from this period.[213]

Fabric making equipment

Whorls are small, round objects with a hole in the center. They functioned as weights on the spindles used to spin thread from raw materials like wool or flax (Fig. 71). The spindle was most often made of wood in prehistory and is a very rare find on archaeological sites[214] as wood, like fabric, easily disintegrates. The size and mass of whorls most often corresponds to the thickness of the thread produced.[215] These characteristics are therefore included in the analysis below. It is also necessary to consider their shape, as this will have partially affected the length and speed of rotation.[216] In order to obtain this data, it is necessary to measure and analyze each individual whorl.

After spinning, the threads were used to weave fabric. This was then used to make different everyday or decorative objects, such as clothes, cloths for wiping, furniture covers, and so on. As a rule, fabric is produced with the help of two systems of threads: vertical (warp) and horizontal (weft). These threads are intertwined at a right angle in different ways and according to set rules to create

209 Grömer 2013b, 32–33; Rahmstorf 2015, 2; Siennicka, Ulanowska, Rahmstorf 2018, 2.

210 Soffer *et al.* 1998, 64; Piqué *et al.* 2018, 262.

211 Grömer 2014; De Diego *et al.* 2018, 69.

212 Grömer *et al.* 2013.

213 Belanová-Štolcová, Grömer 2010; Gleba, Mannering 2012, 9; Grömer 2013a, 36.

214 Andersson Strand 2012, 32.

215 Andersson Strand 2012, 33.

216 Grömer 2005, 112–113.

SL. 71
Predenje niti pomoću vretena
s keramičkim pršljenom (Grömer 2016)

FIG. 71
Spinning thread with the help of a spindle
and a ceramic whorl (Grömer 2016)

tkanina proizvodila na tkalačkim stanovima koji se dijele na vodoravne i okomite. Vodoravni tkalački stanovi najčešće su dvogredni, točnije niti osnove napete su im između dviju greda na nasuprotnim stranama. Okomiti stanovi mogu također biti dvogredni, ali i takvog oblika da su na njima niti osnove napete utezima.[218]

U pretpovijesnoj Europi, pa tako i na području današnje Hrvatske, tkanina se najčešće izrađivala na okomitom tkalačkom stanu s utezima.[219] Ovakav tkalački stan sastojao se od drvenog okvira, najčešće naslonjenog na zid kuće (Sl. 72). Za gornju gredu drvenog okvira pričvršćivale su se niti osnove koje su na dnu pričvršćivane utezima. Time se dobivao sustav pravilno raspoređenih i dovoljno napetih okomitih niti osnove da bi se uz pomoć vodoravne niti potke moglo stvoriti željeno tkanje. Da bi ovaj proces bio što jednostavniji, niti osnove morale su biti podjednako napete, na što su utjecali spomenuti utezi. Izgled, veličina i oblik utega kroz pretpovijest su se mijenjali, djelomično potaknuti trenutačnim stilom, ali dijelom i stoga što su njihove određene karakteristike, poput veličine i oblika, utjecale na raspored postavljanja tkalačkog stana i na konačni proizvod.[220]

different types of weave, such as flax or twill weave and fabrics of different density, elasticity and appearance.[217] In the past, fabric was produced on looms that can be divided into horizontal and vertical ones. Horizontal looms were more often of the two-beam variety, where the warp is tensioned between two opposite beams. Vertical looms can also be of the two-beam type or shaped in such a way that the threads are suspended by weights.[218]

In prehistoric Europe, including today's Croatia, fabric was most often made on a warp-weighted loom.[219] This type of loom was composed of a wooden frame that most commonly leaned against a house wall (Fig. 72). The warp threads were attached to the upper beam of the wooden frame and weights on the lower end. This was done to achieve a system of regularly spaced and sufficiently stretched vertical warp threads, which allowed for the creation of the desired weave with the vertical weft. To make this process simpler, the warp threads had to be equally stretched, and this was achieved by the weights. The appearance, size and shape of the weights changed throughout prehistory. This was partially induced by the current style, but also because some of their characteristics, such as size and shape, affected the layout of the loom and the final product.[220]

218 Barber 1991; Andersson Strand 2018, 19.

219 Barber 1991, 113; Andersson Strand 2018, 23; Grömer 2016.

220 Andersson Strand 2018, 23; Mårtensson, Nosch, Andersson Strand 2009, 374.

217 Grömer 2013b, 60–62; Verberg 2019.

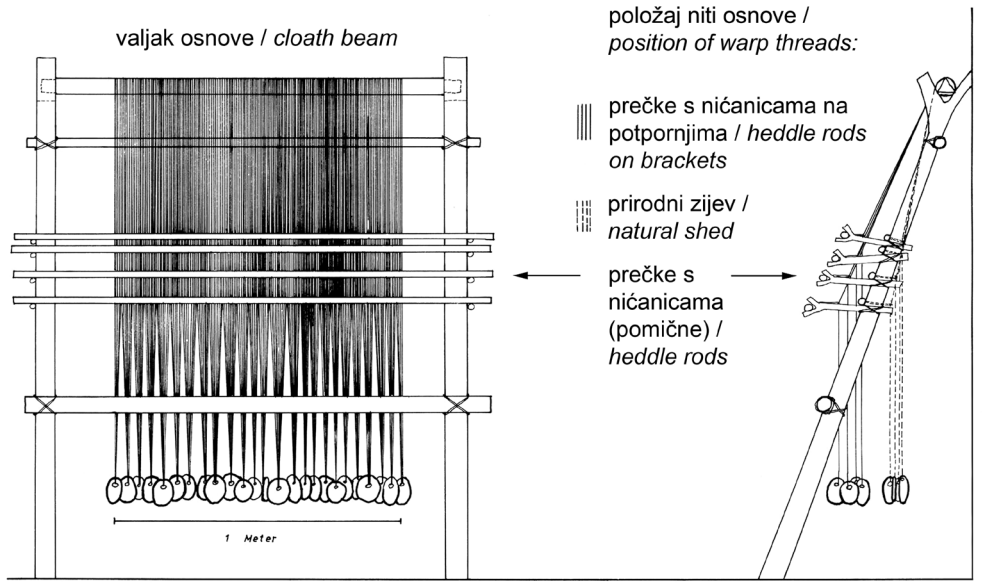
218 Barber 1991; Andersson Strand 2018, 19.

219 Barber 1991, 113; Grömer 2016; Andersson Strand 2018, 23.

220 Mårtensson, Nosch, Andersson Strand 2009, 374; Andersson Strand 2018, 23.

SL. 72
Grafički prikaz okomitog tkalačkog stana
(Grömer 2016)

FIG. 72
A graphic depiction of a vertical loom
(Grömer 2016)



Uz pršljenove i utege, na pretpovijesnim se arheološkim nalazištima često nailazi i na kaleme ili špule. Radi se o valjkastim predmetima s proširenim bazama, za koje se vjeruje da su služili za namotavanje i skladištenje niti, ali i prilikom tkanja za provlačenje potke između niti osnove. Moguće je da su u određenim prilikama služili i kao svojevrsni utezi za manje tkalačke stanove.[221]

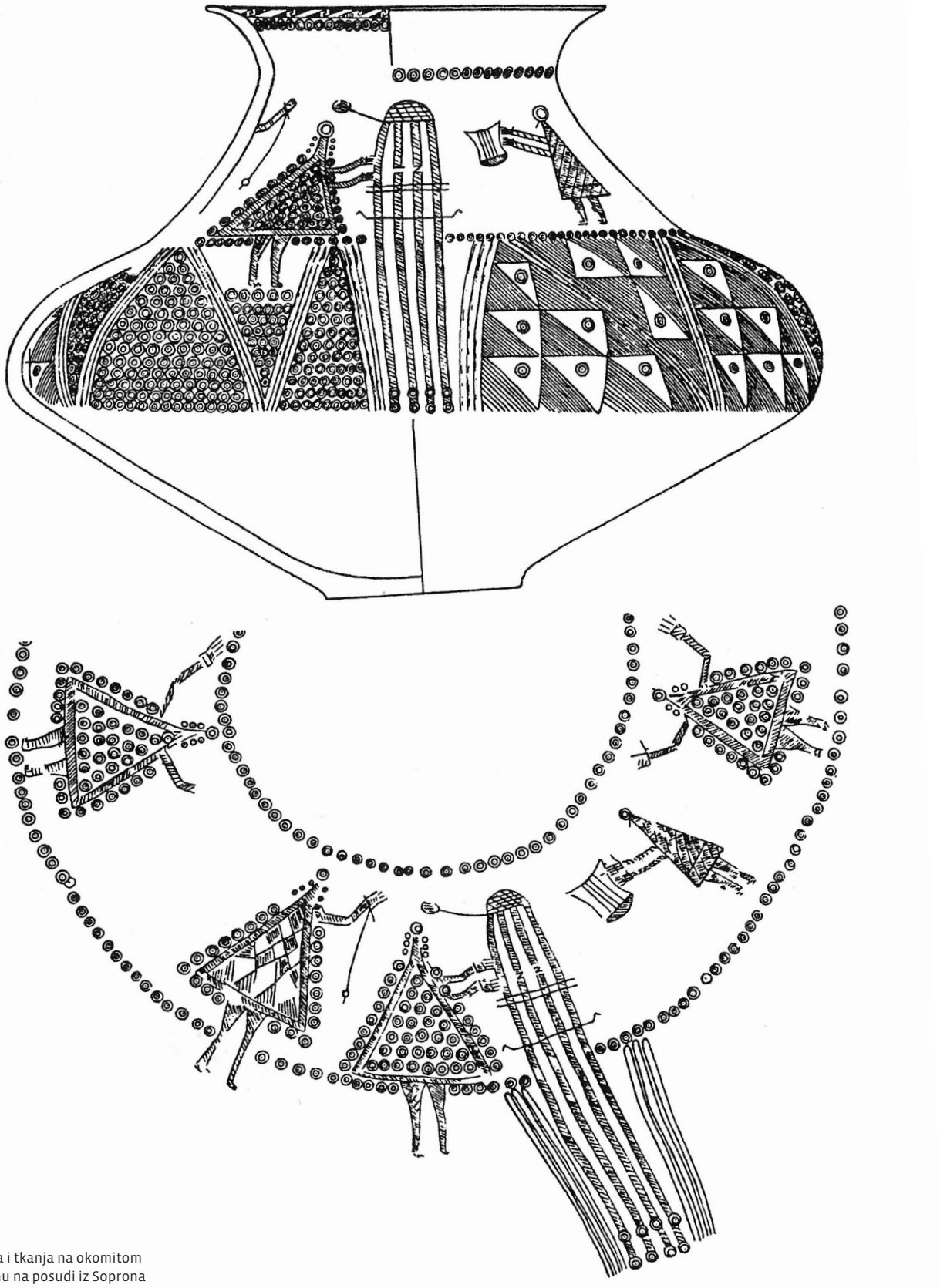
Svi navedeni keramički predmeti mogu u arheološkoj interpretaciji biti izvor različitih spoznaja o procesu izrade tkanine. Primjerice, veličina i oblik pršljena mogu upućivati na debljinu niti koja se njima prela,[222] a mogu biti i neizravan pokazatelj od kojeg je materijala proizvođena tkanina jer se u prosjeku vuna prela manjim pršljenovima, a lan većim.[223] U slučaju utega, njihov oblik često utječe na njihovo postavljanje na tkalačkom stanu, čime svjedoče i o gustoći tkanine.[224] Ukoliko ih se pronađe u položaju koji su izvorno imali na tkalačkom stanu prilikom tkanja, u nekim se slučajevima može odrediti vrsta tkanja i uzorak tkanine, a pouzdano se može odrediti njezina širina.[225] Broj i koncentracija predmeta vezanih uz proizvodnju tekstila na određenom mjestu na nalazištu svjedoče o organizaciji proizvodnje tekstila, pa čak i o prostornoj organizaciji naselja.[226] Konačno, potrebno je naglasiti da se u mnogo slučajeva ne može izravno govoriti o tkanini, njezinom izgledu i upotrebi u pretpovijesti, jednostavno zato što se nije očuvala. Ipak, mnogo se toga može saznati o njezinoj proizvodnji neizravno, premda možda neočekivano, kroz keramičke predmete.

Along with whorls and loom-weights, prehistoric sites often yield spools. These are cylindrical items with widened bases that are thought to have been used to wrap and store thread but also to weave the weft and warp. They were possibly also used sometimes as a kind of loom-weights for smaller looms.[221]

All of these ceramic items can be a source of insight into the fabric making process in archaeological interpretations. The size and shape of whorls, for example, can point to the thickness of the thread that was spun.[222] It can also be an indirect indicator of the material that was used to produce fabric, as wool was typically spun with smaller whorls and flax with larger ones.[223] In the case of weights, their shape often dictates their position on the loom, making them indicators of fabric density.[224] If they are discovered in their original position on the loom during weaving, it is possible to determine the kind of weave, the pattern of the fabric and above all its width.[225] The number and concentration of items connected to fabric production on a site attests to the organization of textile production there and the spatial organization of the settlement.[226] Finally, it is important to emphasize that in many cases it is impossible to directly discuss fabrics and their appearance and use in prehistory simply because they were not preserved. However, a lot can be discovered about its production indirectly through ceramic finds.

221 Gleba 2008, 140.
222 Kania 2013, 118–119.
223 Grömer 2005, 110.
224 Grömer 2016, 112–113.
225 Olofsson, Andersson Strand, Nosch 2015, 92.
226 Costin 2005, 1056.; Gleba 2007, 75

221 Gleba 2008, 140.
222 Kania 2013, 118–119.
223 Grömer 2005, 110.
224 Grömer 2016, 112–113.
225 Olofsson, Andersson Strand, Nosch 2015, 92.
226 Costin 2005, 1056; Gleba 2007, 75.



SL. 73
Prikaz predenja i tkanja na okomitom tkalačkom stanu na posudi iz Soprona (Potrebica 2005)

FIG. 73
A depiction of spinning and weaving on a vertical loom on a vessel from Sopron (Potrebica 2005)

SL. 74
Kalemovi iz željeznodobnog naselja na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 74
Spools from the Iron Age settlement at the Pogorelac position in Sisak (I. Krajcar)

Alatke za proizvodnju tkanine iz sisačkog željeznodobnog naselja

Kalemi

U iskopavanjima koje od 2012. na položaju Pogorelac provodi Arheološki muzej u Zagrebu pronađeno je više od dvije stotine predmeta vezanih uz proizvodnju tkanine.[227] Pronađeno je dvostruko više utega od pršljenova, dok se za kaleme može reći da su rijetko korišten dio tekstilnog pribora na istraženom dijelu naselja, jer su pronađena samo dva predmeta za koje se sa sigurnošću može ustvrditi da su upravo kalemi. S obzirom na to da ih je pronađeno tako malo, može se pretpostaviti da ovi kalemi nisu služili kao utezi u setovima za tkanje, kao što je ranije navedeno.[228] Oba spomenuta kalema su probušena, što navodi na pomisao da su kroz njih niti provođene pojedinačno ili u snopovima kako bi se pričvrstile, a njihov je ostatak vjerojatno namotan oko kalema za skladištenje ili daljnju upotrebu, u obliku čunka, prilikom tkanja (Sl. 74). Njihov u osnovi valjkasti oblik omogućuje lako i jednolično namotavanje niti, a proširene baze osiguravaju da nit ne sklizne s tijela kalema prilikom rukovanja.

227 Drnić 2018, 15; Drnić, Groh 2018.
228 Raeder-Knudsen 2012, 259.

Tools used in fabric production from Sisak Iron Age settlement

Spools

The excavations conducted by the Archaeological museum in Zagreb in the Pogorelac position since 2012 have yielded over two hundred finds related to fabric production.[227] There are twice as many weights than whorls. It can be said that spools were rarely used as textile producing equipment in the excavated part of the site, as only two finds can certainly be identified as this kind of object. Given that so few have been found, one can assume that these spools were not (as previously suggested) used as weights in weaving sets.[228] Both spools have a perforation, which suggests that individual or multiple threads were pulled through to secure them. The rest were probably wrapped around the spool for storage or further use as a shuttle for weaving (Fig. 74). Their essentially cylindrical shape allowed for an easy and consistent wrapping of thread, while the widened base ensured that the thread did not slip from the body of the spool during use.

227 Drnić 2018, 15; Drnić, Groh 2018.
228 Raeder-Knudsen 2012, 259.

SL. 75
Utezi za okomiti tkalački stan iz željeznodobnog naselja na položaju Pogorelac u Sisku
(I. Krajcar)

FIG. 75
Weights from a vertical loom from the Iron Age settlementat the Pogorelac position in Sisak
(I. Krajcar)

Utezi

Utezi pronađeni u željeznodobnom naselju na Pogorelcu potvrđuju proizvodnju tkanina pomoću uspravnih tkalačkih stanova s utezima. Pronađeni utezi većinom su u obliku krnje piramide ili imaju proširen, trapezoidni oblik. Ovaj oblik, relativno izduljen i uzak, s rupom na najvišem dijelu utega, omogućuje relativno gusto redanje utega jednog do drugoga prilikom postavljanja tkalačkog stana, čime se postiže tkanje relativno guste tkanine.[229]

Isto tako, ovi su utezi različitih dimenzija. Neki su relativno mali, visoki oko 6 ili 7 cm i široki tek 5 cm, a teški oko 100 ili 150 g, dok postoje i vrlo veliki i teški utezi, mase veće od jednog kilograma. Ova raznolikost upućuje na lokalnu proizvodnju različitih tkanina, od gušćih i finijih, za koje su mogli biti korišteni manji i relativno tanji utezi, do grubljih i prozračnijih, za koje su mogli biti upotrebljavani veći i teži utezi.[230] Svakako treba napomenuti da je velik dio utega fragmentiran, odnosno samo 25% ih je potpuno očuvano ili očuvano skoro u cijelosti. Ovo bi moglo upućivati na činjenicu da ih je mnogo pronađeno u stanju i na mjestu u

Loom-weights

The loom-weights from the Iron Age settlement at Pogorelac confirm that fabric was produced with the help of warp-weighted looms. These are mostly shaped like truncated pyramids or a widened trapeze. Their elongated and narrow shape with a hole in the highest part allowed the weights to be lined up densely. This in turn allowed a relatively thick fabric to be made.[229]

These weights also differ in size. Some are relatively small – approximately 6 or 7 cm tall, 5 cm wide and weighing around 100 or 150 g. Others are very large and heavy, weighing over one kilogram. This diversity points to the local production's use of different fabrics, from denser and finer ones requiring the use of smaller and relatively thinner loom-weights, to coarser but more aerated ones requiring the use of larger and heavier loom-weights.[230] It should also be noted that a large portion of the weights are very fragmented, i.e. only 25% are completely or almost completely preserved. Their broken state suggests that they had been discarded in this area after use. They may have alternatively been broken when the loom and the area where it stood were suddenly destroyed.[231]

229 Grömer 2016, 112.
230 Mazăre 2014, 23.

229 Grömer 2016, 112.
230 Mazăre 2014, 23.
231 Grömer 2016, 132–134.

naselju na koje su odbačeni nakon korištenja, ali je moguće da su polomljeni i prilikom naglog uništenja tkalačkog stana i prostora u kojem se on nalazio.[231]

Takva situacija zabilježena je u Sondi 2 na Pogorelcu. U kasnohalštatskoj fazi željeznodobnog naselja pronađene su dvije spaljene kuće, a između njih širok prostor u kojem je pronađen red od najmanje deset utega, tik uza zid jedne od kuća (Sl. 76).[232] Nažalost, zbog ograničenosti oblikom i dimenzijama arheološke sonde, ovaj red utega nije istražen u cijelosti, a vjerojatno se širi i dalje. Ukoliko se doista radi o tkalačkom stanu, on je vjerojatno stajao naslonjen na vanjsku stranu zida kuće nazvane Objekt 7,[233] a budući da je tkanje bio dugotrajan proces od nekoliko dana pa do više tjedana,[234] tkalački je stan morao stajati pod većom nadstrešnicom koja je štitila samu tkaninu i tkalca od atmosferskih prilika. Prema analizi situacije s terena, može se zaključiti da je tkanina koja se tkala na ovome razboju bila široka barem 100 cm, a moguće čak i do 150 cm budući da se u blizini nalazilo još nekoliko keramičkih utega. Time se ovaj tkalački stan uklapa u opću sliku na području željeznodobne srednje Europe, budući da je najčešća širina tkalačkih stanova na naseljima s ovoga područja između 120 i 160 cm.[235]

Kao što je spomenuto, u blizini ove linije utega koji vjerojatno upućuju na mjesto tkalačke proizvodnje, pronađeno je još nekoliko sličnih utega, tako da ih je u ovom prostoru sveukupno pronađeno više od dvadeset (Sl. 77). To upućuje na činjenicu da je ovaj tkalački stan doista bio veći, no prilikom uništenja neki su se utezi vjerojatno raspršili uslijed raspada arhitektonskih struktura. S druge je strane moguće da su još i prije, prilikom upotrebe, stajali negdje uz tkalački stan uskladišteni ili pripremljeni kao rezervni utezi.[236] Treba napomenuti da se unutar skupine od ovih dvadesetak utega može razlikovati utege u obliku krnje piramide i nekoliko varijanti trapezoidalnih utega. Samo je nekima od ovih utega pouzdano poznata masa jer ih je samo polovica sačuvana u cijelosti, dok je ostalima masa izračunata prema postotku očuvanosti. Raspon masa svih ovih dvadesetak utega vrlo je širok, a seže od 200 g pa sve do više od 1 kg. Budući da je pri postavljanju tkalačkog stana idealno da utezi budu što sličniji po masi i obliku, moguće je da se ovdje ne radi o utezima koji su istovremeno stajali na tkalačkom stanu, već su na tome mjestu, uza zid kuće, bili uskladišteni za kasniju upotrebu. Ipak, ako su ovi utezi pripadali istom tkalačkom stanu, prilikom pripreme tkanja trebalo je paziti na grupiranje utega različitih dimenzija i masa kako bi niti bile pravilno napete i kako bi se postiglo ravnomjerno tkanje.[237] Nažalost, u ovome slučaju nije uočen određeni uzorak, pa se u ovom trenutku ne može sa sigurnošću reći da se radi o jedinstvenom tkalačkom stanu.

Such a situation was recorded in Trench 2 at Pogorelac. The Late Hallstatt phase of the settlement yielded two burnt houses. The wide area between them yielded at least ten weights lined up along one of the house walls (Fig. 76).[232] Unfortunately, due to the limitations imposed by the shape and size of the archaeological trench, this line of weights was not completely excavated and probably extends further. If this in fact was a loom, it probably leaned on the exterior wall of the house defined as Structure 7.[233] Seeing as weaving was a long process that required anywhere between a few days and a few weeks,[234] the loom had to stand under a marquee, which protected the fabric and the weaver from the weather. Based on the analysis of the situation recorded in the field, one can say that the fabric woven here was at least 100, possibly even 150 cm wide, as indicated by several other ceramic weights. This loom therefore fits into the general picture of textile production in Iron Age central Europe, as the most common width of looms from settlements in this area varies between 120 and 160 cm.[235]

As already mentioned, this line of weights was accompanied by several other similar weights, raising their total number to over twenty (Fig. 77). This suggests that the loom was actually bigger, though some of the weights probably spread out when the architectural structures were destroyed. However, it is also possible that they had stood beside the loom before use – either stored or prepared as spare weights.[236] It is possible to differentiate within this group between weights in the shape of truncated pyramids and several variants of trapezoidal weights. The mass of only a few weights was reliably determined, as only half were completely preserved. The original mass of the other half was estimated using what remained. The mass of these twenty or so weights spans from 200 g to over 1 kg. Seeing as the ideal loom setup requires the weights to have a similar weight and shape, it is possible that these were not used on the loom at the same time but were stored beside the house for later use. However, if these weights were in fact part of the same loom, it then would have been necessary to group them according to size and weight so that equal tension could be applied to the threads and the weave/fabric was even.[237] Unfortunately, no pattern was recorded in this case, and so it is currently impossible to conclude with certainty whether or not this was a single loom.

A relatively large number of weights was discovered in Trench 1. Eleven of these were found in the destroyed house labeled as Structure 2, which dates to the later period of the Early Iron Age. This indicates fabric production or weaving equipment storage within that structure. However, seeing as these weights were not found in the place where they were used (i.e. on a loom) but were scattered within the destroyed house, it is impossible to go

231 Grömer 2016, 132–134.
232 Drnić, Groh 2018, 74, 94.
233 Drnić, Groh 2018, 94.
234 Grömer 2016, 275.
235 Grömer 2016, 114.
236 Karavidović, Sekelj Ivančan 2018, 4.
237 Sekelj Ivančan, Karavidović 2016, 199–200.

232 Drnić, Groh 2018, 74, 94.
233 Drnić, Groh 2018, 94.
234 Grömer 2016, 275.
235 Grömer 2016, 114.
236 Karavidović, Sekelj Ivančan 2018, 4.
237 Sekelj Ivančan, Karavidović 2016, 199–200.

SL. 76
Nalaz *in situ* utega tkalačkog stana u Sondi 2 na položaju Pogorelac u Sisku (I. Drnić)

FIG. 76
The *in situ* find of a loom weights in Trench 2 at the Pogorelac position in Sisak (I. Drnić)

SL. 77
Utezi tkalačkog stana iz Sonde 2 na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 77
Loom weights from Trench 2 at the Pogorelac position in Sisak (I. Krajcar)

Relativno velik broj utega potječe iz Sonde 1, gdje ih je jedanaest pronađeno u urušenju kuće, odnosno Objekta 2, koji se datira u kasnije razdoblje starijeg željeznog doba. Ova situacija upućuje na proizvodnju tkanine ili skladištenje pribora za tkanje u tome objektu, no budući da ovi utezi nisu pronađeni na mjestu gdje su i korišteni na tkalačkom stanu kao u prethodnom primjeru, već su bili razbacani unutar urušenja kuće, ne može se detaljnije opisati njihova upotreba. Najveći broj utega pronađen je u Sondi 5, i to vrlo plitko u subhumusnom (25) i površinskom, humusnom sloju (8). Kao i u prethodnom slučaju, ovi utezi nisu pronađeni na mjestu svoje izvorne funkcije, već fragmentirani i razbacani unutar sloja te pomiješani s ostalim materijalom iz željeznoga doba i rimskoga razdoblja.

Kao posebnu zanimljivost treba spomenuti oznake prisutne na pojedinim utezima. Najčešće su ove oznake izvedene utiskivanjem prstom ili alatkom, urezivanjem ili kaneliranjem, a mogu biti u obliku točaka i krugova te ravnih ili zakrivljenih linija koje se križaju pod kutom, a nalaze se ili na gornjoj bazi ili na bočnim stranicama, ponekad u kombinaciji, a vrlo rijetko i na donjoj bazi utega. Diljem Europe na utezima se u pretpovijesti uočavaju ovakve oznake, iako se ne može sa sigurnošću reći što predstavljaju. Pretpostavlja se da ove oznake nisu primarno dekorativne jer često nisu pretjerano pažljivo izrađene, a motivi su vrlo jednostavni. Stoga se smatra da ne služe za ukrašavanje površine utega, već vjerojatno imaju funkciju oznake koja tkalcu služi prilikom postavljanja tkalačkog stana ili tkanja, simbolizirajući različite mase ili mjesta na tkanini, ili pak označavaju vlasništvo nad određenim komadima.[238] Na Pogorelcu je oko polovice od ukupno 162 utega označeno, što upućuje na mogućnost da su se nekim oznakama označavali određeni setovi utega, ali i na ideju da su označavani samo neki utezi da bi se razlikovali od drugih, odnosno da bi se na temelju oznaka lakše pravilno rasporedili na tkalačkom stanu.[239] Ipak, analizom cjelokupnog uzorka nije se mogla uočiti posebna povezanost određenih oblika oznaka utega s njihovim masama ili oblicima. Ova slika je možda posljedica trenutačnog stanja istraživanja, budući da se za sada radi o relativno malom uzorku od kojeg je veliki dio utega fragmentiran ili dolazi iz površinskih slojeva, pa se ove oznake ne mogu detaljnije interpretirati.

238 Grömer 2016, 111.

239 Sekelj Ivančan, Karavidović 2016, 203.

into more detail about their use. The largest number of weights was discovered in Trench 5 – very shallow in the surface (8) and sub-surface layers (25). As in the previous case, these loom-weights were not found in the place where they were used but were fragmented and scattered within the layer together with the rest of the material dated to the Iron Age and Roman period.

The marks noted on some loom-weights are especially interesting. These were usually made either by imprinting a finger or tool, or by incising or channeling. They appear in the form of dots, circles and straight or curved lines that intersect at an angle and are often found on the upper base, sides, sometimes both but very rarely on the lower base of the loom-weights. These marks have been found on prehistoric loom-weights from across Europe, but what they represent is unclear. It is assumed that they were not primarily decorative, as they were often uncarefully done, and the motifs are very simple. They are therefore thought to have assisted the weaver in setting up the loom, having symbolized different masses or places on the fabric, or denoting ownership of certain pieces.[238] At Pogorelac, about 50% of the 162 weights have marks, which points to the possibility that some were used to mark certain sets of loom-weights. It is also possible that some were marked to differentiate them from the rest, i.e. to make it easier to distribute the weights on the loom.[239] However, the analysis of the entire sample did not produce any special connection between certain marks, the weights and their masses or shapes. This may only reflect the current state of research. Seeing as this was a relatively small sample that included many fragmented finds or finds from surface layers, these cannot be interpreted in more detail.

238 Grömer 2016, 111.

239 Sekelj Ivančan, Karavidović 2016, 203.

SL. 78
Pršljenovi i kalem iz željeznodobnog naselja
na položaju Pogorelac u Sisku (I. Krajcar)

FIG. 78
Whorls and spool from the Iron Age settlement
at the Pogorelac position in Sisak (I. Krajcar)

Pršljenovi

Treća skupina predmeta vezanih uz proizvodnju tkanine su pršljenovi, a na Pogorelcu ih je pronađen 71 na različitim pozicijama. Vrlo su raznolikih oblika, a na osnovu dimenzija i mase mogu se podijeliti u pet kategorija, od vrlo malih i malih, preko srednjih do velikih i vrlo velikih (Sl. 78).[240] Treba naglasiti da prevladavaju vrlo mali i mali pršljenovi, točnije oni lakši od 25 g te srednji pršljenovi koji su teži od 20 g i lakši od 50 g.

Ova bi činjenica mogla upućivati na korištenje vune kao sirovine za izradu niti. Isto tako, mali pršljenovi upućuju i na izradu relativno finih i tankih niti. Pršljenovi srednje veličine pogodni su za vrlo veliku raznolikost pri predenju,[241] jer se njima moglo presti relativno tanke i srednje niti od kratkih vunenih vlakana,[242] a moglo ih se i koristiti i pri izradi dvostrukih niti i konaca. S druge strane, prisustvo malog broja većih pršljenova (pogotovo onih težih od 75 g) upućuje na mogućnost iznimnog predenja lana, ali i ponovno na uvijanje dvije ili više ispredenih niti u jednu,[243] što je omogućavalo još veću čvrstoću, ali i više mogućnosti u tkanju. Sličnu, relativno veliku količinu malih pršljenova pokazala je i većina srednjoeuropskih arheoloških nalazišta iz vremena starijeg željeznog doba.[244]

Među analiziranim pršljenima dominiraju oni bikoničnog oblika, a slijede primjerci koničnog oblika, što se ponovno uklapa u sliku najčešćih oblika pršljenova sa stariježeljeznodobnih lokaliteta srednje Europe.[245] Zanimljivo je da je površina nekih pršljenova, isto kao i utega, ukrašena raznolikim motivima. U ovome se slučaju vjerojatno radi o ukrasu, a ne o funkcionalnoj oznaci, jer su motivi na pršljenovima mnogo kompleksniji od onih na utezima, a vrlo često im je ukrašena cijela površina. Od ukrasa mogu se izdvojiti točkice, linije, kružnice, elipse i spirale te okomiti i kosi žljebovi.

Kod analize mjesta nalaska pršljenova na nalazištu treba uzeti u obzir da je predenje mnogo dinamičnija aktivnost od tkanja. Budući da je postavljeni tkalački stan masivan i težak, gotovo ga je nemoguće pomaknuti tijekom tkanja jednoga komada tkanine. S druge strane, vreteno i preslica, pribor potreban za predenje niti, mali su i lagani predmeti, pa su se tijekom predenja osobe mogle nesmetano kretati i sa sobom nositi svoj pribor.[246] Dakle, položaj pršljena na arheološkom nalazištu moguća je posljedica njegove upotrebe prilikom kretanja osobe koja ga je koristila, a nije nužno ograničen na prostor kuće ili radionice kojoj pripada.

240 Mazăre 2014, 12.
241 Grömer 2005, 111.
242 Grabundžija 2018, 131.
243 Grabundžija 2018, 139.
244 Grömer 2005, 111; Belanová-Štolcová, Grömer 2010, 12.
245 Belanová-Štolcová, Grömer 2010, 11.
246 Grömer 2016, 275.

Whorls

The third group of finds connected to fabric production includes whorls. Pogorelac yielded 71 from different locations. These finds have very different shapes, but it is possible to divide them into five categories based on their dimensions and mass: the very small, small, medium-sized, large and very large (Fig. 78).[240] Very small and small whorls, i.e. those lighter than 25 g, prevail, followed by medium-sized ones, which are heavier than 20 g but lighter than 50 g.

This suggests the use of wool as the raw material for thread production. The use of the small whorl also points to the production of relatively fine and thin threads. Medium-sized whorls were suitable for a variety of spinning[241] as they could be used to spin relatively thin and middle-sized threads from short woolen fibers[242] and for plying/production of twine. The presence of a small number of larger whorls (especially those heavier than 75 g) alternatively points to the spinning of flax and plying.[243] This enabled increased firmness and more weaving options. Most Early Iron Age archaeological sites in central Europe display a similar, relatively large number of smaller whorls.[244]

The whorls analyzed are predominantly biconical and to a lesser extent conical. These are also the most common whorl shapes on Early Iron Age sites in central Europe.[245] It is interesting to note that the surfaces of some whorls (like the loom-weights) are decorated with different motifs. In this case, they are probably only decorations as they are much more complex than the marks on the weights and more often cover the entire surface. These decorations include dots, lines, circles, ellipses and spirals as well as vertical and slanted gauges.

When analysing the whorls from the site, it should be noted that spinning is a significantly more dynamic activity than weaving. A loom is massive, heavy and therefore impossible to move during the weaving process. A spindle and distaff (the equipment necessary for spinning thread), on the other hand, are small and light, allowing the spinner to move themselves and their equipment around unimpeded.[246] The position of a whorl on a site is then potentially the consequence of its use as the person using it moved it around and therefore not necessarily limited to the area of a house or related workshop.

240 Mazăre 2014, 12.
241 Grömer 2005, 111.
242 Grabundžija 2018, 131.
243 Grabundžija 2018, 139.
244 Grömer 2005, 111; Belanová-Štolcová, Grömer 2010, 12.
245 Belanová-Štolcová, Grömer 2010, 11.
246 Grömer 2016, 275.

SL. 79
Proizvodnja tkanine
u sisačkom željeznodobnom naselju
(S. Bogojević Narath)

FIG. 79
The production of fabric
at the Iron Age settlement in Sisak
(S. Bogojević Narath)

Zaključak

Analizom predmeta vezanih uz proizvodnju tkanine potvrđeno je da je zajednica nastanjena na prostoru današnjeg Pogorelca aktivno proizvodila tkaninu, i to na većoj površini unutar naselja. Budući da su utezi tkalačkog stana i pršljenovi pronađeni na prostorima unutar nekoliko različitih objekata i u njihovoj okolici, može se pretpostaviti da proizvodnja tkanine u ovome naselju nije bila ograničena na određeni prostor te da se njome nisu bavili samo specijalizirani profesionalci, već je tkaninu vjerojatno proizvodilo svako kućanstvo za svoju upotrebu ili je eventualno razmjenjivalo i trgovalo svojim viškovima (Sl. 79). To s druge strane pak ne znači da je tkanina bila gruba i slabe kvalitete. Naprotiv, prema količini i raznolikosti utega i pršljenova može se zaključiti da je proizvodnja tkanine na ovome naselju bila vrlo dinamična i raznolika. Niti koje su ovdje proizvođene vrlo su vjerojatno bile izrađene od ovčje vune, a po svemu sudeći varirale su od vrlo finih i tankih do debljih i dvostruko uvijenih i čvršćih. Tkanine koje su njima tkane također su mogle biti jednostavnije i prozračnije, iako su vjerojatno češće bile gušće i tkane u različitim uzorcima. U svakome slučaju sa sigurnošću se može ustvrditi da je u naselju na Pogorelcu proizvodnja tkanine bila važna svakodnevna aktivnost, a vještina i domišljatost njezinih proizvođača nisu nimalo zaostajale za ostalim europskim željeznodobnim zajednicama.

Conclusion

This analysis of items connected to the production of fabric has confirmed that the population of today's Pogorelac actively produced fabric across a large area within the settlement (Fig. 79). Seeing as loom weights and whorls were discovered in and around several different structures, it can be assumed that the production of fabric in this settlement was not limited to a specific area. Nor was it conducted by specialized professionals alone but rather in each household according to its needs, though excess produce may have been traded too. That does not necessarily mean that the fabric produced was coarse and of low quality, however. On the contrary, given the amount and diversity of weights and whorls found, one can conclude that the production of fabric on this site was very dynamic and varied. The threads produced there were probably made of sheep wool and likely varied from very fine to thick and double-spun to firmer. The fabrics produced from them may have also been simpler and sparser, though they were probably more often denser and woven in different patterns. In either case, one can definitively say that fabric production was an important everyday activity in the settlement at Pogorelac, and that the skill and ingenuity of its producers did not lag behind the other European Iron Age communities in the slightest.

SL. 80
Brončane matrice i privjesak od srebrnog lima
u obliku ljudske figure iz Siska (I. Krajcar)

FIG. 80
The bronze matrices and the pendant made of silver
sheet in the shape of the human figure from Sisak
(I. Krajcar)

6.3 PROIZVODNJA METALNIH PREDMETA (IVAN DRNIĆ)

Pojedini predmeti, kao i strukture otkrivene u recentnim istraživanjima na Pogorelcu, prilično jasno upućuju na postojanje radionica za proizvodnju predmeta od bronce i plemenitih metala u sisačkom željeznodobnom naselju, uglavnom funkcionalno-dekorativnih dijelova nošnje. Pri tome neki od njih spadaju u kategoriju toreutičke proizvodnje koja uključuje dekorativne radove u kovini (zlatu, srebru, bronci) hladnom obradom, tj. pomoću čekića i malih dlijeta.[247] Primjerice, u jaružanjima rijeke Kupe početkom 20. stoljeća pronađene su četiri brončane matrice s gornjom konveksnom i donjom ravnom stranom koje su korištene kao toreutički alat za izradu privjesaka od srebrnog lima (Sl. 80). Jedan primjerak korišten je za izradu privjesaka u obliku falusa, kao i dvije nešto stiliziranije matrice, dok je četvrti primjerak apstraktan. Privjesci su izrađivani na način da se tanki srebrni lim prislonio na matricu, nakon čega se upotrebom manjeg čekića i dlijeta oblikovao "negativ" prikaza s matrice. Nakon iskucavanja privjesci su obično izrađivani od dva iskucana lima spojena lemljenjem, što je vidljivo na antropomorfnom privjesku iz Siska, koji je izrađen opisanom tehnikom i oblikovan u vidu stiliziranog prikaza ljudskog tijela s određenim detaljima na odjeći, što bi moglo upućivati da se radi o ženskoj figuri (Sl. 80).[248] Na vrhu glave nalazi se petlja kroz koju je provučena karika izrađena od srebrne žice. Istom tehnikom izrađen je i privjesak s prikazom ženske glave koji će detaljnije biti opisan u poglavlju o umjetnosti i duhovnoj kulturi (Sl. 106). Prisutnost ovih, za sada jedinstvenih matrica, jasno potvrđuje postojanje toreutičke radionice u sisačkom mlađeželjeznodobnom naselju, kao i majstora obrtnika sa specijaliziranim tehnološkim znanjima i vještinama koji su proizvodili za tadašnje vrijeme tehnološki sofisticirane i estetski vrlo kvalitetne proizvode čiju distribuciju možemo pratiti od istočne jadranske obale do jugoistočne Panonije u razdoblju od 3. do 1. st. pr. Kr.[249]

Nadalje, postoje nepobitni dokazi o proizvodnji fibula tipa Certosa u kasnohalštatskoj fazi sisačkog naselja. To su jedan dio dvodijelnog kalupa za lijevanje fibula XIII skupine, pronađen u rijeci Kupi, s tri utisnuta negativa fibula (Sl. 81)[250] te poluproizvod s masivnim zadebljanjem na kraju noge J-presjeka i zadebljanjem na završetku grubo izlivenog kratkog luka iz kojega se nastavlja duga savijena igla (Sl. 81). Ovaj predmet, pronađen u iskopavanju na poziciji Keltsko-Pogorelac 1992. godine, vjerojatno predstavlja nedovršeni primjerak skupine VII, inačice d ili e. Fibule su izrađivane tehnikom izgubljenog voska, pri čemu se prvo izradio detaljan voštani model koji se oblagao glinom, čime bi se formirao kalup za lijevanje. Nakon toga se rastaljeni metal, u slučaju sisačkih fibula bronca (legura bakra i kositra), ulijevao kroz prethodno pripremljenu šupljinu u kalupu. Nakon hlađenja metala, keramički kalup se razbijao, a metalni predmeti su dorađivani uklanjanjem viškova lijeva, glačanjem površine, raskivanjem i savijanjem

247 http://hjp.znanje.hr/index.php?show=search.

248 Drnić, Franjić 2014, 87, Dodatak 3.

249 Tonc 2012. Analizom grobnih cjelina i ostava, druga skupina srebrnih privjesaka sa stiliziranim prikazima glava i cijelih figura datirana je u 2. – 1. st. pr. Kr.

250 Balen 2003.

THE PRODUCTION OF METAL OBJECTS (IVAN DRNIĆ)

Some of the finds and structures discovered in the recent excavations at Pogorelac clearly point to the existence of metal workshops at Sisak in the Iron Age. These produced bronze and other precious metal items – mostly the functional-decorative elements of attire. Some of these fall into the category of toreutics, which relates to the cold processing of decorative metal items (gold, silver, bronze) with the use of hammers and small chisels.[247] For example, the dredging of the Kupa riverbed at the beginning of the 20th century yielded four bronze matrices with convex upper sides and a straight lower ones. These were used in toreutics to make silver tin pendants (Fig. 80). Three matrices were used to make pendants in the shape of a phallus. Two of these are somewhat more stylized than the other. The fourth matrix is abstract. Pendants were made by beating a thin sheet of silver into the "negative" depiction of the matrix with a small hammer and chisel. Two sheets were usually then soldered together to form a pendant. This is evident on the stylized anthropomorphic pendant from Sisak, which has details of clothing that are suggestive of a woman's figure and a loop with a hoop made of silver wire on the head (Fig. 80).[248] The same technique was used to make a pendant depicting a woman's head, which will be described in more detail in the chapter on art and spiritual culture (Fig. 106). The presence of these so far unique matrices confirms the existence of a toreutics workshop in the Late Iron Age settlement in Sisak and the presence of craftsmen with specialized technological knowledge and skills. These craftsmen were producing technologically sophisticated and aesthetically high-quality products for their times. Moreover, their products were widely distributed between the Adriatic coast and southeastern Pannonia in the period between the 3rd and the 1st century BC.[249]

There is also irrefutable evidence for the production of Certosa type fibulas in the Late Hallstatt phase of the Sisak settlement. These include one piece of a bipartite mold for casting fibulas of the XIII group, which was found in the Kupa River and has three impressed negatives (Fig. 81),[250] and a semi-product with a massive thicker part with a J-cross-section at the foot another thicker part at the end of a roughly cast bow that continues into a long bent pin (Fig. 81). This find, discovered in the excavations of the Pogorelac-Keltsko position in 1992, is probably an unfinished example of the group VII variant d or e. Fibulas were cast with the help of the lost wax technique, which involved the making of a detailed wax model that was subsequently wrapped in clay to form a casting mold. The smelted metal – bronze (an alloy of copper and tin) in the case of Sisak – was then poured through a cavity in the mold. After the metal had cooled, the ceramic mold was broken, and the metal items were further processed by removing excess metal, polishing the surface, hammering, bending

247 http://hjp.znanje.hr/index.php?show=search.

248 Drnić, Franjić 2014, 87, Appendix 3.

249 Tonc 2012. Following an analysis of grave units and hoards, the second phase of silver pendants with stylized depictions of heads and entire figures was dated to the 2nd–1st century BC.

250 Balen 2003.

SL. 81
Keramički kalup za lijevanje fibula, nedovršen proizvod i posudica za lijevanje bronce iz Siska (I. Krajcar)

SL. 82
Alat korišten u izradi metalnih funkcionalno-dekorativnih predmeta iz Siska (I. Krajcar)

FIG. 81
The ceramic mold for casting fibulas, the unfinished product and the crucible for bronze smelting from Sisak (I. Krajcar)

FIG. 82
Tools used in the production of metal functional-decorative items from Sisak (I. Krajcar)

igle u slučaju fibula, doradivanjem detalja kao što je ukras i naposljetku apliciranjem dodatnih elementa. Osim spomenutog kalupa za izradu fibula tipa Certosa, iz je Siska poznato još nekoliko kalupa za lijevanje, iako se u njihovom slučaju ne može sa sigurnošću potvrditi za lijevanje kojih predmeta su služili.

U izradi metalnih predmeta korišten je alat koji je također zabilježen u željeznodobnim naseobinskim slojevima u Sisku. To su željezna kliješta, različita dlijeta i šila, manji čekići (Sl. 82)[251] te male keramičke posude za lijevanje (Sl. 81) i sopalj, odnosno keramički završetak cijevi za upuhivanje zraka u peć.

Od iznimne važnosti za potvrdu sisačkog željeznodobnog naselja kao proizvodnog centra pronalazak je ostataka dvije strukture u Sondi 5 na Pogorelcu 2018. i 2019. godine, od kojih prva sigurno, a druga vrlo vjerojatno predstavlja peć za taljenje bronce. Prva se peć nalazila između dva starija objekta, i od nje su preostali urušenje kupole koje se sastojalo od debelog sloja zapečene zemlje te izdužena baza izrađena od nabijene žute zemlje (slične onoj korištenoj za izradu podova kuća) i pojačena drvenim daskama (Sl. 83). Sitni ulomci, odnosno kapljice bronce, koji su pronađeni u urušenju kupole, kao i posudica za taljenje (Sl. 81) te dio soplja potvrđuju izrečenu tezu da se radi o željeznodobnoj peći/radionici za taljenje bronce. Desetak metara zapadno od opisane peći pronađena je još jedana izdužena struktura koja bi također mogla predstavljati metaluršku peć. I ovdje je definirana velika količina zapečene zemlje koja je ostatak urušene kupole peći, a donji dio konstrukcije je također izrađen od nabijene gline, pri čemu je zabilježeno nekoliko obnova. Prednji dio strukture ljevkasto je oblikovan. Obje opisane strukture izgrađene su na ostatcima starijih nastambi koje potječu iz kasnohalštatskog razdoblja. Stoga smatramo da su one mlađe i vjerojatno potječu iz mlađeg željeznog doba kada se naselje na Pogorelcu prostorno smanjilo i egzistiralo bliže rijeci Kupi, a na njegovoj zapadnoj periferiji funkcionirala je radionica (ili više njih) za proizvodnju predmeta od bronce.

the pins in the case of fibulas, working on details such as decorations, and applying additional elements. Sisak yielded several other types of cast molds, though it is impossible to determine what sorts of objects were made in them.

Tools required in the production of metal objects were also recorded in the Iron Age settlement layers in Sisak. Among these were iron tongs, different chisels and awls, small hammer,[251] and small ceramic vessels that were used for casting, including a nozzle, i.e. the ceramic ending of a pipe used to blow air into the furnace.

The remains of two features excavated in Trench 5 at Pogorelac in 2018 and 2019 are of crucial significance to the confirmation of the Iron Age settlement in Sisak as a production center. Both, the first surely and the second very likely, belong to furnaces for bronze casting. The first furnace was situated between two older structures and was composed of a collapsed dome, a thick layer of fired soil, and an elongated base made of compacted yellow soil (similar to the kind used to make house floors) further supported with wooden planks (Fig. 83). Tiny fragments, i.e. drops of bronze, were discovered in the collapsed dome together with a crucible (Fig. 81) and a part of a nozzle. These finds confirm the hypothesis that this was an Iron Age furnace/workshop for bronze casting. About ten meters west of the described furnace was another elongated structure that may have also been a metallurgical furnace. It too yielded a large amount of burnt soil constituting the remains of the dome, and the lower part of the feature is made of compacted clay, where several phases of renewal were recorded. The front part of the feature has a funnel-like shape. Both of these features were constructed on the remains of older dwellings that can be dated to the Late Hallstatt period. That is why they are later and could be probably dated to the Late Iron Age, when the settlement at Pogorelac became smaller, existed closer to the Kupa River and had a workshop (or several) for the production of bronze items on its western periphery.

251 S obzirom na to da čekić potječe iz rijeke Kupe, a oblik ovih predmeta je bio više-manje nepromjenjen stoljećima, podjednako je moguće da je korišten u mlađem željeznom dobu i u rimsko vrijeme.

251 Considering the fact that the hammer was discovered in the Kupa River, and the fact that the form of these items remained more or less unchanged for centuries, it is equally possible that it was used during the Late Iron Age and the Roman period.

SL. 83
Ostatci metalurške radionice za lijevanje bronce iz mlađeželjeznodobnog horizonta naselja na Položaju Pogorelac u Sisku (J. Zorić)

FIG. 83
The remains of a bronze smelting workshop from the Late Iron Age phase of settlement at the Pogorelac position in Sisak (J. Zorić)

6.4 PROIZVODNJA ŽELJEZA (TENA KARAVIDOVIĆ)

Najraniji nalazi željeznih predmeta potječu s prostora Bliskog i Srednjeg istoka, odnosno iz Mezopotamije, Anatolije, sjeverne Sirije, Armenije, sjevernog Irana i Egipta. Ovi rijetki nalazi željezih predmeta datiraju se od 5000. do 3000. pr. Kr., a većina ih je izrađena od željeza s izrazito visokim udjelom nikla,[252] što može biti karakteristično za meteoritsko željezo. Od najranije, sporadične pojave željeznih predmeta do tehnološke inovacije, otkrića postupka taljenja željeznih ruda te uspostavljanja proizvodnje, proteklo je više tisućljeća. Između 5. tisućljeća pr. Kr. i oko 1200. pr. Kr. željezni predmeti pojavljuju se na prostoru Bliskog i Srednjeg istoka, no iznimno rijetko i rezervirani su gotovo isključivo za pripadnike viših društvenih slojeva o čemu svjedoče nerijetki pisani izvori, kao i kontekst pronalaska ovih predmeta.[253] Prema R. Pleineru karakter terminoloških izraza koji se odnose na željezo u pisanim izvorima već oko 1800. pr. Kr. upućuje na standardizaciju izraza te jasno razlikovanje željeza od ostalih metala, što upućuje i na namjernu proizvodnju ovog metala. Pretpostavlja se da je rana proizvodnja željeza bila ograničena na visokospecijaliziranu zanatsku proizvodnju, a željezu su pripisivana plemenita i nadnaravna svojstva.

Prijenos znanja i širenje proizvodnje s prostora "kolijevke proizvodnje željeza", Bliskog i Srednjeg istoka, intenzivira se nakon slabljenja Hetitskog carstva oko 1200. pr. Kr., vjerojatno uslijed mogućnosti slobodnijeg kretanja specijaliziranih zanatlija. Željezni predmeti se u ovom razdoblju pojavljuju na širem prostoru Srednjeg istoka, Istočnog Mediterana, Egeje, kontinentalne Grčke i sporadično Europe.[254] Epicentar razvoja proizvodnje željeza vjerojatno se nalazio na prostoru Bliskog istoka, odnosno istočne Anatolije, Ponta i Kilikije. Neki od najranijih nalaza željeznih predmeta na europskom tlu pojavljuju se na prostoru Grčke, Balkana, Karpatske kotline, ali i sjevernije sve do Skandinavije te ih je moguće datirati u brončano doba, u širokom rasponu od 17. do 11. st. pr. Kr.[255] U završnoj fazi kasnog brončanog doba, nakon 1000. pr. Kr. (stupanj Ha B), željezni predmeti pojavljuju se učestalije, a poznata su i nalazišta na kojima su pronađeni i poluproizvodi procesa proizvodnje željeznih predmeta poput spužvastog željeza.[256] Moguće je da je otkriću postupka proizvodnje željeza prethodilo znanje vezano uz ranija razdoblja i postupak topljenja bakrenih ruda.[257] Naime, željezne rude poput limonita ($Fe_2O_3 \cdot 2H_2O$) mogu nastati i sekundarno pod utjecajem atmosferilija tj. oksidacijom gornje površine drugih metalnih ruda, kao svojevrsna ovojnica s vanjske strane površine, primjerice kod halkopirita tj. rude bakra (eng. *gossan*, franc. *chapeau de fer*). S obzirom na svojstva halkopirita, dodavanje željeznih ruda može pozitivno utjecati na proces topljenja rude i osigurati veći prinos u bakru odnosno bronci. Međutim, tek od starijeg željeznog doba započinje sustavnija proizvodnja

252 Pleiner 2000, 7.
253 Pleiner 2000, 8–12.
254 Pleiner 2000, 14–22.
255 Pleiner 2000, 23.
256 Pleiner 2000, 24–25.
257 Pleiner 2000, 11–12.

THE PRODUCTION OF IRON (TENA KARAVIDOVIĆ)

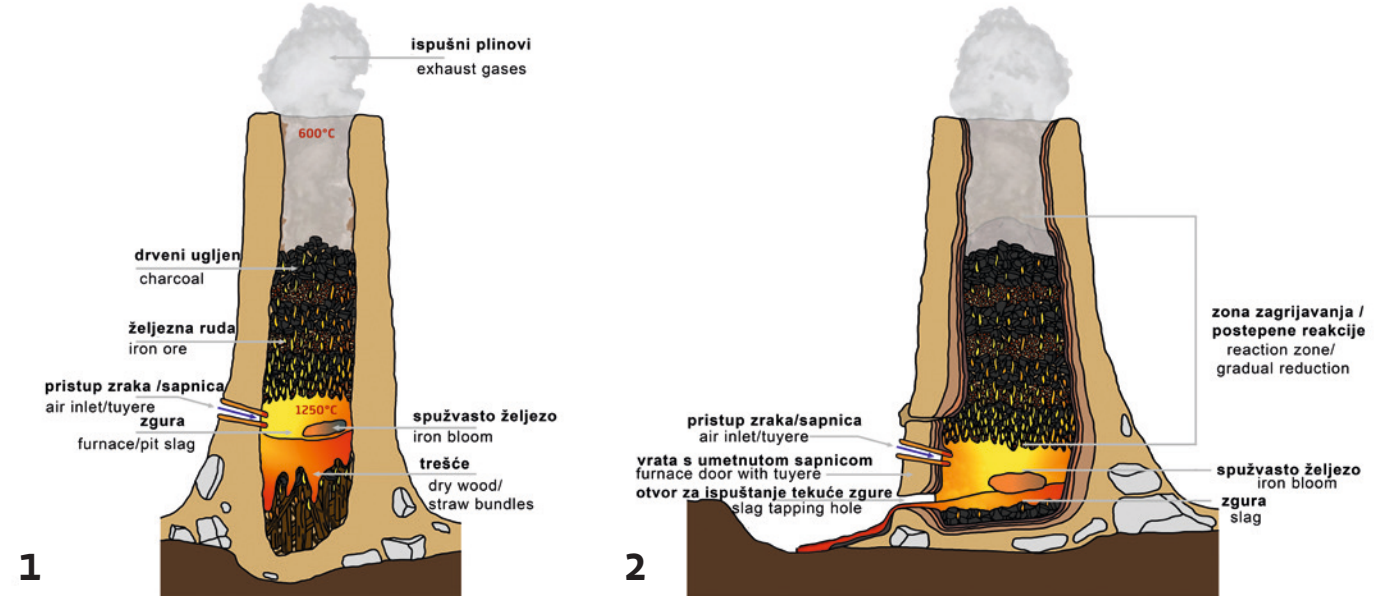
The earliest finds of iron objects come from the Middle East, from the territories of Mesopotamia, Anatolia, northern Syria, Armenia, northern Iran and Egypt. These rare iron finds can be dated between 5000 and 3000 BC. Most of them are made of iron with a large percentage of nickel,[252] which is characteristic of meteoric iron. Several millennia after the earliest sporadic emergence of iron objects, the technological innovation of iron smelting was achieved, and production was established. Iron objects appear very rarely in the Middle East between the 5th millennium BC and around the 1200 BC and are almost exclusively reserved for the members of higher social strata, as attested by numerous written sources and the contexts of the finds.[253] According to R. Pleiner, the character of the terminological expressions denoting iron in written sources points to a certain standardization of terms already around 1800 BC as well as a clear differentiation between iron and other metals, indicating the intentional production of this metal. It is assumed that early iron production was limited to highly specialized craft production, and that the metal was ascribed noble and supernatural properties.

The transfer of knowledge and the expansion of production from the "cradle of iron production", the Middle East, intensified after the weakening of the Hittite Empire around 1200 BC, probably due to the ability of specialized craftsmen to move around more freely. Iron objects appear in the wider area of the Middle East, the Mediterranean, the Aegean, continental Greece and sporadically in Europe in this period.[254] The epicenter of the development of iron production was probably in the Middle East, i.e. in Anatolia, Pontus and Cilicia. Some of the earliest finds of iron items in Europe appear in the territory of Greece, the Balkans, the Carpathian Basin and as far north as Scandinavia. These can be dated today to the European Bronze Age, the wide time span between the 17th and 11th century BC.[255] Iron objects appear more frequently in the final phase of the Bronze Age, after 1000 BC (Ha B), and have been recorded at sites that also yielded byproducts from the production of iron, such as iron blooms.[256] Knowledge of the properties of iron and the process of smelting copper ores preceded the discovery of iron production.[257] Iron ore, such as limonite ($Fe_2O_3 \cdot 2H_2O$), can also be created through the affects of the weathering, i.e. the oxidation of the exposed surface of other metallic ores, as a kind of coat wrap on the outer side of, for example chalcopyrite (Eng. *Gossan*; French *chapeau de fer*). Considering the properties of chalcopyrite, the addition of iron ore can have a positive effect on the process of ore smelting and ensures that more copper, i.e. bronze, is obtained. However, a more systematic production of iron started in the Early Iron Age, as indicated

252 Pleiner 2000, 7.
253 Pleiner 2000, 8–12.
254 Pleiner 2000, 14–22.
255 Pleiner 2000, 23.
256 Pleiner 2000, 24–25.
257 Pleiner 2000, 11–12.

SL. 84
Željezna ruda limonit i hematit

FIG. 84
Iron ores (limonite and hematite)



SL. 85
Grafički prikaz rekonstrukcije talioničkih peći
i postupka taljenja željezne rude:
1) jamska peć
2) peć s plitkim ognjištem i ispuštenom zgurom
(peć na istek) (prema: Universalmuseum Joanneum
/ D. Modl)

FIG. 85
Graphical reconstruction of smelting furnaces
and the bloomery smelting process:
1) pit furnace
2) slag - tapping furnace (based on Universalmuseum
Joanneum / D. Modl)

željeza, a talioničkі otpad pronalazi se na lokalitetima na prostoru središnje Europe (Smolenice-Molpir, Čejenovce, Kralova itd.), na etruščanskoj Elbi itd.[258]

U Sisku bliskim regijama rana proizvodnja željeza zabilježena je na prostoru srednjobosanske kulturne grupe (Pod kod Bugojna, Čolaci kod Donjeg Vakufa itd.),[259] kao i na prostoru Dolenjske za čiji su izniman kulturni razvoj u starijem željeznom dobu dobrim dijelom zaslužna bogata ležišta željezne rude (hematit, limonit, siderit) (Sl. 84) i metalurgija željeza.[260] Također, u naselju na Turskoj kosi, nalazištu smještenom nedaleko rudonosne Petrove gore, pronađene su peći, dijelom ukopane u zemlju, za koje se pretpostavlja da su služile za proizvodnju željeza,[261] kao i mnoštvo zgure te kratke keramičke cijevi koje su mogle služiti kao otvor za upuhivanje zraka u talioničke peći. Tijekom mlađeg željeznog doba dolazi do intenzivnije proizvodnje željeza, primarno u zonama bogatim željeznim rudama, kao što je Češka ili antički Norik (poznati *ferrum noricum*) koji ostaje važan proizvodni centar i tijekom antike.[262] Tijekom željeznog doba željezo postaje najzastupljeniji metal, korišten za proizvodnju predmeta korišenih gotovo u svim aspektima života: od oružja i konjske opreme preko dijelova nošnje (fibule, narukvice, pojasne kopče) pa sve do alatki, predmeta za pripremu hrane (ražnjevi, roštilji) i konstrukcijiskih elemenata u arhitekturi (čavli, zakovice, brave i dr.).

Proces proizvodnje željeza – od eksploatacije rude do željeznog predmeta

Osnovni preduvjet za sustavnu proizvodnju željeza dostupnost je prirodnih resursa, u prvom redu željezne rude, drva za proizvodnju ugljena, gline za izgradnju peći te vode. Proces proizvodnje željeznog predmeta izrazito je kompleksan te podrazumijeva niz koraka koji sežu od prepoznavanja i eksploatacije ruda, proizvodnje drvenog ugljena, pirometalurške pripreme i postupka taljenja ruda i više faza kovačke obrade. Svaki korak ovoga procesa zahtijeva znanje, vještinu, iskustvo, kao i znatan utrošak vremena i energije. Minerale s dovoljno visokim udjelom željeza za ekstrakciju nazivamo željeznim rudama. U arheološkim razdobljima postotak željeza u rudi dovoljno visok za iskorištavanje sezao je od 55 – 60% Fe naviše.[263] Sve rude željeza bogate su željeznim oksidima zbog visokog afiniteta željeza prema kisiku. Rude uobičajeno sadrže i manje udjele ostalih elemenata, kao što su mangan, fosfor, sumpor itd., a prema kemijskom sastavu mogu se podijeliti na karbonatne, sulfidne, oksidne i silikatne rude.[264]

Peći za taljenje željezne rude kakve su korištene tijekom arheoloških razdoblja bile su različita izgleda, a osnovne razlike u konstrukciji odnose se na način otklanjanja zgure (nakupljanje ili ispuštanje), način na koji je peć bila termalno izolirana (ukopane

by the meting waste found on sites across central Europe (Smolenice-Molpir, Čejenovce, Kralova, etc.), on the Etruscan Elba and so on.[258]

Early iron production was recorded in the regions near Sisak, namely among the central Bosnian cultural group (at Pod near Bugojno, Čolaci near Donji Vakuf, etc.),[259] and the Dolenjska group, which developed exceptionally in the Early Iron Age precisely due to its rich iron ore deposits (hematite, limonite, siderite) and related metallurgy (Fig. 84).[260] The settlement at Turska Kosa, a site not far from the rich iron ore Petrova Gora Mountain, also yielded furnaces that were partially dug into the ground. These are assumed to have been used in iron production.[261] There was also an abundance of slag and ceramic pipes, which may have used as tuyeres to blow air into the metallurgical furnaces. The Late Iron Age saw an intensification of iron production, primarily in zones that were rich in iron ore, such as the Czech Republic or Roman Noricum (the famous *ferrum noricum*), which continued to be an important production center in Antiquity.[262] Iron became the most represented metal in the Iron Age. It was used to produce items that featured in almost all aspects of life: weapons, horse-riding equipment, parts of attire (fibulas, bracelets, belt buckles, tools, items used in food preparation [skewers, grills]), and construction elements used in architecture (nails, rivets, locks, etc.).

The process of iron production – from ore exploitation to iron objects

The basic precondition for iron production is the availability of natural resources, primarily iron ore, wood used to produce charcoal, clay to make furnaces, and water. The process of producing iron objects is exceptionally complex and involves a series of steps that include everything from ore recognition and extraction, the pyrometallurgical preparation, the process of smelting the ore, and several stages of forging. Each step requires knowledge, skill, experience and a significant input of time and energy. Minerals with a sufficiently high ratio of iron for extraction are called iron ores. In archaeological periods, the percentage of iron in ores necessary for production ranged between 55 to 60% and more.[263] All iron ores are rich in iron oxides due to iron's high affinity for oxygen. Ores also usually contain smaller portions of other elements, such as manganese, phosphorus, sulphur and the like. Based on their chemical composition, they can be divided into carbonate, sulfide, oxide and silicate ores.[264]

The furnaces used for smelting iron ore in archaeological periods had different shapes. Their basic differences reflect the way the slag was removed (pit - collecting or tapping), the way in which the furnace was insulated (embanked or free-standing),

258 Pleiner 2000, 32–33.
259 Pravidur 2011.
260 Trampuž Orel 2012; Črešnar, Vinazza, Burja 2017.
261 Čučković 2009, 6, 16, 23–24, 28, 38, sl. 18, 25, T. 72–73.
262 Pleiner 2000, 31–41.
263 Pleiner 2000, 87.
264 Trujić, Mitevska 2007; Glavaš, Dolić 2014, 4–5.

258 Pleiner 2000, 32–33.
259 Pravidur 2011.
260 Trampuž Orel 2012; Črešnar, Vinazza, Burja 2017.
261 Čučković 2009, 6, 16, 23–24, 28, 38, sl. 18, 25, T. 72–73.
262 Pleiner 2000, 31–41.
263 Pleiner 2000, 87.
264 Trujić, Mitevska 2007; Glavaš, Dolić 2014, 4–5.

SL. 86
Amorfna željezovita magnetična masa, spužvasto željezo (?) (veliki komad) i kovačka zgura planokonveksnog oblika s položaja Pogorelac u Sisku (I. Krajcar)

FIG. 86
The amorphous magnetic ferrous mass, iron bloom (?), and the plano-convex smithing slag from the Pogorelac position in Sisak (I. Krajcar)

i slobodno stojeće) te oblik nadzemne konstrukcije peći i vrstu rješenja za upuhivanje zraka ili izazivanje propuha.[265] Nadzemne strukture ovih peći rijetko su očuvane u arheološkom kontekstu pa je stoga rekonstrukcija izgleda i funkcionalnih karakteristika peći moguća neizravno, analizom nalaza, poput zgure (otpada), sapnica i dijelova stijenki peći. Najučestaliji oblici peći (jamske peći i peći ravnog dna kod kojih se zgura ispušta izvan peći) pojavljuju se na širem prostoru Europe već u željeznom dobu, a zbog svoje funkcionalnosti ostaju vrlo dugo u uporabi (Sl. 85).[266] Bez obzira na razlike u konstrukciji peći, da bi postupak taljenja željezne rude bio uspješan, proces unutar peći mora se odvijati prema istim načelima termodinamike. Ovaj postupak taljenja naziva se izravnim postupkom. Peć djeluje kao komora unutar koje se ruda postepeno reducira spuštajući se niz okno zapunjeno drvenim ugljenom, pri čemu se odvaja otpad (talionička zgura) i željeni proizvod taljenja, spužvasto željezo (eng. *iron bloom*). Načelno, postupak taljenja odvija se kroz nekoliko faza. Peć je na početku postupka potrebno zapuniti drvenim ugljenom čijim se sagorijevanjem stvara redukcijska atmosfera te postiže temperatura dovoljna za taljenje željezne rude. Potom se peć postupno zapunjava rudom i drvenim ugljenom. Kontinuiranim protokom zraka (inducirani ili prirodni propuh) ugljen sagorijeva, a ruda se postepeno spušta niz

the shape of the above-ground structure, and the means of blowing air in or causing a draft.[265] The above-ground structures of these furnaces are rarely preserved in archaeological contexts, and so one can only indirectly reconstruct their appearance and functional characteristics through analyses of finds such as slag (waste), tuyeres and parts of furnace walls. The most common type of furnace (pit-furnace and flat hearth slag-tapped furnace) could already be found across Europe in the Iron Age and remained in use for a long time due to its functionality (Fig. 85).[266] All furnaces, despite their differences, had to be built in accordance with the same principles of thermodynamics in order for the smelting process to be successful. This is known as the direct process or bloomery smelting. In this method, the furnace serves as a chamber where the ore is gradually reduced by descending down along a shaft filled with charcoal. The waste (smelting slag) is separated during this process, and the desired product, the iron bloom, is obtained. In principle, the smelting process occurs in several stages. The furnace is first filled with charcoal, which creates a reductive atmosphere as it burns, raising the temperature to one high enough for iron smelting. The furnace is then gradually filled with ore and charcoal, which burns due to a continued airflow (via induction or a natural draft). The ore descends

265 Cleere 1972, 16; 1981, 57–59; Pleiner 2000, 141–196.
266 Joosten 2004, 13–15.

265 Pleiner 2000, 141–196; Cleere 1972, 16; 1981, 57–59.
266 Joosten 2004, 13–15.

okno peći te stupnjevito reducira kako se temperatura unutar peći povećava. Uz sapnicu ili otvor za pristup zraka formira se spužvasto željezo pri temperaturi koja može doseći između 1100 – 1250 i 1400 – 1600°C.[267] Spužvasto željezo nastalo izravnim procesom taljenja grubo je sinterirani, porozni konglomerat željeza, zgure i ugljena koji je potrebno dodatno obraditi tj. čvrsto sinterirati čestice i izbaciti višak zgure. Spužvasto željezo nastalo izravnim postupkom je duktilno i pogodno za daljnju mehaničku obradu.[268] Neposredno nakon izvlačenja spužvastog željeza iz peći, moguće je djelomično sinterirati čestice željeza mehaničkim postupkom pažljivog udaranja po površini (eng. *compacting*).

Međutim, da bi se dobio kompaktan komad željeza potrebno je provesti postupak konsolidacije koji podrazumijeva višestruko zagrijavanje i mehaničku obradu spužvastog željeza (primarno kovanje).[269] Slijedeći stupanj proizvodnje željeznih predmeta podrazumijeva kovačke postupke (sekundarno kovanje). Tijekom oba kovačka postupka nastaje karakterističan otpad (eng. *post-reduction slag*).[270]

Tragovi metalurgije željeza na položaju Sisak-Pogorelec

Nekoliko nalaza pronađenih pri istraživanju naseobinskih slojeva na položaju Pogorelac svjedoči da se u željeznodobnom naselju odvijala metalurška aktivnost. Strukture koje bi se mogle interpretirati kao talioničke ili kovačke peći nisu prepoznate na temelju dosadašnjih istraživanja. Međutim, zanimljiv nalaz čini amorfna, izrazito magnetična željezovita masa fizički vezana uz zapečenu glinu, pronađena unutar urušenja Objekta 6/10 u Sondi 2, datiranog u kasnohalštatsko/ranolatensko razdoblje. Moguće je da se radi o poluproizvodu postupka proizvodnje željeza, spužvastom željezu (Sl. 86), no ovakvi zaključci tek su preliminarnog karaktera s obzirom na to da se temelje na makroskopskoj analizi. Najučestaliji arheološki nalaz vezan uz metalurške aktivnosti je zgura čije karakteristike su u prvom redu važne za interpretaciju vrste aktivnosti koja se odvijala na nalazištu. Dva nalaza zgure planokonveksna oblika (eng. *plano-convex cake*) (Sl. 86) mogla bi se pripisati zguri nastaloj pri konsolidaciji spužvastog željeza ili kovanju željeza, odnosno primarnom ili sekundarnom kovanju.

down the furnace shaft while being gradually reduced as the temperature in the furnace rises. The iron bloom is formed in front of the tuyere or air hole at a temperature ranging between 1100–1250 and 1400–1600 °C.[267] An iron bloom created through direct smelting is a sintered, porous conglomerate of iron, slag and charcoal. As such it requires further processing to firmly sinter the particles and remove excess slag. It is also ductile and suitable for further mechanical processing.[268] Immediately after the extraction of the iron bloom from the furnace, it was possible to partially sinter iron particles by carefully striking the surface, i.e. compacting.

However, in order to obtain a compact piece of iron, one must conduct a process of consolidation. This involves multiple reheating and the mechanical processing of the iron bloom (primary smithing).[269] The next stage in the production of iron objects involves forging procedures (secondary smithing). Both stages create the characteristic waste –post-reduction slag.[270]

Traces of iron metallurgy at the Sisak-Pogorelac position

Several finds from the settlement layers at the Pogorelac position attest to the fact that metallurgical activities took place in the Iron Age settlement. No features interpretable as smelting or blacksmithing furnaces have been recorded in the research conducted thus far. However, an amorphous, exceptionally magnetic ferrous mass connected to house daub was retrieved from the destroyed Structure 6/10 in Trench 2, which dates to the Late Hallstatt/Early La Tène period. This is possibly an iron bloom, a semi-product of the iron production process (Fig. 86). These kinds of conclusions, however, are of a preliminary character, as they are based on a macroscopic analysis. The most common archaeological find connected to metallurgical activities is slag. Its characteristics are especially important for the interpretation of the kinds of activity that took place on a site. Two finds of plano-convex cakes (Fig. 86) could be defined as post-reduction slag that was created through a consolidation of an iron bloom or iron smithing, i.e. primary or secondary smithing.

267 Echenlohr et al.1991, 4950; Pleiner 2000, 133; Charlton et al. 2010, 353., Pleiner 2000, 133, Echenlohr *et al.*1991, 49–50.

268 Tylecote 1979, 188; Pleiner 2000, 131; Joosten 2004, 7.

269 Jouttijärvi 2009, 975; 2015, 42.

270 Jouttijärvi 2009; 2015; Joosten 2004, 15–18; Pleiner 2000, 216–217, Echenlohr, Seernels 1991, 107–117.

267 Echenlohr *et al.*1991, 49–50; Pleiner 2000, 133; Charlton *et al.* 2010, 353.

268 Tylecote 1979, 188; Pleiner 2000, 131; Joosten 2004, 7.

269 Jouttijärvi 2009, 975; 2015, 42.

270 Jouttijärvi 2009; 2015; Joosten 2004, 15–18; Pleiner 2000, 216–217, Echenlohr, Seernels 1991, 107–117.

7. TRGOVINA I RAZMJENA TRADE AND EXCHANGE

Tomislav Bilić, Ivan Drnić

Osim što je sisačko željeznodobno naselje funkcioniralo kao potentan proizvodni centar, ono je bilo i važna točka u komunikacijskim mrežama starijeg i mlađeg željeznog doba kojima su kolali ljudi, predmeti (gotovi proizvodi i sirovine), ali i znanja, ideje i tehnologije.

Umrežavanje željeznodobnih zajednica odvijalo se na nekoliko razina: lokalnoj, regionalnoj i nadregionalnoj, za što postoje tragovi i u slučaju sisačkog naselja. S obzirom na ograničen format kataloga predstavljene su dvije kategorije predmeta koje možda najbolje svjedoče o umreženosti sisačke željeznodobne zajednice u regionalnim i nadregionalnim mrežama koje su osim kontinentalnog (južna Panonija, Balkan, jugoistočne Alpe) uključivale i mediteranski/italski svijet, a to su brončano posuđe i novac. Ti predmeti zasigurno nisu proizvođeni u sisačkom naselju te ih stoga možemo smatrati alohtonim elementima u okviru lokalne materijalne kulture koji su na ušće Kupe u Savu mogli pristići različitim mehanizmima: razmjenom, trgovinom, razmjenom darova među elitama i dr.

Besides functioning as a potent production center, the Iron Age settlement in Sisak was an important point in the communication networks of the Early and Late Iron Age, which involved the transfer of people, items (finished products and raw materials) as well as knowledge, ideas and technology.

The networking of Iron Age communities occurred on several levels: local, regional and supra-regional, as indicated by traces from the settlement in Sisak as well. Given the limited format of this catalogue, only two categories of items can be discussed in detail – bronze vessels and coins. These are perhaps the best illustrations of the participation of the Sisak Iron Age community in the regional and supra-regional networks that connected the continental (southern Pannonia, the Balkans, southeastern Alps) and Mediterranean/Italian worlds. They were certainly not produced at the settlement but can be seen as allochthonous elements in the framework of the local material culture. They likely came to the Kupa and Sava interfluve via different mechanisms: exchange, trade, gift exchange between the elites, and so on.

7.1 METALNO POSUĐE (IVAN DRNIĆ)

Relativno malu, ali iznimno važnu skupinu predmeta iz Siska čine brončane posude i njihovi konstrukcijski elementi. S obzirom na to da se radi o iznimnim predmetima koji su proizvođeni u mediteranskim radionicama, a u slučaju sisačkih primjeraka uglavnom na italskom prostoru, njihovo prisustvo u kontekstu sisačkog željeznodobnog naselja potvrđuje prethodno izrečenu tezu o uključenosti ove zajednice u glavne komunikacijske tokove koji su u željeznom dobu uspostavljeni između Mediterana i kontinentalne Europe. Također, oni upućuju i na postojanje društvene skupine koja je te predmete mogla pribavljati te njihovom konzumacijom i prezentacijom potvrđivati svoj elitni status. Nažalost, za brončane posude iz Siska nije nam poznat primarni arheološki kontekst, što otežava njihovu interpretaciju, iako postoji znatan broj analogija sa susjednih područja koje nam mogu poslužiti kao dobre smjernice. Također, većina ovih predmeta potječe iz jaružanja rijeke Kupe pa se ne može u potpunosti isključiti mogućnost i ritualnog polaganja pojedinih primjeraka u vodeni kontekst. Brončano posuđe iz Siska pripada dvama vremenskim razdobljima. Manju skupinu čine predmeti iz razdoblja 6. – 4. st. pr. Kr., odnosno kasnog halštata, dok su brojnije posude i njihovi ulomci iz rimskog kasnorepublikanskog razdoblja (2. – 1. st. pr. Kr.) koje je uglavnom istovremeno s kasnim latenom, odnosno stupnjem LT D prema srednjoeuropskoj kronološkoj podjeli za mlađe željezno doba.

METAL VESSELS (IVAN DRNIĆ)

Bronze vessels and their constructive elements make up a small but exceptionally important group among the finds from Sisak. Given that these exquisite finds were produced in Mediterranean workshops, in the case of Sisak mostly in Italy, their presence in the context of the Iron Age settlement confirms the hypothesis that this community was part of the main communication routes between the Mediterranean and continental Europe. They also point to the existence of a social group that could obtain these items and confirm its social status through their consumption and presentation. Unfortunately, the primary archaeological context of bronze vessels from Sisak remains unknown, making them harder to interpret despite the numerous useful analogies from neighboring regions. Furthermore, most of these finds were retrieved from the Kupa River, and so it is impossible to completely exclude the possibility that some of them were ritually discarded into the water context. The bronze vessels from Sisak belong to two time periods. A smaller portion is dated to the 6th–4th century BC, i.e. to the Late Hallstatt, while the more numerous group of vessels and vessel fragments is from the Roman Late Republican Era (2nd–1st century BC), which is mostly contempory with the Late La Tène period, i.e. the LT D phase in the central European chronological division of the Late Iron Age.

SL. 87
Etruščanski simpul iz Siska (I. Krajcar)

FIG. 87
The Etruscan *simpulum* from Sisak (I. Krajcar)

Kasnohalštatski kontekst

Nesumnjivo izniman predmet predstavlja u cijelosti sačuvan simpul (lat. *simpulum*) plitkog, kalotastog recipijenta na koji se okomito nastavlja drška s plastično izvedenom glavom ptice (vjerojatno labuda) na završetku (Sl. 87). Ovi predmeti su korišteni za grabljenje pića, točnije vina, iz posuda u kojima je ono prethodno pripremljeno u čaše te predstavljaju sastavni dio simpozijalnih setova,[271] koji su osim u grobnim kontekstima zabilježeni i na prikazima gozbi s bronČanih situla (Vače, Magdalenska gora).[272] Osim na gozbama, simpuli su korišteni i za žrtve ljevanice, tzv. libacije. Opisane morfološke karakteristike definiraju sisački primjerak kao simpul etruščanske provenijencije koji se od rimskih kasnorepublikanskih primjeraka, zabilježenih na prostoru susjedne Slovenije (Idrija pri Bači, Novo mesto-Okrajno glavarstvo)[273] razlikuje plićim recipijentom. Na osnovi primjerka iz grobnih cjelina s Apeninskog poluotoka, ovaj tip etruščanskog simpula datira se u kasno 6. i 5. st. pr. Kr.[274] Na prostoru Velike Grčke, a posebno u Makedoniji i Grčkoj ovi se predmeti nastavljaju koristiti i tijekom 4. st. pr. Kr., a pojedini primjerci su zabilježeni u bogatim grobovima s prostora Trakije (Resilovo)[275] i kurganima Skitije (Planina Zelenskaya, grob 3, Karagodeuashkh),[276] datiranim u drugu polovicu 4. st. pr. Kr. S obzirom na morfološku ujednačenost starijih etruščanskih i mlađih makedonskih i grčkih primjeraka, pitanje porijekla sisačkog simpula ostaje za sada otvoreno.

Etruščansko porijeklo može se pretpostaviti i za cjedilo (lat. *infundibulum*) kojemu nedostaje drška (Sl. 88: 1). Ono je objavljeno u knjizi A. Radnotija *Die römischen Bronzegefässe von Pannonien* iz 1938. godine pod nalazištem Siscija.[277] Iako objavljena fotografija ne dočarava najbolje ovaj predmet, jasno je da se radi o okruglom recipijentu koji u središnjem dijelu ima udubljenje s perforacijama, odnosno filter, što je karakteristika etruščanskih cjedila. Također, organizacija perforacija u središnjem udubljenju u obliku niza polukrugova postavljenih oko manjeg kruga, čime je stvoren efekt "rotacije", zabilježen je na brojnim primjercima s italskog prostora datiranim od kraja 6. do u početak 4. st. pr. Kr.[278] Činjenica da na sisačkom primjerku nedostaje drška upućuje na to da je ona bila izrađena posebno i pričvršćena na recipijent. Tako je među materijalom s prostora Apulije C. Tarditi izdvojila cjedila izrađena u jednom komadu te kompozitne primjerke s punom drškom ili drškom izrađenom od valovito oblikovane žice, kakav je pronađen u humci V u Čitlucima na Glasinačkom polju, datiranoj u 5. st. pr. Kr.[279] Time dolazimo i do pitanja potencijalog smjera kojim su prethodno opisani simpul i ovo cjedilo mogli pristići do sisačkog kasnohalštatskog

271 Kent Hill 1942, 42–43, Tab. 1; Castoldi, Feugère 1991, 72–73, Sl. 18, kat. br. 74–75.

272 Turk 2005, Sl. 23, 33, 52, 53.

273 Guštin 1991, 16, T. 14: 11; Božič 2008, 170, T. 21: 14

274 Castoldi 1995, 54–55; Tarditi 1996, 180–181.

275 Tonkova, Stoyanov 2017, 9–10, 32, kat. br. 2.

276 Treister 2011, Sl. 24: 7, Sl. 25: 1.

277 Radnoti 1938, 81, T. 27: 7.

278 Castoldi 1995, 58–60; Tarditi 1996, 45–55.

279 Fiala 1892, 405–406; Jašarević 2014, 66–67, Tab. 7: 2.

The Late Hallstatt context

An entirely preserved (Lat. *simpulum*) is an undoubtedly exquisite find. It has a shallow, calotte-like recipient and a perpendicularly placed handle with the head of a bird (most likely a swan) at the end (Fig. 87). These items were used to scoop up beverages, more precisely wine, from the vessels in which they were prepared and pour them into glasses. As such, these were parts of sets used at symposia,[271] which have been recorded in graves and depictions of feasts on bronze situlas (Vače, Magdalenska Gora).[272] In addition to feasting, *simpula* were used for liquid sacrifice – the so-called libations. The morphological characteristics outlined above define the find from Sisak as a *simpulum* of Etruscan origin. It differs from the Roman Late Republican *simpula* recorded in neighboring Slovenia (Idrija near Bača, Novo Mesto-Okrajno Glavarstvo)[273] on account of its shallower recipient. Based on finds from graves in the Apennine Peninsula, this type of Etruscan *simpulum* has been dated to the late 6th and the 5th century BC.[274] These items were still in use in Magna Graecia, Macedonia and Greece in the 4th century BC. Examples from the 4th century have also been found in rich graves in Thrace (Resilovo)[275] and the kurgans of Scythia (Planina Zelenskaya, grave 3, Karagodeuashkh).[276] Considering the morphological uniformity between the older Etruscan examples and the younger Macedonian and Greek ones, the origin of *simpulum* from Sisak remains unknown for the time being.

The strainer (Lat. *infundibulum*) without a handle is also probably of Etruscan origin (Fig. 88: 1). It was published in A. Radnoti's 1938 book, *Die römischen Bronzegefässe von Pannonien*, under the site of *Siscia*.[277] Although the published photograph does not do justice to this find, it is evident that the round recipient has an indentation with perforations, i.e. a filter, in the middle, which is characteristic of Etruscan strainers. Additionally, the perforations in the central indentation are organized in a series of semicircles around a smaller circle, creating the effect of "rotation", which has been recorded on numerous finds from Italy dating to the period between the end of the 6th and the beginning of the 4th century BC.[278] The fact that the find from Sisak is missing its handle suggests that it was made separately before it was attached to the recipient. That is how C. Tarditi divided the strainers from Apulia, i.e. those made from one piece of material and composite ones with a full handle or one made from wavy wire. A composite example with a wire handle dating to the 5th century BC was found in mound V in Čitluci at Glasinačko Polje.[279] This brings us to the question of the direction from which the previously

271 Kent Hill 1942, 42–43, Tab. 1; Castoldi, Feugère 1991, 72–73, Fig. 18, cat. no. 74–75.

272 Turk 2005, Fig. 23, 33, 52, 53.

273 Guštin 1991, 16, Pl. 14: 11; Božič 2008, 170, Pl. 21: 14

274 Castoldi 1995, 54–55; Tarditi 1996, 180–181.

275 Tonkova, Stoyanov 2017, 9–10, 32, cat. no. 2.

276 Treister 2011, Fig. 24: 7, Fig. 25: 1.

277 Radnoti 1938, 81, Pl. 27: 7.

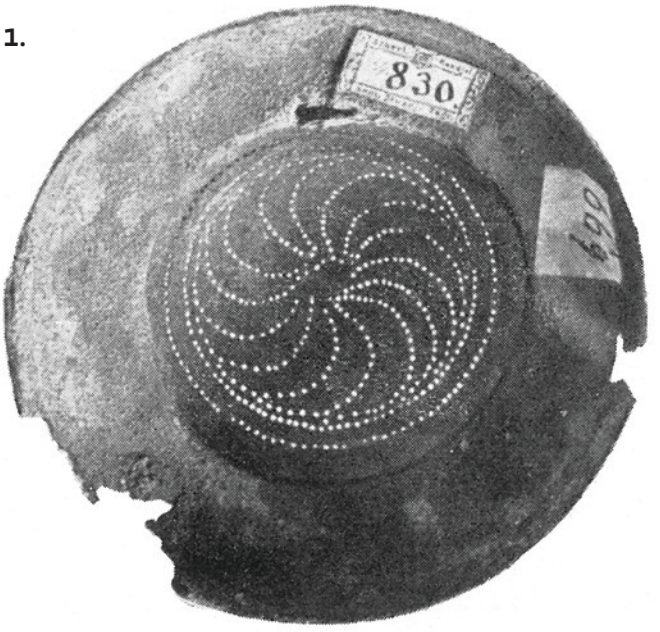
278 Castoldi 1995, 58–60; Tarditi 1996, 45–55.

279 Fiala 1892, 405–406; Jašarević 2014, 66–67, Tab. 7: 2.

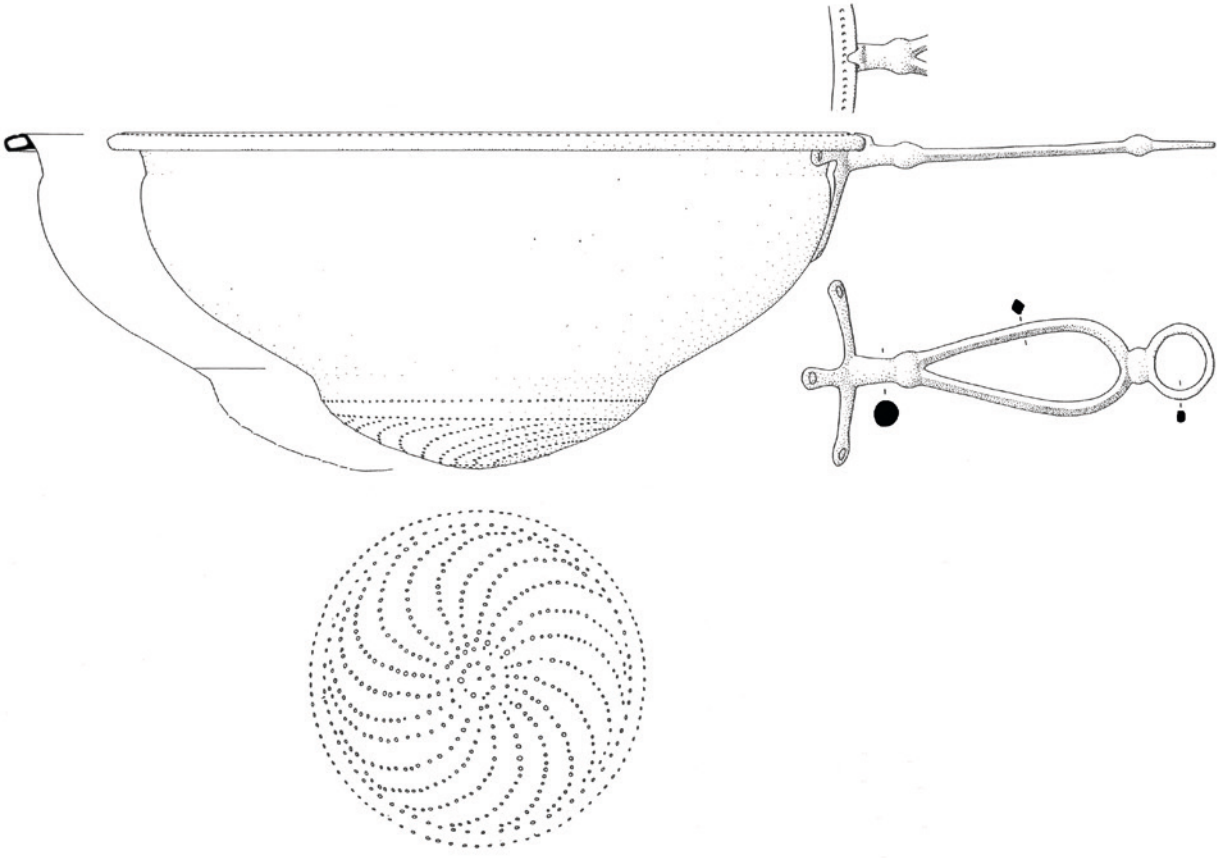
SL. 88
1. Etruščansko cjedilo iz Siska (Radnoti 1938);
2. etruščansko cjedilo s nalazišta Pouilly-sur-Saone (Francuska) (Verger 1992)

FIG. 88
1. The Etruscan strainer from Sisak;
2. the Etruscan strainer from Pouilly-sur-Saone (France) (Verger 1992)

1.



2.



naselja. Činjenica je da većina brončanih posuda s prostora glasinačke kulture potječe iz etruščansko-italskih radionica, a kao ključan trenutak u uspostavi prekojadranskih kontakata pretpostavlja se osnivanje grčkih kolonija Apolonije i Dirahija u 7. st. pr. Kr. koje su imale ulogu posrednika prema zajednicama središnjeg i zapadnog Balkana, s čime se kronološki podudara i prva pojava italskih importa na glasinačkom prostoru.[280] U prethodnim poglavljima već je upozoreno na postojanje predmeta iz Siska koji upućuju na određene kontakte sa zapadnim Balkanom od kraja 6. do u 4. st. pr. Kr. (ilirska kaciga, dvojne igle).

Ipak, jednako se može pretpostaviti da su simpul i cjedilo pristigli na ušće Kupe u Savu zapadnom trasom, preko jugoistočnih Alpa, posredstvom svetolucijske i dolenjske halštatske skupine. Nije potrebno posebno naglašavati utjecaj italskog prostora na halštatske zajednice jugoistočnoalpskog prostora, koji se, među ostalim, odražava i u prihvaćanju određenih mediteranskih kulturnih praksi koje uključuju ritualne gozbe i ispijanje pića (*symposion*). U arheološkom kontekstu taj se fenomen može pratiti kroz pojavu uvezenog brončanog posuđa počevši od 7. st. pr. Kr.,[281] ali i kroz razvoj lokalne toreutičke proizvodnje koja vrhunac doživljava u situlskoj umjetnosti u okviru koje su čest motiv spomenute gozbe. Primjerice, u halštatskim tumulima u Novom mestu, stotinjak kilometara zapadno od Siska, zabilježen je velik broj brončanih posuda (uključujući i ukrašene situle), kao i pojedini predmeti italske provenijencije, kao što su cjedilo iz groba 41/III s Kapiteljske njive[282] te tronožac iz tumula na poziciji Kandija.[283]

Treći predmet koji pripada razdoblju kasnog halštata je križna ataša brončane posude s okruglom ušicom za provlačenje ručke i dvije kukice na završetcima vodoravnih krakova za pričvršćivanje zakovicama na posudu (Sl. 89: 1). Predmet je pronađen na položaju Pogorelac-Keltsko 1992. godine, u koritu rijeke Kupe, zbog čega na predmetu nedostaje uobičajena zelena patina. Slično oblikovane križne ataše nalazimo na dva tipa brončanog posuđa: kotlićima i situlama.[284] Ono što olakšava atribuciju sisačkog predmeta njegova je profilacija koja potvrđuje da se ataša nalazila na posudi s izraženim ramenom, što nikako nije mogao biti kotlić zaobljenog tijela pa se kao zaključak nameće činjenica da se radi o konstrukcijskom elementu situle. Na prostoru dolenjske halštatske skupine, odakle je poznat velik broj ovih posuda, slične ataše zabilježene su na situli s prikazom povorke iz groba b tumula 2 iz Magdalenske gore (Sl. 89: 2),[285] kao i na neukrašenom primjerku iz groba 34 iz tumula 5 iz Dolenjskih Toplica.[286] Na prostoru notranjske skupine križne ataše zabilježene su na jednoj situli iz Škocjana (Skeletna jama) na kojoj se nalazi i paleovenetski natpis.[287] Njihov se broj povećava u dolini rijeke Soče

280 Jašarević 2014, 73–74 s literaturom.

281 Dular 2003, 118.

282 Križ 1997, 77, T. 63: 1

283 Gabrovec 1968; Jereb 2016, 118–119, kat. br. 335.

284 Jereb 2016, 103–105.

285 Jereb 2016, 45, kat. br. 50, T. 27.

286 Teržan 1977, 402, T. 37: 4; Jereb 2016, 52, kat. br. 87, T. 87.

287 Jereb 2016, 55, kat. br. 103, T. 57.

described *simpulum* and this strainer came to the Late Hallstatt settlement at Sisak. The fact that most bronze vessels of the Glasinac culture originated from Etruscan-Italian workshops reflects a key moment in the creation of cross-Adriatic contacts following the foundation of the Greek colonies of Apollonia and Dyrrachium in the 7th century BC. These colonies acted as intermediators between the populations of the central and western Balkans when the first Italian imports appeared in the Glasinac area.[280] As noted in previous chapters, a few finds from Sisak point to contacts with the western Balkans between the end of the 6th and the 4th century BC (the Illyrian helmet and the double pins).

Nevertheless, it can also be assumed that the *simpulum* and the strainer came to the Kupa and Sava Interfluve via the western route, across the southeastern Alps through the St. Lucija and Dolenjska Hallstatt groups. It is unnecessary to further highlight the Italian influences on the Hallstatt communities from the southeastern Alps, which are reflected in among other things the acceptance of certain Mediterranean cultural practices, including ritual feasting and drinking (*symposion*). In the archaeological context, this phenomenon is traceable through the presence of imported bronze vessels from the beginning of the 7th century BC[281] and the development of local toreutics that peaked with situla art (this frequently used the motif of the feast). For example, the Hallstatt tumuli in Novo Mesto, about a hundred kilometers west of Sisak, yielded a large number of bronze vessels (including decorated situlas) and several other finds of Italian origin, such as the strainer from grave 41/III from Kapiteljska Njiva[282] and the tripod from the Kandija position.[283]

The third Late Hallstatt item is the cross-like attaché of a bronze vessel. It has a round loop for a handle with two hooks at the ends of horizontal protrusions that were used to fasten it with rivets (Fig. 89: 1). The find was discovered in the Kupa riverbed at the Pogorelac-Keltsko position in 1992, which explains why it lacks the characteristic green patina. Similarly shaped cross-like attaches are found on two types of bronze vessels: kettles and situlas.[284] The profile of the find from Sisak makes it easier to attribute, as it shows that the attaché was on a vessel with an accentuated shoulder, which cannot have been a rounded kettle, thus clearly making it a construction element of a situla. In the territory of the Dolenjska Hallstat group, which yielded a large number of these vessels, similar attaches were recorded on a situla depicting a procession from grave b, tumulus 2 at Magdalenska Gora (Fig. 89: 2)[285] and on an undecorated find from grave 34, tumulus 5 from Dolenjske Toplice.[286] In the territory of the Notranjska group, cross-like attaches were recorded on a situla from Škocjan

280 Jašarević 2014, 73–74 with bibliography.

281 Dular 2003, 118.

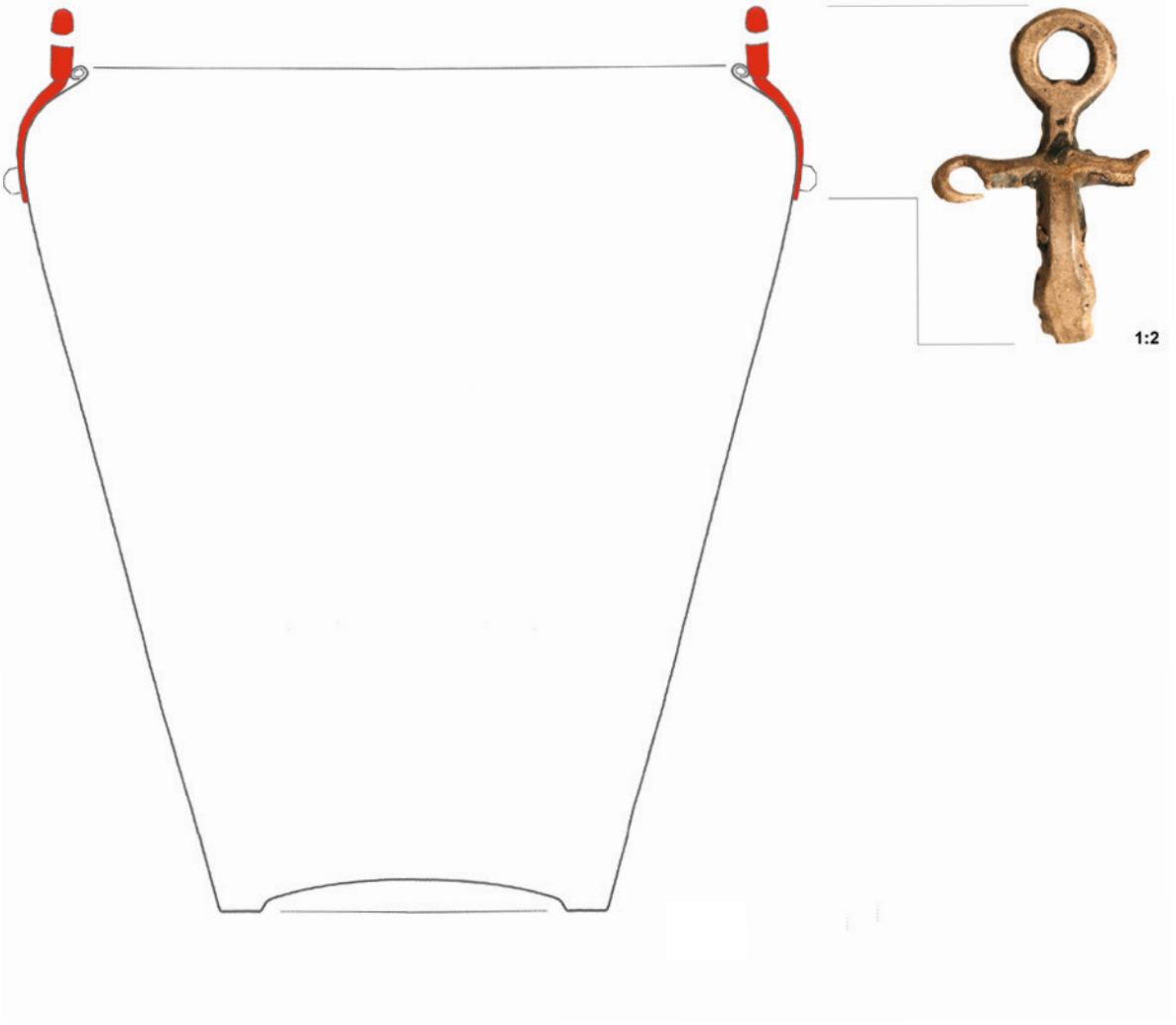
282 Križ 1997, 77, Pl. 63: 1

283 Gabrovec 1968; Jereb 2016, 118–119, cat. no. 335.

284 Jereb 2016, 103–105.

285 Jereb 2016, 45, cat. no. 50, Pl. 27.

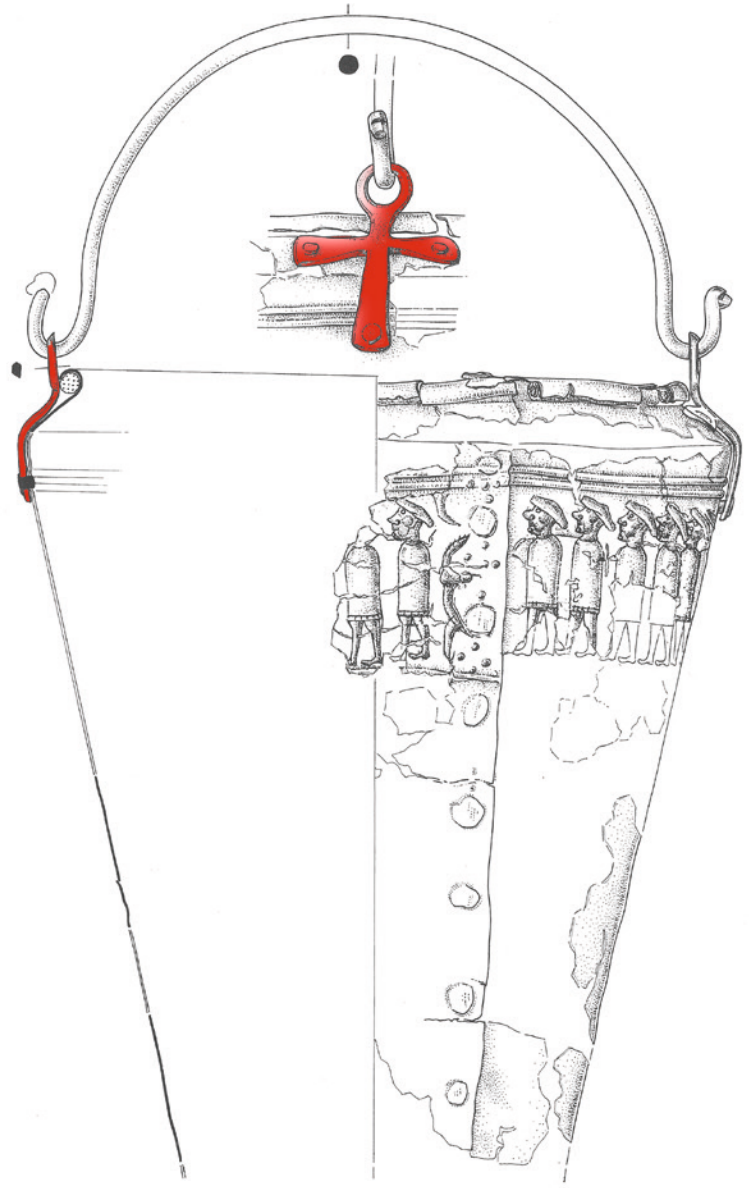
286 Teržan 1977, 402, Pl. 37: 4; Jereb 2016, 52, cat. no. 87, Pl. 87.



1.

SL. 89
1. Križna ataša situle iz Siska (I. Krajcar);
2. situla s križnim atašama iz groba b tumula 2
iz Magdalenske gore (Jereb 2016)

FIG. 89
1. The cross-like attaché of the situla from Sisak (I. Krajcar);
2. the situla with cross-like attaches from grave b,
tumulus 2 at Magdalenska gora (Jereb 2016)



2.

odakle su poznati primjerci iz groba 2439 s groblja u Sv. Luciji,[288] Bodreža[289] te kultnog mjesta u Posočju koje autori na osnovi analogija s prostora sjeveroistočne Italije (Valle di Cadore, Cembra) datiraju u 4. st. pr. Kr.[290] Navedene analogije upućuju na to da je sisačka ataša, odnosno brončana posuda čiji je ona dio, mogla pristići zapadnom komunikacijskom rutom s venetskog/dolenjskog prostora gdje se pretpostavlja proizvodnja ovih predmeta.

(Skeletna Jama) with a paleo-venetian inscription.[287] Their numbers increase in the Soča River valley, which yielded the known finds from grave 2439 from the St. Lucija,[288] Bodrež[289] and cult-related place in Posočje. The authors dated these to the 4th century BC using analogies from northeastern Italy (Valle di Cadore, Cembra).[290] The analogies listed point to the possibility that the attaché from Sisak and the bronze vessel to which it belonged came via the western communication route from the Venetian/Dolenjska territory, where the production of these items is assumed to have occurred.

288 Teržan, Lo Schiavo, Trampuž-Orel 1984-1985, 382, T. 261: 6; Jereb 2016, 42, kat. br. 39, T. 21.

289 Guštin 1991, T. 39: 11.

290 Turk *et al.* 2009, 57–59, Sl. 10.

287 Jereb 2016, 55, cat. no. 103, Pl. 57.

288 Teržan, Lo Schiavo, Trampuž-Orel 1984-1985, 382, Pl. 261: 6; Jereb 2016, 42, cat. no. 39, Pl. 21.

289 Guštin 1991, Pl. 39: 11.

290 Turk *et al.* 2009, 57–59, Fig. 10.

SL. 90
Prikaz gozbe na situli iz groba 13/55 s nalazišta Preloge, Magdalenska gora (Arhiv Narodnog muzeja Slovenije)

FIG. 90
The depiction of a feast on the situla from grave 13/55 from the site of Preloge, Magdalenska Gora (Archives of the National Museum of Slovenia)

SL. 91
Rimsko kasnorepublikansko brončano posuđe iz Siska (I. Krajcar)

FIG. 91
Roman Late Republican bronze vessels from Sisak (I. Krajcar)

Kasnorepublikansko brončano posuđe

Nakon intenzivnih veza uspostavljenih između Mediterana i zajednica sjeverno od Alpa tijekom 6. i 5. st. pr. Kr., a koje su se reflektirale, između ostalog, i velikim brojem brončanog posuđa prvo grčke, a zatim i etruščanske provenijencije, pronalaženog uglavnom u grobovima pripadnika viših društvenih staleža, u razdoblju od 4. do prve polovice 2. st. pr. Kr. broj tih predmeta znatno se smanjio. Tek osnivanjem Akvileje 181. pr. Kr. i postupnom rimskom penetracijom u Galiju nakon drugog punskog rata uspostavljaju se novi komunikacijski pravci između rastuće rimske republike i kasnolatenskih zajednica, što je utjecalo na izniman porast broja italskog brončanog posuđa u zapadnoj i srednjoj Europi.

Od rimskih kasnorepublikanskih posuda iz Siska poznate su dvije drške pehara tipa Idrija s karakterističnim okruglim zadebljanjima koje na jednom primjerku ima žlijeb (Sl. 92: 1).[291] U slučaju vrčeva tipa Idrija radi se o široko rasprostranjenom obliku koji se proizvodio u drugoj polovici 2. i početkom 1. st. pr. Kr., vjerojatno na prostoru Etrurije. Osim u središnjem i zapadnom Mediteranu, veći broj vrčeva tipa Idrija poznat je i iz kontinentalne Europe, od Galije i južne Njemačke preko jugoistočnih Alpa do zapadne Panonije, gdje se njihova uporaba smješta drugu polovicu 2. i početak 1. st. pr. Kr. (LT D1), uz nekoliko primjeraka koji potječu iz grobnih cjelina iz sredine i druge polovice 1. st. pr. Kr. (LT D2).[292] Što se tiče funkcije ovih predmeta, J. Werner je pretpostavio njihovo korištenje u konzumaciji vina, dok M. Feugère upućuje na mogućnost uporabe u kontekstu pranja tijela.[293]

Predmeti koji se također vežu uz pranje, odnosno higijenu u kontekstu gozbi (simpozija) su tave tipa Aylesford. U bogatoj zbirci brončanog posuđa iz Siska nalazi se i jedan primjerak oštećenog recipijenta s drškom zadebljalih rubova i središnjim rebrom koja se širi prema kraju na kojemu se uobičajeno nalazi nastavak s plastično oblikovanom ptičjom glavom, a koji kod ovoga predmeta nedostaje (Sl. 93). Ustaljena interpretacija koja ove predmete smješta u kontekst ritualnog pranja, koji je osim tava tipa Aylesford uključivao i neke druge oblike posuda, primjerice različite oblike vrčeva, dobro je posvjedočena na prostoru Italije, uključujući i latenske zajednice na sjeveru apeninskog poluotoka, ali J. Kysela s pravom upozorava na oprez u interpretaciji funkcije određenih predmeta, u ovom slučaju kasnorepublikanskog metalnog posuđa koje prelazi iz mediteranskog u kontinentalni/latenski kulturni kontekst.[294] Iako je broj predmeta italskog porijekla koji se vežu uz higijenu na prostoru sjeverno od Alpa znatan, zapravo je malo dokaza da se uz prijenos predmeta dogodio

291 Ipak, potreban je određen oprez pri determinaciji ovih predmeta, jer slične ručke imaju i vrčevi tipa Gallarate te amfore tipa Agde, na što upozorava i M. Feugère (1991, 55).

292 Feugère 1991, 53–59.

293 Werner 1954, 54–55; Feugère 1991, 55. Ova se interpretacija zaista čini mogućom u mediteranskom kulturnom konteksu, uključujući i latenske zajednice sjeverne Italije, ali za prostor kontinentalne Europe vjerojatnija je interpretacija J. Wernera, iako je u srednjoeuropskom miljeu ipak vjerojatnija konzumacija piva ili medovine!

294 Kysela 2014.

The Late Republican bronze vessels

The number of bronze vessels from Greece and Etruria, mostly discovered in higher status graves and reflective of the intensive connections established between the Mediterranean and the communities north of the Alps during the 6th and 5th centuries BC, significantly decreased between the 4thand the first half of the 2nd century BC. Only after the founding of Aquileia in 181 BC and the gradual Roman penetration into Gallia following the second Punic war, did new communication paths develop between the growing Roman Republic and the Late Iron Age populations. This caused a significant increase of Italian bronze ware in western and central Europe

Among the Roman Late Republican vessels from Sisak are two handles of Idrija type jugs with characteristic round thickenings, one of which has a gauge (Fig. 92: 1).[291] The Idrija type is a widely distributed form that was manufactured in the second half of the 2nd and the beginning of the 1st century BC, probably in Etruria. Besides the central and western Mediterranean, a large number of Idrija type jugs have been recorded in continental Europe, from Gallia and southern Germany across the southeastern Alps up to western Pannonia, where they are dated to the 2nd and the beginning of the 1st century BC (LT D1), along with some examples from grave units of the mid- and second half of the 1st century BC (LT D2).[292] Regarding the function of these items, J. Werner supposed that they were used for wine consumption, while M. Feugère points to their possible use in the contexts of bathing.[293]

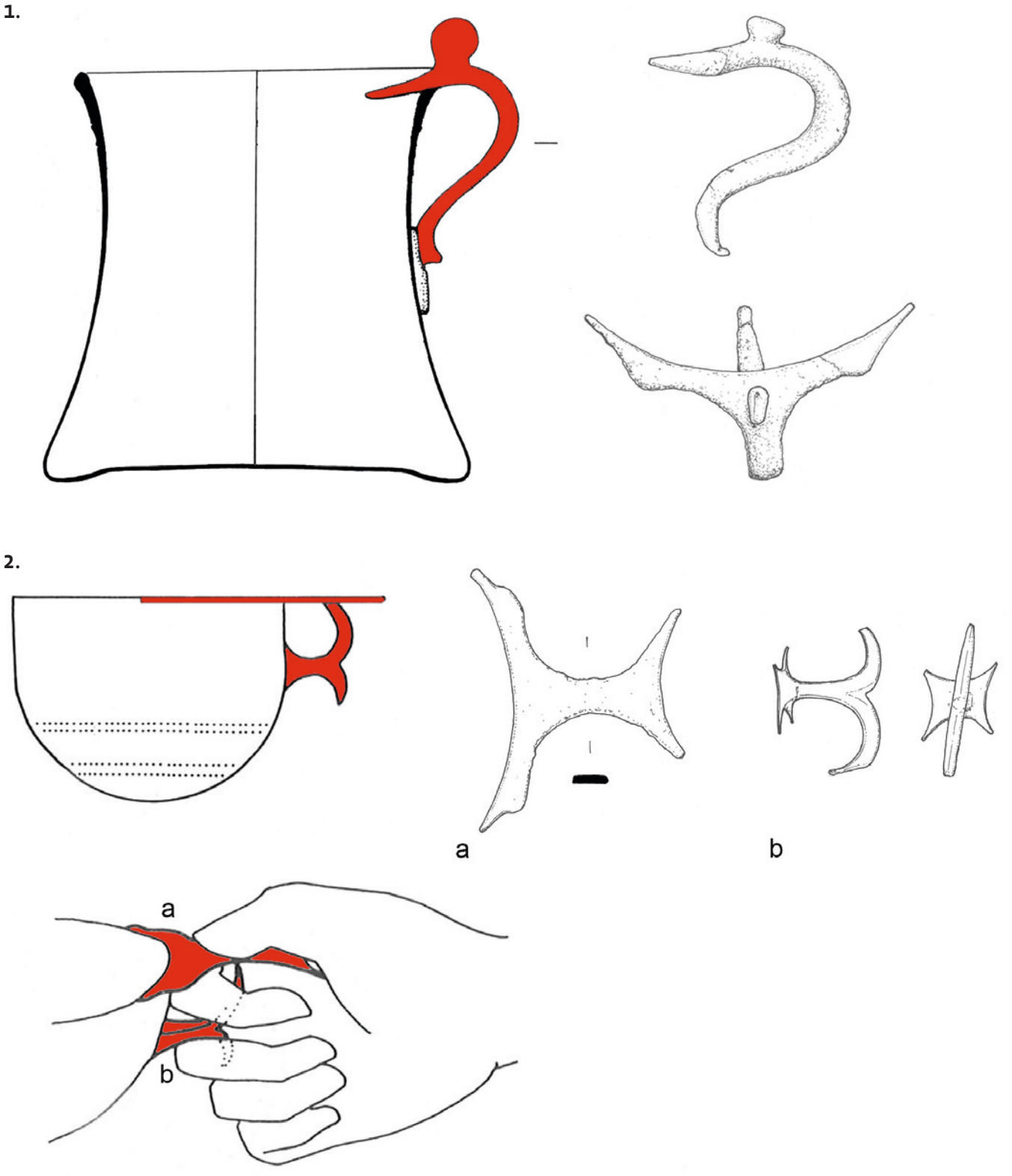
Aylesford type pans are also related to washing, i.e. hygiene in the context of feasts (*symposia*). There is one in the rich collection of bronze vessels from Sisak kept in Archaeological museum in Zagreb (Fig. 93). It has a damaged recipient and a handle with thickened rims and a central rib that widens towards the ends where there is typically an attachment with a depiction of a bird's head (missing in this case). The accepted hypothesis connecting these items – Aylesford type pans and other vessel forms, including differently shaped jugs – with ritualistic washing is well attested in Italy, including the La Tène communities in the north of the Apennine Peninsula. However, J. Kysela rightfully calls for caution in the interpretation of the function of certain items, in this case the Late Republican bronze ware, that was transferred from the Mediterranean to the continental/La Tène context.[294] Although the number of Italian hygiene-related items found north of the Alps is large, there is little indication that these were transferred along with the cultural practices with which they were associated in their original cultural milieu. As

291 Certain caution is necessary in the determination of these items, however, as similar handles are seen on Gallarate type jugs and Agde type amphoras, as indicated by M. Feugère (1991, 55).

292 Feugère 1991, 53–59.

293 Werner 1954, 54–55; Feugère 1991, 55. This interpretation seems plausible in the Mediterranean cultural context, including the La Tène communities of northern Italy. However, in continental Europe, J. Werner's interpretation seems more appropriate, despite the fact that beer and mead were more likely consumed in central Europe!

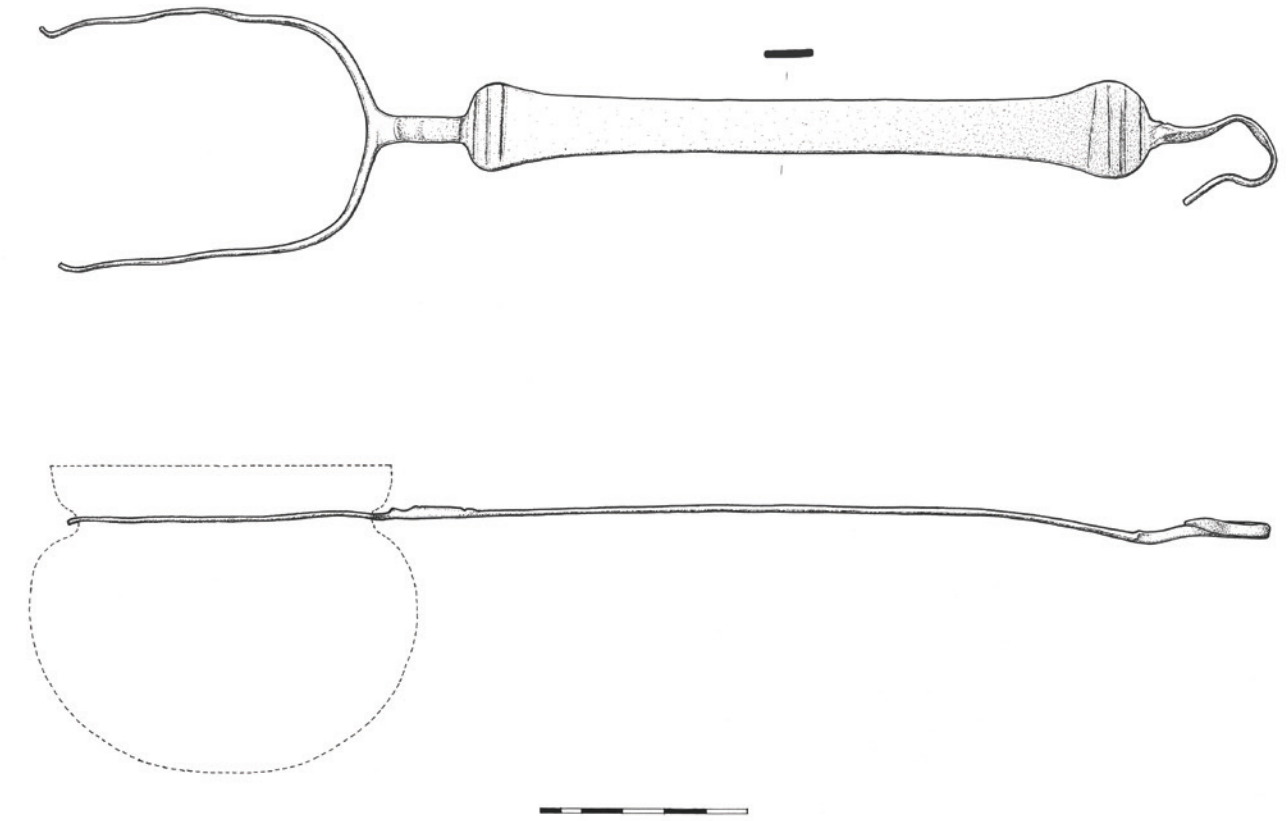
294 Kysela 2014.



SL. 92
1. Drška vrča tipa Idrija iz Siska;
2. elementi drške cjedila iz Siska;
3. drška simpuluma iz Siska
(M. Galić; Giullaumet 1991)

FIG. 92
1. The handle of an Idrija type jug from Sisak;
2. elements of the handle of the strainer from Sisak;
3. the handle of simpulum from Sisak
(M. Galić; Giullaumet 1991)

3.



i prijenos kulturnih praksi koje se uz njih vežu u izvornom kulturnom miljeu. Kao jedan od najkarakterističnijih oblika kasnorepublikanskog posuđa, tave tipa Aylesford koriste se istovremeno s vrčevima tipa Idrija u mediteranskom i kontinentalnom kontekstu sjeverno od Alpa, odakle su poznati brojni primjerci koji potječu iz grobova, ali i naselja.[295] Osim sisačkog primjerka, na prostoru južne Panonije jedna tava tipa Aylesford nalazila se u bogatom grobu 92 s groblja Beograd-Karaburma.[296] Upravo bi ta grobna cjelina mogla potvrđivati prethodno izrečenu tezu o promjeni funkcije predmeta u različitm kulturnim kontekstima. Naime, u pokušaju interpretacije potencijalne društvene hijerarhije u kasnolatenskim zajednicama Skordiska kroz prizmu gozbovanja kao društvenog, političkog i ekonomskog fenomena, M. Egri i A. Rustuiu su osobu pokopanu u navedenom grobu na osnovi priloga interpretirali kao "organizatora", odnosno figuru koja zauzima vrh društene ljestvice.[297] Njegov elitni društveni status reflektira se kroz organizaciju javnih gozbi kroz koje se potvrđuju i redefiniraju stari i uspostavljaju novi društveni odnosi. U grobnom inventaru njegov se status iskazuje prisustvom pune ratničke opreme, uključujući i *pars pro toto* priloge konjske opreme, te predmeta korištenih u pripremi i konzumaciji hrane i pića, a u tom kontekstu se može promatrati i prisutnost tave tipa Aylesford.

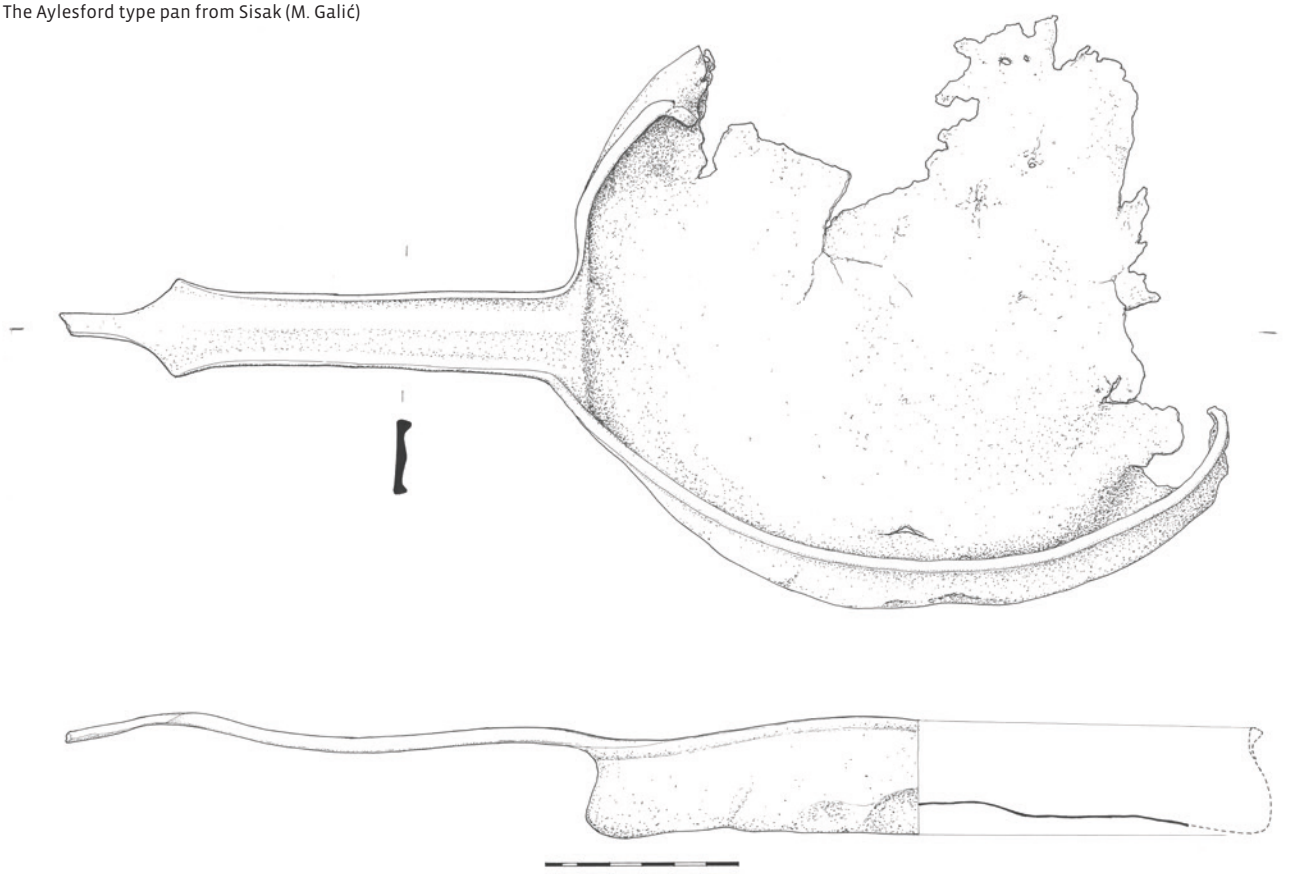
one of the most characteristic forms of Late Republican bronze ware, Aylesford type pans were used at the same time as Idrija type jugs in the Mediterranean and the continental context north of the Alps, which yielded numerous examples (discovered in both graves and settlements).[295] In addition to the one from Sisak, southern Pannonia yielded another Aylesford type pan. This was discovered in the rich grave 92 at the Belgrade-Karaburma necropolis.[296] This grave could serve as evidence for the hypothesis that the function of items could change in different cultural contexts. In an attempt to interpret the potential social hierarchy of the Late La Tène communities of the Scordisci through the prism of feasting as a social, political and economic phenomenon, M. Egri and A. Rustuiu defined the person buried in the listed grave as the "organizer", i.e. the figure at the top of the social scale.[297] His elite social status is reflected through the organization of public feasts, which were used to confirm and redefine old social relations and establish new ones. In the grave inventory, his status is expressed through warrior equipment, including the *pars pro toto* parts of horse-riding equipment, and items used in the preparation of food and drink, including an Aylesford type pan.

295 Feugère, De Marinis 1991, 100, 108–113, Sl. 5.
296 Todorović 1972, 30–31, T. 28: 14.
297 Egri, Rustoiu 2008.

295 Feugère, De Marinis 1991, 100, 108–113, Fig. 5.
296 Todorović 1972, 30–31, Pl. 28: 14.
297 Egri, Rustoiu 2008.

SL. 93
Tava tipa Aylesford iz Siska (M. Galić)

FIG. 93
The Aylesford type pan from Sisak (M. Galić)



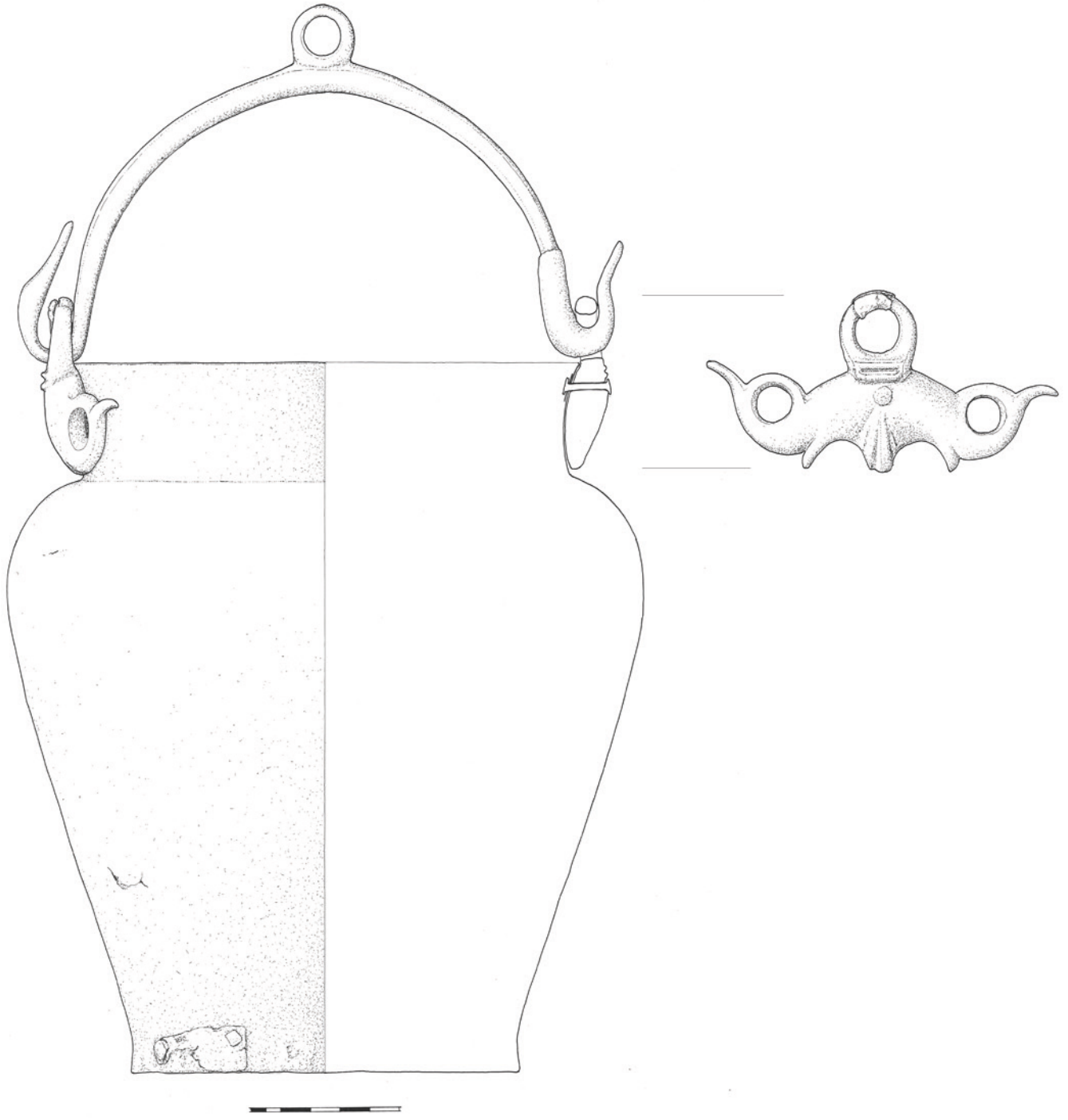
SL. 94
Brončane situle iz Siska (I. Krajcar)
FIG. 94
Bronze situlas from Sisak (I. Krajcar)

Nedvosmislenu funkciju u ritualu ispijanja vina ili vjerojatnije drugih pića u kontinentalnoj tradiciji, primjerice piva ili medovine, imaju brončana cjedila i prethodno spomenuti simpuli. Karakterističan kasnorepublikanski tip cjedila sastoji se od recipijenta izrađenog od tankog lima s perforacijama te dvodijelne lijevane drške s palčanim, vodoravno postavljenim i kažiprstnim, okomitim elementom.[298] Nalazi ovih cjedila, odnosno najčešće dijelova drški, rasprostranjeni su diljem Europe s najvećom koncentracijom nalaza u Galiji i na tzv. jantarnom putu.[299] Određen broj primjeraka potječe i s prostora jugoistočnih Alpa (Idrija pri Bači, Stična, Celje, Magdalensberg) i južne Panonije (Blato kod Vinkovaca, Dalj, Ostrvo kod Ljubičevca, Gomolava),[300] uključujući i dva elementa drške iz Siska (Sl. 92: 2), te iz Dakije.[301] Kažiprstni element ima uobičajena dva polukružna kraka i pločicu konkavnih stranica za pričvršćivanje na recipijent, a palčani dio ima u potpunosti sačuvanu konkavnu stranu koja je bila pričvršćena na recipijent te dršku u obliku lastinog repa. Ova cjedila tipološki i funkcionalno predstavljaju karakterističan italski proizvod, ali s obzirom na velik broj primjeraka s prostora kontinentalne Europe, ali i poluproizvoda na pojednim kasnolatenskim naseljima (opidima), J.-P. Giullaumet je ostavio

Bronze strainers and the aforementioned *simpula* clearly played a role in the ritual consumption of wine or more likely other drinks in the continental tradition, for example beer or mead. The characteristic Late Republican type of strainer is composed of a recipient made from a thin sheet with perforations and a bipartite cast handle with a vertical element for the thumb and a horizontal one for the forefinger.[298] These strainers were used across Europe. Most of them, or more often parts of their handles, have been found in Gallia on the so-called amber route.[299] A certain number have also been found in the southeastern Alps (Idrija near Bače, Stična, Celje, Magdalensberg) and southern Pannonia (Blato near Vinkovci, Dalj, Ostrvo near Ljubičevac, Gomolava),[300] including two elements of a handle from Sisak (Fig. 92: 2) and Dacia.[301] The element for the forefinger has the usual two semicircular parts and a plate with concave sides to fasten it to the recipient. The element for the thumb has a completely preserved concave side that was attached to the recipient and a handle in the shape of a swallow's tail. These strainers typologically and functionally represent a characteristically Italian product. J.-P. Giullaumet, however, considering both the large number of finds from continental Europe and semi-product from some Late

298 Giullaumet 1991, 89–90.
299 Giullaumet 1991, 92–95, Sl. 6.
300 Dizdar, Radman Livaja 2004; Dizdar, Tonc 2014, 587.
301 Rustoiu 2005, 67–68, Sl. 8.

298 Giullaumet 1991, 89–90.
299 Giullaumet 1991, 92–95, Fig. 6.
300 Dizdar, Radman Livaja 2004; Dizdar, Tonc 2014, 587.
301 Rustoiu 2005, 67–68, Fig. 8.



SL. 95
Brončana situala s atašama u obliku delfina iz Siska
(M. Galić)

FIG. 95
The bronze situla with dolphin-shaped attaches from Sisak
(M. Galić)

mogućnost njihove proizvodnje i na tom prostoru. Kronološki su pozicionirana u kraj 2. i 1. st. pr. Kr., odnosno kasnolatensko razdoblje.[302]

Za razliku od prethodno opisanih etruščanskih simpula, kasnorepublikanski primjerak iz Siska ima vodoravnu dršku dok je kuglasti recipijent bio izrađen zasebno i naknadno uglavljen u dio drške u obliku vilice (Sl. 92: 3). Koncepcijski ovaj predmet pripada skupini kasnorepublikanskih simpula s vodoravnim drškama,[303] ali tipološki zapravo nema izravne analogije među desetcima poznatih primjeraka. Uz činjenicu da je i tehnička izvedba drške nezgrapnija, moguće je da se radi o "provincijskoj" imitaciji izvornog oblika, možda nastalog i izvan apeninskog poluotoka.

Slijedi veći broj situla od kojih se čak šest primjeraka može definirati kao tip Eggers 16, što Sisak čini jednim od ključnih nalazišta ovih posuda uz, primjerice, Ornavasso, Chalon-sur-Saône i Idriju pri Bači. Radi se o posudama ravnog dna i cilindričnog tijela te različito oblikovanim rubovima (Sl. 94). Također, jedna od konstrukcijskih karakteristika ovih predmeta je uporaba željeza za izradu ataša i ručki. Njihova distribucija, od Galije, preko alpskog prostora i sjeverne Italije do zapadne Panonije, upućuje na to da se vjerojatno radi o proizvodima radionica s prostora latenske kulture, možda u sjevernoj Italiji.[304] Prema sadašnjem stanju istraženosti, situle tipa Eggers 16 proizvode se u kasnolatenskom razdoblju, ali i početkom 1. st. po Kristu.[305]

Očuvanošću se izdvaja situla kruškoliko oblikovanog tijela i cilindričnog vrata na kojemu se nalaze ataše u obliku dva vodoravno i nasuprotno postavljena, stilizirano izvedena delfina (Sl. 95). Završetci ručke izvedeni su u obliku ptičjih glava, a u sredini se nalazi i ušica. Morfološki ova je posuda bliska situlama tipa Eggers 18-20, ali bitan detalj predstavljaju opisane ataše. Naime, na atašama situla tipa Eggers 18 realistično izvedeni delfini postavljeni su okomito,[306] dok bliske paralele sisačkom primjerku nalazimo na prostoru predrimske Dakije gdje su izdvojene situle tipa Costeşti-Tilişca s atašama u obliku stiliziranih delfina koje su na osnovi nekoliko primjeraka iz zatvorenih cjelina datirane u 1. st. pr. Kr. te augustovsko vrijeme.[307] Ovaj izniman predmet upućuje na određene veze sisačkog mlađeželjeznodobnog naselja s istočnim dijelom Karpatske kotline u kasnolatenskom razdoblju kada se, uslijed jačanja dačkog kraljevstva, osjećaju snažniji impulsi i u njenim južnim i zapadnim krajevima.

Za kraj pregleda sisačkog brončanog posuđa navodimo čak četiri primjerka situla tipa Eggers 21-22 koje karakterizira brončani recipijent kruškoliko oblikovanog trbuha i cilindričnog odnosno ljevkasto oblikovanog vrata te željezne ataše ovalnog (E. 21) ili pravokutnog oblika (E. 22) sa željeznom ručkom. Jedan sisački primjerak ima oštro naglašen prijelaz trbuha u rame što

302 Giullaumet 1991, 90–92.
303 Castoldi, Feugère 1991, 63–72.
304 Bolla, Boube, Giullaumet 1991, 8.
305 Bolla, Boube, Giullaumet 1991, 10.
306 Bolla, Boube, Giullaumet 1991, 13–15, Sl. 6–8.
307 Rustoiu 2005, 59–60, Sl. 4.

La Tène settlements (*oppida*), has suggested that they may also have been produced there. They are chronologically dated to the end of the 2nd and the 1st century BC, i.e. the Late La Tène period.[302]

Unlike previously described Etruscan *simpula*, the Late Republican find from Sisak has a horizontal handle. The spherical recipient was also made separately and then attached to the fork-shaped part of the handle (Fig. 92: 3). Conceptually, this find belongs to the group of Late Republican *simpula* with horizontal handles.[303] Typologically, however, it lacks direct analogies among the other known examples. Along with the fact that the technical execution of the handle is cumbersome, it is possible that this is a "provincial" imitation of the original form, possibly made outside the Apennine Peninsula.

These finds are followed by a large number of situlas, six of which can be ascribed to the Eggers 16 type, making Sisak one of the key sites for these vessels along with, for example, Ornavasso, Chalon-sur-Saône and Idrija near Bače. These vessels have a flat base, a cylindrical body and differently shaped rims (Fig. 94). One of the other constructional characteristics of these items is the use of iron to make attaches and handles. Their distribution, from Gallia, across the Alpine region, northern Italy and into western Pannonia, suggests that they are the products of workshops from the area of the La Tène culture, possibly in northern Italy.[304] According to the current state of research, Eggers 16 type situlas were produced in both the Late La Tène period and at the beginning of the 1st century AD.[305]

The situla with a pear-shaped body and a cylindrical neck with two attaches shaped as horizontal stylized dolphins stands out for its state of preservation (Fig. 95). The ends of the handles are shaped as bird heads, and there is a loop in the middle. Morphologically, this vessel is similar to situlas of the Eggers 18-20 types, but the distinguishing details are the described attaches. Eggers 18 type situlas have realistically depicted vertical dolphins.[306] Close parallels for the find from Sisak can be seen in the pre-Roman Dacia, where Costeşti-Tilişca type situlas, with stylized dolphin-shaped attaches, were identified. Using several finds from closed grave units, these having been dated to the 1st century BC and the Augustan period.[307] This exceptional item points to certain connections between the Late Iron Age settlement in Sisak and the eastern part of the Carpathian Basin during the Late La Tène period, when due to the growth of Dacian Kingdom strong impulses were felt in its southern and western parts.

At the end of the overview of bronze ware from Sisak, we will mention four examples of Eggers 21-22 type situlas, which are characterized by a bronze recipient with a pear-shaped body, a cylindrical, i.e. funnel-like neck, an iron oval-shaped (E. 21) or rectangular

302 Giullaumet 1991, 90–92.
303 Castoldi, Feugere 1991, 63–72.
304 Bolla, Boube, Giullaumet 1991, 8.
305 Bolla, Boube, Giullaumet 1991, 10.
306 Bolla, Boube, Giullaumet 1991, 13–15, Fig. 6–8.
307 Rustoiu 2005, 59–60, Fig. 4.

ga definira kao inačicu Bargfeld tipa Eggers 22 (Sl. 94),[308] datiranu primjercima iz grobnih cjelina, primjerice u grobu 100 iz Persone ili grobu 3 iz Reke pri Cerknem,[309] u kasni laten i srednje/kasnoaugustovsko razdoblje. To je datacija koja uglavnom vrijedi i za ostale primjerke situla tipa Eggers 21-22. Što se distribucije tiče, u većem broju ih nalazimo u sjevernoj Italiji i susjednom alpskom prostoru, ali i na prostoru srednje i sjeverne Europe, što znatno otežava pokušaj definiranja smještaja potencijalnih radionica.

Kao što je vidljivo iz pregleda, gotovo svi navedeni oblici kasnorepublikanskog brončanog posuđa pojavljuju su u kontekstima iz druge polovine 2. i početka 1. st. pr. (LT D1), ali većina se nastavlja koristiti i tijekom 1. st. pr. Kr. (LT D2), pa i u srednje/kasnoaugustovsko vrijeme (15. g. pr. Kr. – 14. g. po. Kr.). To u slučaju sisačkog predmeta, koji ne potječe iz zatvorenih cjelina, znači da je teško definirati jesu li u korito rijeke Kupe dospjeli prije rimskog osvajanja mlađeželjeznodobnog naselja 35. pr. Kr., pri čemu ih se onda može interpretirati kao importe u domorodački južnopanonski kulturni kontekst, a koje u velikom broju nalazimo i na prostoru kontinentalne Europe, ili nakon uspostave vojnog garnizona, što bi upućivalo na znatno drugačije mehanizme njihovog pribavljanja, a vjerojatno i drugačije korisnike.

7.2 MLAĐEŽELJEZNODOBNI NUMIZMATIČKI NALAZI S PODRUČJA SISKA (TOMISLAV BILIĆ)

Mlađeželjeznodobni novac

Vrlo često se numizmatičke nalaze iz razdoblja mlađeg željeznog doba naziva "keltskim" ili "keltsko-barbarskim novcem". I dok bismo se s terminom "keltski" mogli donekle složiti ("barbarski" je ipak malo previše za današnji senzibilitet), termin "novac", na prvi pogled jasan, treba u ovom kontekstu dodatno obrazložiti. Naime, da bi se neki predmet moglo nazvati novcem, potrebno je poznavati njegovu funkciju unutar društva koje je taj predmet koristilo. Prema suvremenim shvaćanjima novac može imati nekoliko funkcija. Najčešće se među tim funkcijama navode njegovo korištenje kao sredstva razmjene, pohrane vrijednosti, mjerila vrijednosti, obračunske jedinice i sredstva plaćanja.[310] Podaci o korištenju mlađeželjeznodobnih kovanica u bilo kojoj od ovih funkcija vrlo su oskudni i danas se uglavnom smatra da su one korištene kao "novac posebne namjene", odnosno da predstavljaju predmete koji su služili u ispunjavanju nekih specifičnih pseudo- ili paramonetarnih funkcija. Neke od tih funkcija su razmjena darova, uključujući diplomatsku razmjenu, plaćanje danka, miraza ili različitih naknada, zatim distribucija plaćenicima ili onima ovisnima o

attaché (E. 22), and an iron handle. One find from Sisak has a highly accentuated transition from the body to the shoulder, which defines it as a Bargfeld variant of the Eggers 22 type (Fig. 94),[308] dated based on finds from grave units, e.g. grave 100 from Persona or grave 3 from Reka near Cerkno,[309] to the Late La Tène and the middle/late Augustan period. As for distribution, they are mostly found in northern Italy and the neighboring Alpine regions but also in central and northern Europe, which makes it significantly more difficult to determine the location of potential workshops.

As this overview shows, almost all listed forms of Late Republican bronze ware appear in contexts from the second half of the 2nd and the beginning of the 1st century BC (LT D1). Most of these, however, remained in use during the 1st century BC (LT D2) and even in middle/late Augustan times (15 BC–14 AD). In the case of the finds from Sisak, which did not come from a closed context, it is difficult to determine whether they made their way to the Kupa riverbed before the Roman conquest of the Late Iron Age settlement in 35 BC, in which case they can be interpreted as imports (widely recorded across continental Europe) to the native southern Pannonian cultural context, or after the military garrison was set up, which would point to significantly different mechanisms of acquisition and likely different users.

LATE IRON AGE NUMISMATIC FINDS FROM THE AREA OF SISAK (TOMISLAV BILIĆ)

Late Iron Age coinage

Late Iron Age numismatic finds are often called "Celtic" or "Celtic-barbarian" money. While we could somewhat agree with the term "Celtic" ("barbarian" is a bit much for today's sensibility), the term "money", clear at first glance, should also be explained in this context. To define a coin as money, it is important to know its function within the society that used it. According to modern scholarship, money can have several functions. These functions most often include its use as a medium of exchange, store of wealth, measure of value, unit of account, and means of payment.[310] Data on the use of Late Iron Age coins for any of these functions is scarce, and it is largely thought today that these were used as "special-purpose money", i.e. to fulfill specific pseudo- or para-monetary functions. Some of these functions include the exchange of gifts, including diplomatic exchange, tax payment, dowry or different compensations, distribution to mercenaries or those dependent on the minting authority that issued the coins. In the end, the "special-purpose money" could have been ritually deposited, as was often the case during the Late Iron Age.[311]

308 Bolla, Boube, Giullaumet 1991, 18, Sl. 14.

309 Graue 1974, T. 75: 3; Guštin 1991, 25–26, 32, Sl. 20, T. 31: 4.

310 Howgego 1995, 12; Seaford 2004, 16–20; Aarts 2005, 5; Hollander 2007, 2–3, 59–86; Luley 2008, 185; von Reden 2010, 3–5; Murgan, Kemmers 2016, 278–279.

308 Bolla, Boube, Giullaumet 1991, 18, Fig. 14.

309 Graue 1974, Pl. 75: 3; Guštin 1991, 25–26, 32, Fig. 20, Pl. 31: 4.

310 Howgego 1995, 12; Seaford 2004, 16–20; Aarts 2005, 5; Hollander 2007, 2–3, 59–86; Luley 2008, 185; von Reden 2010, 3–5; Murgan, Kemmers 2016, 278–279.

311 Harl 1996, 5–6, 293; Haselgrove, Wigg-Wolf 2005, 9; Wigg-Wolf 2008, 36; Howgego 2013, 26–31.

kovničkom autoritetu koji je stajao iza otkovanog novca. Na kraju, "novac posebne namjene" mogao je biti ritualno odlagan, što je često bio slučaj upravo u mlađem željeznom dobu.[311]

Na području sjeverozapadne Hrvatske najčešći mlađeželje-znodobni novac uobičajeno se pripisuje Tauriscima, a ranije se nazivao i "istočnonorički novac", što je danas napušteno. Najpoznatiji – tj. najraširenija i najbrojniji – tipovi ovog novca kovani su upravo na području današnje sjeverozapadne Hrvatske, tj. na području današnjih gradova Varaždina, Samobora i Đurđevca. Upravo su po tim naseljima, odnosno ostavama kovanica nađenima u njihovoj blizini, tri najznačajnija tipa tauriščanskog novca dobila ime. Na licu tih kovanica nalazi se golobrada muška glava s vijencem, koja možda prikazuje lokalno keltsko božanstvo Belenosa, interpretirano u grčkim terminima kao Apolon, dok se na naličju novca nalazi konj bez jahača.[312] Ti su tipovi novca kovani uglavnom u formatu tetradrahmi, po uzoru na raniji grčko-makedonski novac, ali su istovremeno kovane i manje nominale u težini i vrijednosti jedne četvrtine drahme i manje. Jedan primjerak takvog novca nedavno je nađen u grobnom kontekstu na nalazištu Zvonimirovo-Veliko polje te se datira u razdoblje LT C2 (200–150. g. pr. Kr.).[313] U slično razdoblje datiraju se i tauriščanske tetradrahme tipa Varaždin A (Sl. 96: 1), dok se ostali tauriščanski tipovi novca datiraju u razdoblje oko 150. pr. Kr. ili nešto kasnije, ali svakako u 2. st. pr. Kr.[314]

Nedavno je objavljena analiza svih numizmatičkih nalaza s područja današnjeg Siska s pretpostavljenim vremenom kovanja u razdoblju prije Bitke kod Akcija.[315] Taj novac se redovito u literaturi naziva "predcarskim", iako je to termin koji – uz to što dosta otkriva – ponešto i skriva. Među tim nalazima obrađene su i mlađeželje-znodobne kovanice za koje se pretpostavlja da su kovane prije 31. g. pr. Kr., iako za neke od njih ne možemo biti sasvim sigurni da nisu kovane i u kasnijem razdoblju, tj. u vrijeme ranog Principata. Analizi se pristupilo s točke gledišta "lokaliteta kao konteksta", tj. proučavajući čitavu sliku numizmatičkih nalaza, neovisno o njihovom kontekstu.[316] U studiji koja je uslijedila obrađeni su samo oni "predcarski" novci koji su pronađeni u arheološkom kontekstu.[317] Analiza svih nalaza s područja suvremenog Siska pokazala je da je među mlađeželje-znodobnim kovanicama dominantan udio upravo tauriščanskih (55,6%), uz manji postotak noričkih (11,1%) te nešto veći udio kovanica Skordiska (18,5%). Gotovo tri četvrtine svih mlađeželje-znodobnih kovanica načinjeno je od srebra (74,1%), uz preostale kovanice od bronce ili bronce s određenim manjim udjelom srebra, tzv. *billon* (25,9%). Nešto više od tri četvrtine svih kovanica predstavljeno je velikim, mogli bismo reći standardnim, mlađeželje-znodobnim nominalama, tetradrahmama (77,8%), dok

311 Harl 1996, 5–6, 293; Haselgrove, Wigg-Wolf 2005, 9; Wigg-Wolf 2008, 36; Howgego 2013, 26–31.

312 Bilić 2016.

313 Bilić, Dizdar 2016.

314 Kos, Šemrov 2003, 386–387; Gorini 2004, 59; 2005, 59, 83; 2008, 99; 2009, 120; Kos 2007, 60–63; 2009, 311; 2012, 355–356; 2016, 378–379; Kos, Mirnik 2011, 102; Miškec 2012, 381, 383; Strobel 2014, 75–78.

315 Bilić 2017a.

316 Wigg-Wolf 2009.

317 Bilić 2018.

In northwestern Croatia, the most common Late Iron Age coins are usually ascribed to the Taurisci. It was previously referred to as "east-Norican coinage", but that term has been abandoned. The most famous – i.e. the most widespread and most numerous – types of this coinage were minted in today's northwestern Croatia, i.e. in the area of today's cities of Varaždin, Samobor and Đurđevac. Three types of coins ascribed to the Taurisci took their names precisely from these settlements, i.e. the hoards of coins that were discovered in their vicinity. The obverse of these coins depicts the face of a beardless man with a wreath, possibly the local Celtic deity Belenos (interpreted in Greek terms as Apollo), while the reverse depicts a horse with no rider.[312] These types of coins were minted in the form of tetradrachms under the influence of the earlier Graeco-Macedonian coins. Smaller denominations, however, weighing and valued at a quarter of a drachm or less, were minted at the same time. One such coin was recently discovered in a grave context at the site of Zvonimirovo-Veliko Polje. It has been dated to the LT C2 period (200–150 BC).[313] The Varaždin A type tetradrachm is dated to about the same period (Fig. 96: 1), while other types of Tauriscan coins are dated to the period around 150 BC or somewhat later, but definitely to the 2nd century BC.[314]

An analysis of all numismatic finds from today's Sisak, which are supposed to have been issued before the Battle of Actium, was recently published.[315] These coins are frequently listed in publications as "pre-Imperial", a term that both reveals and hides some information. These finds also include the late Iron Age coins that are assumed to have been minted before 31 BC, though some may have been minted later, i.e. during the early Principate. The analysis took the "a site as a context" approach, i.e. it studied the entire picture of the numismatic finds, regardless of their context.[316] The study that followed included only those "pre-Imperial" coins that were discovered in an archaeological context.[317] An analysis of all the finds from the territory of today's Sisak revealed that the coins of the Taurisci predominated the Late Iron age coinage (55.6%), followed by those of the Scordisci (18.5%) and those of the Norici (11.1%). Almost three quarters of all Late Iron Age coins are made of silver (74.1%), and the rest of bronze or bronze with a small portion of silver, the so-called *billon* (25.9%). A little more than three quarters of all coins are the large, we could say standard, Late Iron Age denominations, the tetradrachms (77.8%), while the rest are fractions derived from tetradrachms (22.2%). At the same time, among the Late Iron Age coins from archaeological excavations, three out of the five reliably attributed coins are those of the Taurisci (60%), while the remaining two were made

312 Bilić 2016.

313 Bilić, Dizdar 2016.

314 Kos, Šemrov 2003, 386–387; Gorini 2004, 59; 2005, 59, 83; 2008, 99; 2009, 120; Kos 2007, 60–63; 2009, 311; 2012, 355–356; 2016, 378–379; Kos, Mirnik 2011, 102; Miškec 2012, 381, 383; Strobel 2014, 75–78.

315 Bilić 2017a.

316 Wigg-Wolf 2009.

317 Bilić 2018.

SL. 96
1. Taurišćanski novac tipa Varaždin iz Siska ;
2. Istočnokeltski novac tipa Audoleon iz Siska
(I. Krajcar)

FIG. 96
1. The Varaždin type coin of the Taurisci from Sisak;
2 Eastern Celtic coin of the Audoleon type from Sisak
(I. Krajcar)

SL. 97
Tauriščanski novac tipa Đurđevac iz Siska
(I. Krajcar)

FIG. 97
The Đurđevac type coins of the Taurisci from Sisak
(I. Krajcar)

SL. 98
Sitni brončani novac Tauriska
s položaja Dunavski Lloyd u Sisku
(I. Krajcar)

FIG. 98
Small bronze coin of the Taurisci
from Dunavski Lloyd position in Sisak
(I. Krajcar)

su preostale kovanice manjih nominala, redovito izvedenih od tetradrahmi (22,2%). Istovremeno, među mlađeželjeznodobnim kovanicama nađenima u arheološkim istraživanjima, od ukupno pet pouzdano determiniranih kovanica tri pripadaju tauriščanskim kovovima (60%), dok preostala dva primjerka pripadaju noričkoj i skordiščanskoj proizvodnji (po 20%). Četiri od pet kovanica su tetradrahme, uz jedan mali norički srebrnjak; slično tome, četiri od pet kovanica su načinjene od srebra, uz jednu brončanu tetradrahmu Skordiska. Naravno, ovaj izuzetno mali uzorak ne može puno otkriti o razmjerima prisustva određenih tipova kovanica na području Siska. Štoviše, arheološki kontekst sugerira da su ove kovanice bile u optjecaju kako u mlađeželjeznodobnom naselju tako i u ranorimskom.[318]

Među kovanicama koje su pronađene u mlađeželjeznodobnim kontekstima nalazi se jedna kasna tetradrahma tipa Đurđevac od lošeg srebra (nađena na položaju Frankopanska ulica b.b.) (Sl. 97: 1), jedna kasna posrebrena brončana tetradrahma istog tipa (nađena na položaju Pogorelac) (Sl. 97: 2), jedna brončana tetradrahma koju su kovali Skordisci (Sl. 99) (nađena na položaju Dunavski Lloyd), jedan mali srebrni norički novac tipa Magdalensberg (nađen na položaju Željeznički kolodvor) te jedna kovanica determinirana u objavi kao brončana tetradrahma srijemskog tipa, ali koja po promjeru (9 mm) i težini (0,65 g) odgovora minimima Skordiska kovanima u zadnjem odsječku njihove monetarne aktivnosti (tip D).[319] No, kako je ova kovanica jako istrošena, nije moguće precizno odrediti njezinu tipološku pripadnost, iako ona zasigurno ne pripada kovovima srijemskog tipa; možda bismo je trebali svrstati među tauriščanski sitni novac (Sl. 98). Štoviše, iako se u izvornoj objavi navodi kako su obje potencijalno mlađeželjeznodobne kovanice s položaja Dunavski Lloyd pronađene u "predrimskim slojevima",[320] ponovnim uvidom u terensku dokumentaciju i same nalaze dolazimo do zaključka da je brončana tetradrahma zapravo pronađena u kompromitiranom kontekstu, dok je mala brončana kovanica, za koju nije sasvim sigurno utvrđeno je li mlađeželjeznodobnog datuma, pronađena u slično nepouzdanom kontekstu.[321]

Dakle, mlađeželjeznodobne kovanice su zasigurno bile korištene na području današnjeg Siska; jesu li korištene kao novac, gotovo je nemoguće sa sigurnošću utvrditi. Nadalje, zbog vrlo malog broja nalaza iz arheološkog konteksta, koji su se u određenoj mjeri pokazali kompromitiranima i nepouzdanima (samo dvije kasne tauriščanske tetradrahme s položaja Frankopanska ulica b.b. i Pogorelac potječu iz nekompromitiranog konteksta), nije moguće puno toga reći o prisustvu i upotrebi tih kovanica prije rimskog zauzimanja Seges(ti)ke/Siscije.[322]

in Noricum or the territory of the Scordisci (20% each). Four of the five coins are tetradrachms, and one is a small silver Norican coin. Four of the five coins are made of silver, and one is a bronze tetradrachm of the Scordisci. Naturally, this exceptionally small sample cannot speak for the overall ratio of coin types in the area of Sisak. Moreover, the archaeological context suggests that these coins were in circulation in both Late Iron Age and Early Roman Sisak.[318]

The coins discovered in Late Iron Age contexts include one late tetradrachm of the Đurđevac type made of poor silver (found at the Frankopanska Ulica b.b. position) (Fig. 97: 1), one late silver-coated bronze tetradrachm of the same type (found at the Pogorelac position) (Fig. 97: 2), one bronze tetradrachm minted by the Scordisci (found at the Dunavski Lloyd position) (Fig. 99), one small silver Norican coin of the Magdalensberg type (found at the Željeznički Kolodvor position), and one coin that was published as a bronze tetradrachm of the Syrmian type but based on its diameter (9 mm) and weight (0,65 g) matches the minimi of the Scordisci that were minted in the last phase of their monetary activities (type D).[319] However, as this coin is very worn, its typological attribution cannot be precisely established, though it is certainly not of the Syrmian type. It should then perhaps be defined as a small coin of the Taurisci (Fig. 98). Moreover, even though the original publication states that both of the potential Late Iron Age coins from the Dunavski Lloyd position were discovered in "pre-Roman layers",[320] a re-evaluation of the documentation and the finds themselves warrants the conclusion that the bronze tetradrachm was actually discovered in a compromised context, while the small bronze coin, which cannot be definitively dated to the Late Iron Age, was discovered in a similarly unreliable context.[321]

Late Iron Age coins were then certainly used in the territory of today's Sisak. Whether or not they were used as money is almost impossible to determine. Furthermore, due to the very small number of finds from archaeological contexts, which to a degree have turned out to be compromised or unreliable (only the two late tetradrachms of the Taurisci at the Frankopanska Ulica b.b. and Pogorelac positions come from an uncompromised context), little can be said with certainty about the presence and use of these coins before the Roman conquest of *Seges(ti)ca/Siscia*.[322]

318 Bilić 2018.

319 Koprivnjak 2010, 28–29, 48, br. 1–2; Bilić 2018, 269 br. 4, Add. 2.

320 Koprivnjak 2010, 29.

321 Za detaljnu analizu upućujem na svoj rad u pripremi (Bilić, forthcoming).

322 Kada je riječ o kovanici s Pogorelca, ona je zapravo pronađena u miješanom mlađeželjeznodobno-rimskom stratigrafskom kontekstu. Međutim, kako je na položaju Pogorelac mlađeželjeznodobno naselje funkcioniralo do kraja 1. st. pr. Kr., a najraniji rimski nalazi potječu iz naseobinskog sloja 2–3. st. (Drnić 2018, 15–16; Drnić, Groh 2018, 79, 87–90, 104–105, 116–117), možemo pretpostaviti da ovaj nalaz pripada ranijem kronološkom horizontu.

318 Bilić 2018.

319 Koprivnjak 2010, 28–29, 48, no. 1–2; Bilić 2018, 269 no. 4, Add. 2.

320 Koprivnjak 2010, 29.

321 For a more detailed analysis, I point the reader to my forthcoming paper (Bilić, forthcoming).

322 When it comes to the coin from Pogorelac, it was actually discovered in a mixed Late Iron Age-Roman stratigraphic context. However, seeing as the Late Iron Age settlement at Pogorelac was in use until the end of the 1st century BC, and the earliest Roman finds were discovered in the settlement layer dated to the 2nd – 3rd century (Drnić 2018, 15–16; Drnić, Groh 2018, 79, 87–90, 104–105, 116–117), this find should be ascribed to the older chronological phase.

Rimski republikanski novac

Uz mlađeželjeznodobne kovanice, na području današnjeg Siska pronađena je i veća količina rimskog republikanskog novca. Kako je rimsko republikansko kovanje završilo s propašću Republike (za završetak tog kovanja uzimaju se različiti datumi, ali za naše potrebe Bitka kod Akcija ili – alternativno – 27. pr. Kr. kao godina uvođenja principata ili 23. pr. Kr. kao godina Augustove monetarne reforme su prihvatljivi datumi), što otprilike koincidira s rimskim zauzimanjem Seges(ti)ke/Siscije, neupućeni bi proučavatelj antičke povijesti Siska mogao pomisliti da je pred njim ili njom jasna situacija: rimski republikanski novac, kovan prije osvajanja grada na ušću Kupe u Savu, bio je u optjecaju prije tog događaja.

Ipak, iz ostava odloženih u carskom razdoblju, tj. u 2. st., s područja južne Panonije (Gračanica, Osijek, Sotin) evidentno je da je u ovoj regiji rimski republikanski novac cirkulirao zajedno s carskim barem tijekom prva dva stoljeća nakon Krista.[323] Štoviše, analiza sastava triju najvećih ostava 1. i 2. st. s područja Ilirika koje se čuvaju u AMZ-u (Lički Ribnik, Sotin, Cesarica), tj. segmenata tih ostava predstavljenih republikanskim novcem, gotovo savršeno prati priljev rimskog republikanskog novca evidentiran u pojedinačnim nalazima s područja južne Panonije, uključivo Sisak, koji se čuvaju u AMZ-u, sa svim njegovim amplitudama.[324] Amplitude ne znače da je novac upravo tijekom tih razdoblja stizao u navedeno područje, već reflektiraju visok intenzitet kovanja i veličinu pojedinih emisija republikanskog novca, kovanih u tim vremenskim intervalima, obilježenih Savezničkim ratom (91. – 88.) i sukobom između Sule te Marija i marijevaca (88. – 87., 83. – 80.), kao i Prvim i Drugim ratom protiv Mitridata (88. – 81.) te, u drugom razdoblju, građanskim ratovima između Cezara, Bruta i Kasija, Pompeja, Oktavijana i Marka Antonija (49. – 31.).[325] Samim time jasno je da nalazi republikanskog novca izvan stratigrafskog konteksta ne mogu biti pouzdan kronološki indikator – nije moguće utvrditi pripadaju li ti primjerci optjecaju predcarskog ili carskog razdoblja. Štoviše, kako to pokazuje analiza ostava na koju smo se upravo referirali, vjerojatnije je da takvi pojedinačni nalazi reflektiraju optjecaj novca carskoga razdoblja. To znači da samo precizno stratigrafsko pozicioniranje pojedinih rimskih republikanskih kovanica može datirati njihovu prisutnost na nekom položaju unutar antičkog Siska.

Već spomenutom nedavnom objavom analize svih numizmatičkih nalaza s područja današnjeg Siska s pretpostavljenim vremenom kovanja u razdoblju prije Bitke kod Akcija utvrđeno je prisustvo većeg broja republikanskih kovanica unutar tog korpusa (Sl. 100).[326] Gotovo sve su načinjene od srebra i predstavljaju denare (92,93%), uz svega nekoliko kvinara (4,04%) i jedan raniji viktorijat. Uz te srebrne kovanice, iz Siska potječe i jedan brončani *semis* te izuzetno rijetki *aureus* Kvinta Kornuficija (Sl. 101).[327] Gotovo potpuno odsustvo brončanih republikanskih kovanica može

323 Bilić 2012, 374–375.

324 Bilić 2015, 11–12.

325 Bilić 2015, 11.

326 Bilić 2017a.

327 Dukat, Mirnik 1983–1984.

Roman Republican coinage

In addition to Late Iron Age coins, the territory of today's Sisak yielded an even larger number of Roman Republican ones. Seeing as Roman Republican minting ended with the collapse of the Republic (different dates are used to mark this end, but for our purposes the date of the Battle of Actium is an acceptable threshold, though 27 BC, the introduction of the Principate, or 23 BC, the year of Augustus' monetary reform, are also tolerable), which roughly coincides with the Roman conquest of *Seges(ti)ca/Siscia,* an uninformed researcher of ancient history of Sisak might think that they are faced with a clear situation, that the Roman Republican coins minted before the conquest of the city at the confluence of the Kupa and Sava were in circulation before that event.

However, the hoards deposited in southern Pannonia (Gračanica, Osijek, Sotin) in the Imperial period, i.e. the 2nd century, indicate that Roman Republican coins circulated in this region concurrently with Imperial ones, at least during the first two centuries AD.[323] Moreover, the analysis of the composition of the three largest hoards of the 1st and 2nd centuries from the territory of Illyricum kept at AMZ (Lički Ribnik, Sotin, Cesarica), i.e. the segments of those hoards represented by Republican coins, almost perfectly follows the influx of Roman Republican coins recorded in individual finds from the territory of southern Pannonia, including Sisak (kept at AMZ), and all of their amplitudes.[324] These amplitudes do not indicate that the coins came to said territories precisely during this period but rather reflect the high intensity of minting and the size of individual emissions of Republican coins, minted at those periods. These are marked by the Social War (91–88), the fights between Sulla and Marius and his partisans (88–87, 83–80) and the First and Second Mithridatic wars (88–81), and in the second period by the civil wars between Caesar, Pompeius, Brutus and Cassius, and Octavian and Mark Anthony (49 – 31).[325] The finds of Republican coins outside the stratigraphic context then clearly cannot be a reliable chronological indicator, as it is impossible to determine whether these finds belong to the circulation of the pre-Imperial or Imperial period. Moreover, as the above analysis of hoards suggests, such individual finds more likely reflect the circulation of the Imperial period. This means that only the precise stratigraphic positioning of individual Roman Republican coins can date their presence at a certain position in ancient Sisak.

The aforementioned recent publication of the analysis of all numismatic finds from the area of today's Sisak presumably minted before the Battle of Actium establishes the presence of a large number of Republican coins in the corpus (Fig. 100).[326] Almost all are made of silver and are denarii (92.93%), along with several quinarii (4.04%), and a single earlier victoriatus. In addition to these silver coins, Sisak yielded one bronze *semis* and an

323 Bilić 2012, 374–375.

324 Bilić 2015, 11–12.

325 Bilić 2015, 11.

326 Bilić 2017a.

sugerirati da su sakupljači koji su muzejima dostavljali materijal (kroz darove, otkupe ili kao muzejski povjerenici) favorizirali kovanice od plemenitih metala, ali možda ima i numizmatičko značenje. Naime, ukoliko su, kako to sugeriraju nalazi iz ostava, republikanski denari bili u optjecaju tijekom prva dva stoljeća Carstva, oni su tada bili u optjecaju istovremeno s velikom količinom rimskog *carskog* brončanog novca, što bi objasnilo potpuni nedostatak rimskih republikanskih bronci u Sisku (istovremeno, ova hipoteza barem djelomično objašnjava i vrlo malu količinu rimskih ranocarskih srebrnih kovanica u Sisku). U tom slučaju, oni bi pripadali vremenskom horizontu nakon zauzimanja Seges(ti)ke/Siscije, vjerojatno nakon gašenja Velikog ilirskog ustanka 6. – 9. n.e.

Određena količina rimskog republikanskog novca pronađena je u arheološkim istraživanjima. Među njima, dva denara i jedan kvinar, sve tri kovanice s položaja Dunavski Lloyd, objavljene su kao nalazi iz mlađeželjeznodobnih slojeva (Sl. 100).[328] Međutim, ponovnim uvidom u terensku dokumentaciju i same nalaze dolazimo do zaključka da je jedna od tih kovanica pronađena u nejasnom kontekstu – ne isključujući mogućnost da taj kontekst ipak pripada razdoblju prije zauzimanja Seges(ti)ke/Siscije – dok su preostale dvije pronađene u kontekstu koji sugerira pripadnost cirkulaciji augustovskog razdoblja. Naime, iz terenske je dokumentacije vidljivo da su te kovanice pronađene u stratigrafskoj jedinici zajedno s dva augustovska kovničarska asa i istovremenim asom tipa "oltar".[329] Ova interpretacija odgovara situaciji u ostatku regije, gdje su republikanski denari bili u širokoj upotrebi tijekom ranog Carstva.

Jedna grupa numizmatičkih nalaza čija izrada kronološki pripada razdoblju prije rimskog zauzimanja Seges(ti)ke/Siscije, partažirani rimski republikanski asi iz prve polovice 2. st. pr. Kr., bila je potpuno nepoznata prije nedavnih arheoloških istraživanja na položajima Željeznički kolodvor i Holandska kuća, gdje ih je pronađeno ukupno pet primjeraka (Sl. 102). No, oni zapravo sugeriraju optjecaj novca u ranocarskom razdoblju, jer je taj novac redovno korišten kao dio ranocarskog monetarnog sustava,[330] a nikako ne u 2. st. pr. Kr., kada su zapravo izrađeni. Njihov stratigrafski položaj na položaju Željeznički kolodvor (gdje su pronađena četiri primjerka prepolovljenih asa) nije u ovom trenutku objavljen, ali se sa sigurnošću može pretpostaviti da je riječ o ranocarskom kontekstu.

328 Koprivnjak 2010.

329 Ponovo, za detaljnu analizu upućujem na svoj rad u pripremi (Bilić, forthcoming).

330 Kos 1986, 30; Frey-Kupper, Stannard 2018, 309–317.

exceptionally rare *aureus* of Quintus Cornificius (Fig. 101).[327] The almost complete lack of Republican bronze coins suggests that the collectors who delivered the material to museums (as gifts, purchases or via museum commissioners), favorized coins made of precious metals, though there may have also been a numismatic explanation for this phenomenon. If Republican denarii, as suggested by finds from hoards, were in circulation during the first two centuries AD, then they were used at the same time as a large amount of *Imperial* bronze coins, which would explain the lack of Roman Republican bronzes at Sisak (simultaneously, this hypothesis at least partially explains the very small amount of early Imperial silver coins there). In that case, they would belong to the period after *Segest(ic)a/Siscia* was conquered, i.e. after the Great Illyrian Uprising (6–9 AD).

A certain number of Roman Republican coins were discovered in archaeological excavations. These include two denarii and one quinarius, all from the Dunavski Lloyd position, which were published as Late Iron Age finds (Fig. 100).[328] However, a re-evaluation of the field documentation and the finds themselves warrants the conclusion that one of these coins was found in an unclear context – without excluding the possibility that the context may actually be from the time before the conquest of *Segest(ic)a/Siscia* – while the other two were found in a context that suggests they were in circulation during the Augustan period. That is, the field documentation shows that the coins were discovered in the same stratigraphic unit as two Augustan asses and a contemporaneous as of the "Altar" type".[329] This interpretation corresponds to the situation in the rest of the region, where Republican denarii were widely used in the early Empire.

One group of numismatic finds that were produced before the Roman conquest of *Segest(ic)a/Siscia* are halved Roman Republican asses from the first half of the 2nd century BC (Fig. 102). These were completely unknown before the recent archaeological excavations of the Željeznički kolodvor and Holandska Kuća positions, where a total of five were discovered. However, they indicate the circulation of coins in the early Imperial period, as those coins were regularly used as part of the early Imperial monetary system,[330] but in no way during the 2nd century BC, when they were actually made. Their stratigraphic position at the Željeznički Kolodvor position (where four halved asses were discovered) is currently unpublished, but it can be assumed with certainty that it is an early Imperial context.

327 Dukat, Mirnik 1983–1984.

328 Koprivnjak 2010.

329 Again, for a more detailed analysis, see my forthcoming paper (Bilić, forthcoming).

330 Kos 1986, 30; Frey-Kupper, Stannard 2018, 309–317.

SL. 99
Novac Skordiska srijemskog tipa C iz Siska
(I. Krajcar)

FIG. 99
The Syrmian type C coin of the Scordisci from Sisak
(I. Krajcar)

SL. 100
Rimski republikanski novac iz Siska
(I. Krajcar)

FIG. 100
Roman Republican coins from Sisak
(I. Krajcar)

1. **2.** **3.** **4.**

SL. 101
Aureus Kvinta Kornuficija iz Siska
(I. Krajcar)

FIG. 101
The *aureus* of Quintus Cornificius from Sisak
(I. Krajcar)

Ostava imitacija drahmi Apolonije i Dirahija

Na kraju, jedan skupni nalaz novca iz neposredne okolice Siska gotovo bi sigurno pripadao monetarnom optjecaju u razdoblju koje je prethodilo rimskom zauzimanju željeznodobnog naselja, kada bismo mogli biti sigurni da je riječ o autentičnom nalazu. To je ostava imitacija drahmi Apolonije i Dirahija iz obližnje Odre Sisačke, "po izjavama nalaznika nađeni [su] kao slučajni skupni nalaz" (Sl. 102).[331] U Gradskom muzeju Sisak čuva se 68 kovanica iz ove ostave. Sve kovanice su suberati (brončane kovanice presvučene srebrom), a izrađene su od tri pečata aversa (od kojih jedan pečat dolazi u dvije varijante) i četiri pečata reversa (Sl. 103). Dvije kombinacije pečata dijele isti pečat aversa, uz prisustvo ili odsustvo (nesuvislog) natpisa ΣTIΠ, dok su im reversi različiti.[332] Reversi tih kovanica oponašaju novac grada Dirahija, kao i još jedna kombinacija pečata, zastupljena s 23 kovanice.[333] Sve tri kombinacije imaju natpis DYP na reversu te prikazuju kravu na aversu okrenutu nalijevo. Takva orijentacija krave na aversu trebala bi biti karakteristika kasnijih apolonijskih drahmi, što otvara mogućnost da je ovdje riječ o hibridima, tj. da su kao predložak za izradu aversa poslužili upravo prikazi na kasnijim apolonijskim drahmama. Na reversu posljednje od ove tri kombinacije nalaze se oznake u polju lijevo i desno od središnjeg prikaza; te oznake podsjećaju na slične simbole (toljaga, vrh koplja, luk, gušter) koji se pojavljuju na dirahijskim (i apolonijskim) staterima, mnogo starijima od drahmi. Posljednji tip imitacija ili krivotvorina oponaša drahmu Apolonije s natpisom NIKΩN i oznakom u egzergu koja možda imitira kaducej na aversu te kravom okrenutom nadesno (u originalu je ona okrenuta nalijevo), koja se datira u sedmo desetljeće pr. Kr.,[334] s time da se čini kako je pečat reversa ovih imitacija izveden iz pečata reversa prethodnog tipa zarotiranog 90° (uključujući i – sada stilizirane – oznake uz središnji prikaz). Sve kovanice otkovane su bez otklona između orijentacije aversa i reversa, dakle – u numizmatičkim terminima – s osi 12h/0°, što je izuzetno sumnjivo. Naime, za takvu preciznost potrebni su pričvršćeni pečati na šarkama (eng. *hinged die)*, što je tehnološka razina koju je teško očekivati od onovremenog krivotvoritelja, ili neka metoda bilježenja poravnanja dvaju pečata, za što je teško dokučiti jasnu motivaciju. Neke kovanice su raspucane na rubovima, što sugerira da su otkovane u trenutku kada se kovna pločica već ohladila.[335]

Imitacije drahmi iz Odre Sisačke donekle podsjećaju na korpus imitacija ili krivotvorina koje se čuvaju u Muzeju Slavonije, a koje su vjerojatno pronađene na području Osijeka. One se pripisuju Skordiscima, a kovane su od srebra slabe kvalitete, posrebrene bronce ili bronce, najčešće oponašajući kovove najkasnijih faza

331 Burkowsky 2008, 15. Prema tipologiji u Săşianu 1987 ove bi imitacije bilo pravilnije nazivati "krivotvorinama".

332 Kombinacija s natpisom na aversu: inv. br. 1189–1190, 1195–1199, 1202–1206, 1243–1246, 1250; kombinacija bez natpisa na aversu: inv. br. 1188, 1191–1194, 1200.

333 Inv. br.: 1201, 1207–1226, 1252–1253.

334 Inv. br.: 1227–1237, 1239–1242, 1247–1249, 1251, 1254–1256.

335 Rant 2000, 34, 38.

The hoard of imitations of drachms of Apollonia and Dyrrachium

One collective find from the immediate vicinity of Sisak would almost certainly belong to the monetary circulation of the period preceding the Roman conquest of the Iron Age settlement, if we were completely sure that the find was authentic. It is a hoard of imitations of the drachms of Apollonia and Dyrrachium that was supposedly discovered as a "collective chance find" at Odra Sisačka.[331] The Sisak Municipal Museum holds 68 of the coins from this hoard. All of the coins are suberates (bronze coins coated with silver) and were produced by three obverse dies (one appears in two variants) and four reverse dies (Fig. 103). Two combinations of dies share the obverse die with or without the (incoherent) inscription ΣTIΠ with different reverses.[332] The reverses of these coins imitate the coins of the city of Dyrrachium, as does another die combination represented with 23 coins.[333] All three combinations have the DYP inscription on the reverse and depict a cow turned to the left on the obverse. This orientation of the cow on the obverse should be characteristic of the later drachms of Apollonia, which points to the possibility that these are hybrids, i.e. their obverses were precisely based on the later drachms of Apollonia. The reverse of the last of the three combinations contains marks in the field on the left and right sides of the central depictions. These markings resemble similar symbols (club, spearhead, bow, lizard) that appear on the staters of Dyrrachium (and Apollonia), which are a lot older than the drachms. The last class of imitations (or counterfeits) emulate the drachm of Apollonia with the NIKΩN inscription and a mark in exergue that may imitate the caduceus on the obverse and a cow turned to the right (on the original it faces left). These are dated to the 60s BC.[334] It should be noted that the reverse die of these imitations seems to have been made from the reverse die of the former type that was rotated by 90° (including the now stylized marks beside the central depiction). All the coins were minted with no deviation in the orientation between the obverse and the reverse, in numismatic terms with a 12h/0° axis, which is very suspicious. To achieve such precision, one would have needed to use hinged die, which would have been difficult for the forgers of the time, or some means of marking the alignment of the two dies, the motivation of which is difficult to understand. Some coins have cracks at the edges, which suggests that they were minted once the flan had already cooled.[335]

The imitations of drachms found at Odra Sisačka resemble the corpus of imitations or counterfeits held in the Museum of Slavonia. These were probably found in the area of Osijek and are ascribed to the Scordisci. They were minted from low-quality silver, silver-coated bronze or simply bronze, most often imitating the

331 Burkowsky 2008, 15. According to the typology in Săşianu1987 it would be more appropriate to call these imitations "counterfeits".

332 A combination with an inscription on the obverse: inv. no. 1189–1190, 1195–1199, 1202–1206, 1243–1246, 1250; a combination without an inscription on the obverse: inv. no. 1188, 1191–1194, 1200.

333 Inv. no.: 1201, 1207–1226, 1252–1253.

334 Inv. nr.: 12271237, 12391242, 12471249, 1251, 12541256.

335 Rant 2000, 34, 38.

SL. 102
Partažirani rimski republikanski asi s položaja Željeznički kolodvor i Holandska kuća u Sisku
(I. Krajcar)

FIG. 102
Halved Roman Republican asses from the Željeznički Kolodvor and Holandska kuća positions in Sisak
(I. Krajcar)

aktivnosti te dvije kovnice koji su i daleko najprisutniji na ovom području.[336] Istovremeno, imitacije iz odranske ostave moguće je usporediti i s ostavom 417 hibridnih suberata drahmi Apolonije i Dirahija iz Troianula u Munteniji.[337] Ta je ostava, pohranjena u keramičkoj posudi, pronađena prilikom oranja, a ubrzo je na mjestu nalaza provedeno i sondiranje prilikom kojeg je pronađen manji broj dodatnih kovanica.[338] Na taj način, njezina autentičnost čini se neupitnom. Čitava ostava izrađena je s deset pečata aversa i svega četiri pečata reversa, no čak 401 primjerak je izrađen sa samo dva reversna pečata.[339] Natpisi na aversu i (osobito) reversu puni su grešaka i često nesuvisli, ali su prikazi – osobito reversa – ipak nešto vjerniji originalima u usporedbi s odranskim primjercima. Nažalost, u objavi ove ostave ne spominju se osi kovanica, tako da ostava iz Troianula ne nudi mogućnost usporedbe s ovim neobičnim aspektom proizvodnje odranskih drahmi.

emissions from the last phases of activity of the two mints that are by far the most numerous in this area.[336] At the same time, imitations from the Odra hoard are comparable with the hoard of 417 hybrid suberate drachms of Apollonia and Dyrrachium that was discovered at Troianul in Muntenia.[337] This hoard, which had been deposited in a ceramic vessel, was discovered during ploughing. The area was excavated immediately after, and the place yielded a small number of additional coins.[338] In this way, its authenticity seems unquestionable. The entire hoard was made with ten obverse and a mere four reverse dies. However, a total of 41 coins were made with only two reverse dies.[339] The inscriptions on the obverse and (especially) the reverse are full of mistakes and often incoherent. The depictions – especially on the reverse – are somewhat more true to the original compared to the examples from Odra. Unfortunately, the publication of this hoard does not include information on the axis orientations of the coins, and so the Troianul hoard does not allow for comparisons with this unusual aspect of the production of drachms from Odra.

336 Göricke-Lukić 2004, 38–39, 41–45, kat. 9–23. O imitacijama i krivotvorinama drahmi Apolonije i Dirahija vidi i Popović 1987, 114–115 te osobito Săşianu 1987. O popularnosti ovih imitacija/krivotvorina govori i nalaz kalupa za lijevanje imitacija dirahijskih drahmi, kao i samih lijevanih posrebrenih brončanih drahmi ovog tipa, na nalazištu Zboryanovo (ili Sboryanovo) u sjeveroistočnoj Bugarskoj (Dzanev, Prokopov 2007, 74; Paunov 2013, 167). Mitrea 1981–1982, 48 (cf. Săşianu 1987, 218) smatra da su imitacije pronađene na "geto-dačkom" području izrađivane u samim jadranskim kovničarskim središtima ili njihovoj neposrednoj okolici, što nalaz iz Zboryanova (ili Sboryanova) jasno demantira.

337 Mitrea 1981–1982, 32–33 u ostavi prepoznaje suberate, brončane primjerke bez vidljivog posrebrenja i primjerke koji se čine srebrnima.

338 Mitrea 1981–1982, 31.

339 Mitrea 1981–1982, 35–36.

336 Göricke-Lukić 2004, 38–39, 41–45, cat.9–23. On the imitations and counterfeits of drachms of Apollonia and Dyrrachium, see Popović 1987, 114–115, and especially Săşianu 1987. The popularity of these imitations/counterfeits is attested by the mold for casting Dyrrachium drachm imitations, as well as the cast silver-coated bronze drachms of this type from the site of Zboryanovo (or Sboryanovo) in northeastern Bulgaria (Dzanev, Prokopov 2007, 74; Paunov 2013, 167). Mitrea 1981–1982, 48 (cf. Săşianu 1987, 218) feels that these imitations, discovered in the "Getian-Dacian" territory, were made in the Adriatic minting centers or their immediate vicinity. This is directly refuted by the find from Zboryanovo (or Sboryanovo).

337 In the hoard, Mitrea 1981–1982, 32–33 recognizes suberates, bronze coins without a visible silver coating, and coins that appear to be made of silver.

338 Mitrea 1981–1982, 31.

339 Mitrea 1981–1982, 35–36.

SL. 103
Imitacije drahmi Apolonije i Dirahija iz Odre Sisačke (I. Krajcar)

FIG. 103
The imitation of drachms of Apollonia and Dyrrachium from Odra Sisačka (I. Krajcar)

Kako su drahme Apolonije i Dirahija početkom druge polovice 1. st. pr. Kr. na području Panonije gotovo u potpunosti zamijenjene rimskim republikanskim denarima, može se pretpostaviti da su njihove imitacije ili krivotvorine nastajale ranije. No, teško da su mogle nastati mnogo ranije, jer su i same drahme tih dvaju kovnica na ovo područje u većem broju stizale samo tijekom prethodnih nekoliko desetljeća 1. st. pr. Kr.[340] Samim time, ukoliko bi ostava iz Odre bila autentična, one bi pripadale marginama prisustva novca na području antičkog Siska u razdoblju prije rimskog zauzimanja željeznodobnog naselja. No, kako postoji određena sumnja da je ovdje riječ o modernim imitacijama ili krivotvorinama, ovaj nalaz treba uzeti s dozom rezerve. Istovremeno, ukoliko je ovdje riječ o autentičnim onovremenim imitacijama ili krivotvorinama, bitno je napomenuti da drahme Apolonije i Dirahija nisu bile dio standardne cirkulacije novca na prostoru Siska i sjeverozapadne Hrvatske,[341] čime se dovodi u pitanje motivacija lokalnog krivotvoritelja. Veća je vjerojatnost da bi te imitacije ili krivotvorine nastale u istočnijim krajevima te da su u Sisak stigle putem koji je danas vrlo teško rekonstruirati.[342] Svakako, o ovom nalazu nije rečena posljednja riječ.

Seeing as the drachms of Apollonia and Dyrrachium were almost completely replaced by Roman Republican denarii at the beginning of the second half of the 1st century BC in Pannonia, it can be assumed that their imitations or counterfeits were created before that time. However, they could not have been made long before that, as the drachms from those two mints only came to the area in large numbers during the several previous decades of the 1st century BC.[340] Therefore, if the Odra hoard is authentic, it belongs to the margins of the presence of coinage in the territory of ancient Sisak in the period prior to the Roman conquest of the Iron Age settlement. However, since there is a possibility that these are modern imitations or counterfeits, this find should be considered with caution. At the same time, if these are authentic imitations or counterfeits from antiquity, it should be noted that the drachms of Apollonia and Dyrrachium were not part of the standard circulation of coins in Sisak and northwestern Croatia,[341] which makes the local counterfeiter's motivations unexplained. These imitations or counterfeits were more likely made in areas further east and came to Sisak via a route that is difficult to reconstruct.[342] This is unlikely to be the final word on this find.

340 Za pregled mišljenja o ovoj problematici vidi Bilić 2014, 266–267, 273, 275–276.

341 Svega četiri primjerka pronađena su u Sisku, od kojih je jedna hemidrahma (Bilić 2017a, 460, 468 br. 28–31), uz samo dva primjerka na području SZ Hrvatske izvan Siska, od kojih je jedna brončana imitacija (Bilić 2017b, 226, 239 br. 8–9).

342 Kartu rasprostranjenosti imitacija i krivotvorina apolonijskih i dirahijskih drahmi donosi Săşianu 1987, 211 Fig. 2.

340 For an overview of opinions on this issue, see Bilić 2014, 266–267, 273, 275–276.

341 Only four have been discovered in Sisak, one of which is a hemidrachm (Bilić 2017a, 460, 468 no. 28–31). Only two have been discovered in northwestern Croatia outside Sisak, and one of them is a bronze imitation (Bilić 2017b, 226, 239 no. 8–9).

342 A distribution map of imitations and counterfeits of drachms from Apollonia and Dyrrachium can be found in Săşianu 1987, 211 Fig. 2.

8. UMJETNOST I DUHOVNOST ART AND SPIRITUALITY

Ivan Drnić, Katharina Rebay-Salisbury

Umjetnost, a naročito duhovni život i religija ljudskih zajednica iz prošlosti, teme su koje posebno zaokupljaju pozornost stručnjaka, ali i šire javnosti, iako je u kontekstu pretpovijesnih aliterarnih društava koja nisu ostavila pisane tragove teško u potpunosti razumjeti i interpretirati ove složene simboličke sustave. Važno je naglasiti da je ove pojmove ponekad nemoguće odvojiti, a umjetnost je često bila medij za prikazivanje pojedinih religijskih koncepata. Arheologija je kao znanstvena disciplina razvila određene metode koje služe razumijevanju ne samo materijalne već i duhovne kulture. Način na koji to čini je analiza predmeta koji se dovode u vezu s navedenim konceptima kao što su, primjerice, antropomorfne ili zoomorfne figurice kao i figurativni i apstraktni prikazi i simboli te kvalitetna interpretacija arheoloških konteksta u kojima su ti predmeti pronađeni, što je posebno važno u suvremenoj arheologiji. Primjerice, određeni konteksti strukturiranog sadržaja mogu upućivati na prakse koje odražavaju pojedine duhovne koncepte, a koji nisu tako jasno vidljivi u materijalnoj kulturi. Dobar primjer toga je ritualno deponiranje (često vrijednih) predmeta u vode, što je opisano u poglavlju o početcima sisačkog pretpovijesnog naselja, pri čemu se ti predmeti izuzimaju iz svakodnevne uporabe i cirkulacije i posredstvom vode kao transformativnog medija prenose u onaj "drugi", spiritualni svijet. Drugi primjer je jedini pretpovijesni grob koji upućuje na određeni grobni ritual koji je uključivao spaljivanje pokojnika i pokapanje posmrtnih ostataka uz priloge keramičkog posuđa, a koji je sisačka zajednica dijelila s nizom drugih zajednica koje su bile dio onoga što danas nazivamo kompleksom kulture polja sa žarama.

Također, određeni zaključci mogu se izvesti i komparativnom analizom pojedinih religijskih sustava koji dijele slične "gradivne" elemente. Primjer tome je pojava sličnih religijskih koncepata kod stariježeljeznodobnih zajednica srednje Europe i u arhajskoj Grčkoj za koju postoji razmjerno velik broj pisanih svjedočanstava koja mogu poslužiti boljem razumijevanju duhovnih i religijskih praksi istočnohalštatskog kulturnog kruga. Ipak, kod prebacivanja apstraktnih pojmova iz jednog u drugi kulturni i vrijednosni kontekst potreban je izniman oprez s obzirom na to da slične materijalne manifestacije često mogu imati različite semantičke sadržaje.[343]

Art, along with the spirituality and religion of past human communities, are topics that captivate the attention of scientists, as well as the wider public. This is despite the fact that it is difficult to completely understand and interpret these complex symbolic systems in the context of prehistoric illiterate societies that did not leave written traces. It is important to note that it is sometimes impossible to separate these terms, and art was often a medium of displaying certain religious concepts. As a scientific discipline, archaeology developed certain methods used to decipher not only material, but also spiritual culture. This is done through in-depth and meticulous analyses of the archaeological contexts of finds connected with the mentioned concepts, such as anthropomorphic or zoomorphic figurines, and figurative or abstract depictions and symbols. This process is a particularly important component of contemporary archaeology. For example, some structured contexts could point to practices that reflect certain spiritual concepts which are not as clearly visible in the material culture alone. A good example of this is the ritual deposition of (often very valuable) objects into bodies of water; a phenomenon discussed in the earlier chapter about the beginnings of the prehistoric settlement in Sisak. Through these rituals these valuable items exit everyday use and circulation and get transferred to the "other" spiritual world, with water acting as a transformative medium. Another example is seen with the only prehistoric grave from Sisak, the components and context of which suggest a specific burial ritual that included the incineration of the deceased and the burying their remains along with ceramic vessels. The community from Sisak shared this practice with a line of other communities that made up what we today call the Urnfield culture complex.

Additionally, certain conclusions can be drawn through the comparative analysis of individual religious systems that share similar "building" elements. An example of this is the appearance of similar religious concepts in Early Iron Age communities in central Europe and archaic Greece which left quite a large corpus of written testimonies that can help us understand the spiritual and religious practices of the eastern Hallstatt circle. However, when abstract concepts are shifted from one culture and value system to another, extreme caution is required, for similar physical manifestations can often have different semantic contexts.[343]

343 Potrebica 2013, 147–149.

343 Potrebica 2013,147–149.

Nažalost, materijalni tragovi koji bi svjedočili o religiji i mitologiji sisačke željeznodobne zajednice te ritualnim praksama kao materijalnim manifestacijama tih koncepata rijetki su, pa stoga i razina interpretacije reflektira kvantitetu dostupne građe. Ključnu komponentu u komunikaciji religijskih i mitoloških koncepta društava koja nisu koristila pismo imali su različiti vizualni simboli, kako oni figuralni tako i apstraktni, ali problem je interpretacije pojedinih simbola da je *teško razlučiti kada jedan te isti oblik ili prikaz ima religijsko, a kada društveno, heraldičko ili tek dekorativno značenje*.[344] Ostavljajući za sada po strani ovu semantičku problematiku, pozabavimo se pojedinim primjerima koji su poznati iz konteksta sisačkog željeznodobnog naselja, kao što su antropomorfne i zoomorfne figure, kao i figuralni i apstraktni prikazi i simboli i promotrimo njihovo značenje unutar šireg europskog kasnobrončanodobnog i željeznodobnog kulturnog konteksta.

8.1 PRIKAZI LJUDSKOG LIKA U STARIJEM ŽELJEZNOM DOBU – GLINENE FIGURICE IZ SISKA U KONTEKSTU (KATHARINA REBAY-SALISBURY)

Prikazi ljudskog lika na području središnje Europe znatno su učestaliji u starijem željeznom dobu (oko 800. – 450. g. pr. Kr.) nego u prethodom brončanom dobu. Prikazi su izrađivani u rasponu različitih veličina, oblika, materijala i tehnologija izrade, a svi prikazuju osobine ljudskog tijela iako značenje tog zaokreta u prikazivanju ljudskog tijela nije jasno.[345] Moguće je da ono predstavlja kraj ranijeg tabua prikazivanja tijela, promjenu u religiji u kojoj su bogovi smatrani sličniji ljudima, ili je možda riječ o nastojanju da se mitovi i priče dočaraju na slikovit način, prije nego što je pismenost prispjela na neko područje.

Na granicama mediteranskih kultura, u dijelovima istočne Francuske, Švicarske, južne Njemačke, Češke, Slovačke, Austrije, Mađarske, Slovenije, Hrvatske i sjeverne Italije, prikazi ljudskog lika nisu izravne kopije primjeraka s juga, ali nisu ni potpuno izvorne kreacije. Miješanjem stranih i lokalnih elemenata započela je ekspanzija jedinstvenih, neobičnih načina prikazivanja identiteta. Prikazi vjerojatno ne predstavljaju stvarne osobe već suvremenike autora koji su u zajednici imali specifične uloge i zadaće, što se može zaključiti na temelju njihovih frizura, odjeće, oružja i pratećih predmeta. Narativne scene uključuju gozbe i pijenje, sport i glazbena natjecanja, spolne odnose, pogrebne povorke, prinošenje žrtvi, lov i tkanje.

Najpotpunije scene zabilježene su na situlama – brončanim posudama za piće oblika vjedra, pronađenim većinom u grobovima osoba visokog statusa, koje su ukrašavane urezivanjem, iskucavanjem i cizeliranjem.[346] Pojasne kopče, korice mačeva i bodeža, sjekire, fibule i privjesci spadaju u brončane predmete koji su povremeno ukrašavani prikazima ljudskih likova. Ljudski prikazi također krase površine keramičkih posuda te su nacrtani,

344 Potrebica 2013, 150–151.

345 Rebay-Salisbury 2016a.

346 Frey 1969; Turk 2005.

Unfortunately, material traces which shed light on the religion and mythology of the Iron Age community from Sisak, or the ritual practices as the material manifestations of these concepts, are rare, meaning that the level of interpretation reflects the quantity of the available material. Visual symbols, both figural and abstract, were key components in the communication of religious and mythological concepts in illiterate societies. However, the problem behind the interpretation of individual symbols lies in the fact that "*it is difficult to discern when the same form or depiction has a religious, and when a social, heraldic or purely decorative meaning*".[344] Leaving this semantic problem aside for the time being, let us take a look at some examples of related artefacts from the Iron Age settlement in Sisak, such as anthropomorphic and zoomorphic figurines, and figural and abstract depictions and symbols, as well as explore their meaning in the wider Late Bronze and Iron Age contexts of central Europe.

HUMAN REPRESENTATIONS IN THE EARLY IRON AGE – THE FIGURINES FROM SISAK IN CONTEXT (KATHARINA REBAY-SALISBURY)

Human representations are much more common in Early Iron Age Central Europe (c. 800–450 BC) than in the proceeding Bronze Age. The images are made in a range of different sizes, shapes, materials and technologies, but they all depict human bodily features.[345] We do not know exactly what this turn to the human form signifies. It might mean an end to an earlier taboo of representing bodies, it might have accompanied a change in religious beliefs, in which gods are imagined more like humans, or it might follow the urge to express myths and stories in a haptic way, before writing was introduced in the area.

At the fringes of the Mediterranean Cultures, in parts of eastern France, Switzerland, southern Germany, the Czech Republic, Slovakia, Austria, Hungary, Slovenia, Croatia and northern Italy, human representations are neither exact copies of templates from the south, nor are they entirely independent creations. Mixing foreign and local elements, they give rise to idiosyncratic ways of depicting identities. The representations do not appear to be portraits of specific persons; rather they depict recurrent types of people engaging in specific roles and tasks, which can be differentiated by headdress, clothes, armour and accompanying objects. Narrative scenes include feasts with drinking, sport and music competitions, sex, funerary processions, sacrifices, hunting and weaving.

The most complete scenes are found on situlae – bronze drinking buckets found primarily in graves of people of high status, which are decorated with incisions or in *repoussé* and chasing technique.[346] Belt plates, scabbards of swords and daggers, axes, fibulae and pendants are amongst the bronze objects occasionally decorated with human representations. Human images also adorn the surfaces of ceramic vessels and are sketched,

344 Potrebica 2013, 150–151.

345 Rebay-Salisbury 2016a.

346 Frey 1969; Turk 2005.

SL. 104
Keramičke figurice iz Siska (I. Krajcar)

FIG. 104
Ceramic figurines from Sisak (I. Krajcar)

utisnuti ili oslikani na keramici. Prikaz cijelog ljudskog lika ili dijelova tijela poput lica, ruku ili stopala postali su dio ukrasnog repertoara starijeg željeznog doba.

Statue, stele i figurice se razlikuju budući da im je glavna svrha prikazivanje ljudskog tijela. Iako nije poznato jesu li antropomorfne figurice imale profano ili sakralno značenje, jesu li prikazivale bogove, heroje ili smrtnike, živuće ljude ili pokojnike, vjerojatno nisu sve imale isto značenje. Ono što možemo iščitati iz samih figurica su načela prikazivanja ljudskog tijela i osnovni načini klasifikacije ljudi, pa su kao takve korisni indikatori identiteta.

Keramičke figurice

Keramičke figurice su široko rasprostranjene u starijem željeznom dobu s obzirom na to da je ova glinena tijela relativno lako napraviti: glina je bila dostupna većini domaćinstava i bila je korištena kao građevni i keramičarski materijal, a pretežno potječe iz okolice naselja. Iako je proizvodnja visoko kvalitetne keramike zahtijevala vještinu i praksu, za pripremu i oblikovanje gline u pravilu nije bilo potrebno stručno znanje; otisci prstiju na keramici pokazuju da su se s glinom igrala i djeca oblikujući jednostavnije predmete.[347]

Mnoge značajke i osobine stariježeljeznodobnih keramičkih figurica su izravna posljedica korištenja gline, rastezljivog materijala koji može biti beskonačno oblikovan. Isključivo procesi sušenja i

347 Kamp *et al.* 1999; Králík, Novotný, Oliva 2002.

punched or painted on pottery. The human form as a whole or depicting only parts such as faces, hands or feet, become part of the decorative repertoire in the Early Iron Age.

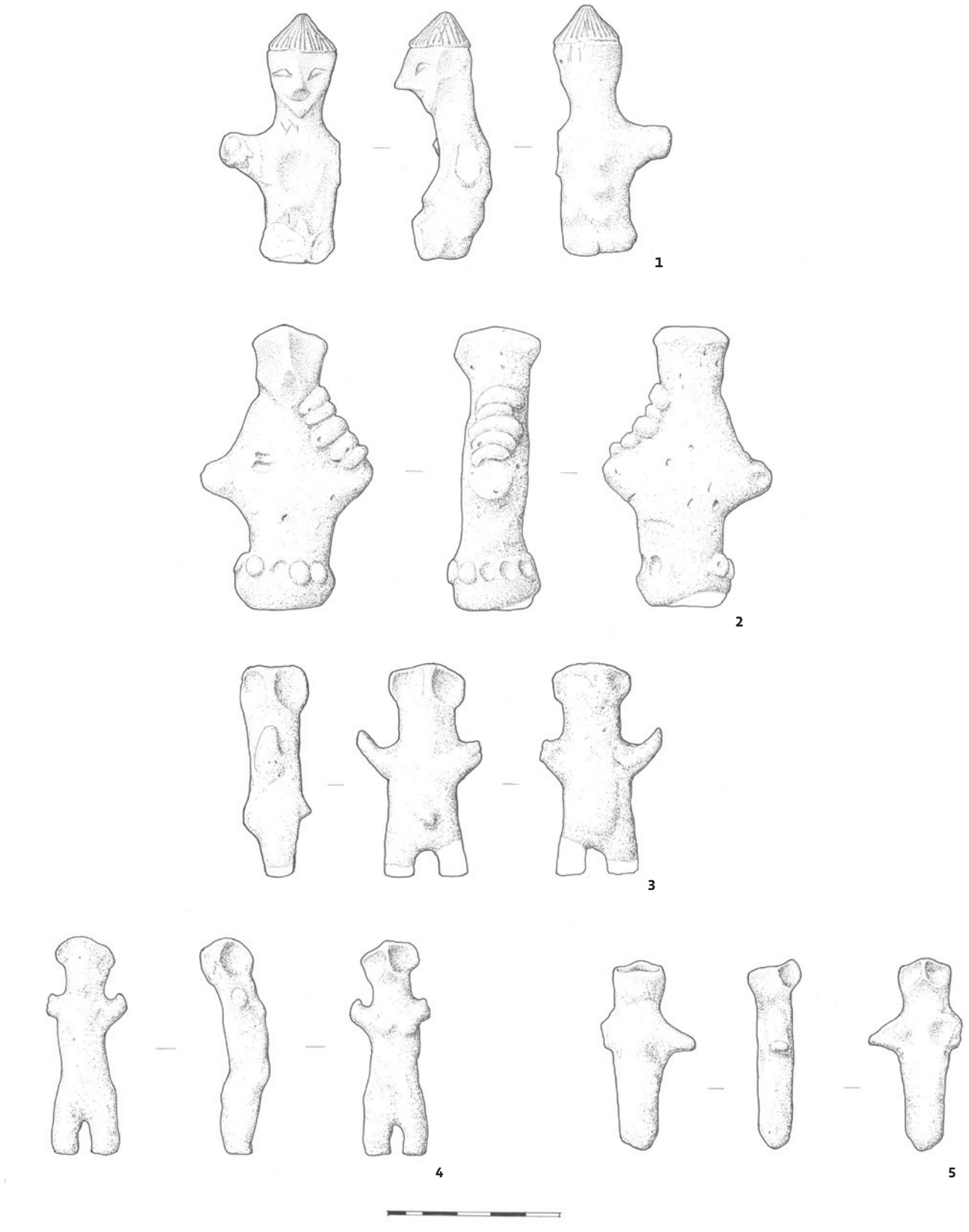
Statues, stelae and figurines are different, as they have the sole purpose of representing human bodies. We do not know if anthropomorphic figurines are profane or sacred, if they depict gods, heroes or mortal humans, living people or the recently deceased; most likely, they did not all have the same significance. What we can read from the figurines themselves are conventions of depicting human bodies, and basic ways how people were categorized – as such, they are useful indicators of identity.

Ceramic figurines

Ceramic figurines are widespread in the Early Iron Age, as these bodies of clay are comparatively simple to make: clay was available in most domestic contexts, as a building and potting material, and was usually sourced locally. Producing high quality pottery involved skill and practice, but in principle, preparing and forming clay does not involve specialist's knowledge; in fact, fingerprints on pottery prove that children played with clay and shaped simple objects.[347]

Many features and properties of Early Iron Age ceramic figurines are a direct result of using clay, a malleable material, as a raw material that can be infinitely shaped. Only the drying and firing

347 Kamp *et al.* 1999; Králík, Novotný, Oliva 2002.



SL. 105
Keramičke figurice iz Siska (M. Galić)

FIG. 105
Ceramic figurines from Sisak (M. Galić)

pečenja definiraju konačni oblik figurice jer pritom tanki i krhki spojevi lako pucaju.[348] Veličina keramičkih figurica često je prilagođena za rukovanje ljudskom rukom. Figurice iz Siska visoke su između 6 i 9 cm, što je idealno za držanje na dlanu (Sl. 104 – 105). Početak oblikovanja figurice kreće od jednostavnog glinenog valjka ili ploče. Budući da su ruke i noge češće oblikovane od spomenute ploče nego naknadno dodane, što bi ih učinilo sklonima pucanju, trup je središnji element, dok se ekstremiteti čine prekratkima za realističan prikaz tijela. Ovo se također odnosi na figurice iz Siska – dvije od njih su odrezane poput bisti, a ostale su postavljene na jako kratke noge. Ruke su horizontalno ispružene ili lagano savijene prema gore. Ova gesta je široko rasprostranjena tijekom starijeg željeznog doba i vjerojatno predstavlja apotropejsku gestu molitve i komunikacije s bogovima.

Glave su položene na debele vratove, vjerojatno da se spriječi pucanje, te su jednostavno oblikovane. Lica četiri figurice izrađena su štipanjem gline s dva prsta čime su modelirani nos i očne duplje, a lice je zadobilo pticoliki izgled. Prva figurica se razlikuje od ostalih budući da jedina ima pokrivalo za glavu, koničnu kapu ili kacigu s urezanim linijama (Sl. 105: 1). Figurica ima dobro formiran nos, šiljastu bradu i bademaste ureze koji predstavljaju oči. Ostatak gornjeg dijela tijela nema drugih zamjetnih osobina, a budući da je figurica skraćena i ruke joj nedostaju, izvorna gesta i postura su nejasni.

Odjeća i nagost

Stariježeljeznodobni prikazi uključuju nage i odjevene ljude, kao i neke za koje to nije moguće odrediti. Druga antropomorfna figurica jedini je sisački primjerak koji možda ima odjeću izvedenu u glini (Sl. 105: 2). Pet traka na lijevoj strani figurice može upućivati na odjevni predmet prebačen preko lijevog ramena, poput toge, desna ruka je obično ostavljana slobodna, a tkanina je skupljena na lijevom ramenu jer su većina ljudi dešnjaci. Kružne aplikacije na dnu figurice mogu predstavljati ukrase poput brončanih zakovica koje su u starijem željeznom dobu često ušivane u ritualne haljine i ogrtače.

Ostale četiri figurice iz Siska naizgled nemaju odjeću, ali nije jasno je li umjetnik namjerno htio prikazati naga tijela. Ljudi su najčešće prikazivani goli u seksualnim aktivnostima, sportu i kao ratne žrtve, a ponekad i u ritualnom kontekstu. Na primjer, brončana figurica s kola iz Strettwega[349] prikazuje muškarca i ženu s jasnim spolnim karakteristikama koji ubijaju jelena, a okruženi su tijelima bez spolnih obilježja.

process puts constraints on the final form of the figurine, as thin and brittle connections are prone to breaking.[348] The size of ceramic figurines is often adjusted so they can be easily handled by a human hand. The figurines from Sisak measure between six and nine centimetres – ideal for holding in the palm of one's hand (Fig. 104–105). The starting point to form a figurine is a simple clay cylinder or slab. Since the arms and legs are shaped out of this slab rather than attached, which would make them prone to breaking off, the trunk of the body remains the centrepiece and the extremities appear too short for a realistic depiction of a body. This applies to the Sisak figurines as well – two of them are truncated like busts, and the others have very short legs on which they are balanced. The arms are stretched out horizontally, or slightly bent up. This gesture is widespread in the Early Iron Age and probably signifies an apotropaic gesture of prayer and communication with the gods.

The heads are set on thick necks – presumably also to prevent breaking – and are shaped simply. The faces of four of the figurines are produced by pinching the clay with two fingers, which creates the nose as well as cavities for the eyes, rendering a bird-like appearance. Figurine 1 differs from the others, as it is the only one with a clear head cover – a conical cap or helmet with incised lines (Fig. 105: 1). The figurine has a well-formed nose, a pointed chin and almond-shaped incisions that indicate the eyes. The rest of the upper body does not any discernible features, and since the figurine is truncated and its arms are missing, its original gesture and posture is unclear.

Dress and nudity

Early Iron Age representations include both naked and clothed people, as well as some for whomit is impossible to tell. The anthropomorphic figurine 2 is the only one from Sisak that might show a garment by its clay applications (Fig. 105: 2). The five bands on the left side of the figurine may indicate clothing draped over the left shoulder; wearing a toga, for example, the right arm was usually left free and the fabric was collected at the left shoulder, as most people are right-handed. The round applications all around the bottom of the figurine may suggest decorations such as bronze rivets, which were often sewn onto ritual garments and mantles in the Early Iron Age.

The other four figurines from Sisak do not appear to be clothed, but it is unclear if a deliberately nude depiction was desired. People are usually shown naked if they engage in sexual activities, sport or are victims in war; they are also sometimes nude in a ritual context. The bronze figurines from the Strettweg wagon,[349] for example, depict men and women with clear sexual characteristics as they slaughter a stag; they are accompanied by sexless bodies.

348 Rebay-Salisbury 2014.
349 Egg 1996.

348 Rebay-Salisbury 2014.
349 Egg 1996.

Spol i rod

Spol je na ljudskim prikazima redovito naglašavan prikazivanjem penisa za muškarce i stidnice i/ili grudi za žene. Figurice koje se čine gole, ali se ne mogu jasno pripisati određenom spolu, često su bile interpretirane kao ženske, iako su u starijem željeznom dobu neke figurice prikazivane bez spolnih obilježja.[350] Primjerice, keramičke figurice iz Geimenlebarna i Langenlebarna u Austriji prisutne su u muškoj, ženskoj i inačici bez spolnih obilježja. Slično kao i kola iz Strettwega, dio su seta koji priča priču, što je bilo bitno u okvirima pogrebnih rituala.

Figurice bez obilježja spola pojavljuju se u ritualnom kontekstu na Turskoj kosi,[351] gdje su ljudske figurice obaju spolova, kao i životinjske figurice pronađene s ulomcima slomljenih posuda, pršljenima i kalemima te minijaturama, koje prikazuju štruce kruha i čamce. Osobe s prikazom muških i ženskih spolnih karakteristika zabilježene su u Turskoj kosi i Ripču u Bosni i Hercegovini.[352] Ovo može upućivati na činjenicu da je biološka i socijalna reprodukcija od izuzetne važnosti u željeznom dobu, a moguće i na mit o dvospolnom djetetu koje su Grci kasnije zvali *hermaphroditos*.

Rodne kategorije su među najvažnijim strukturnim principima u svakom društvu i među nekoliko njih koje je moguće iščitati na prikazima ljudskog lika iz starijeg željeznog doba. Ideje o muškosti i ženstvenosti zasnovane su na muškom i ženskom spolu, ali o njemu ne ovise u potpunosti.[353] Sve u svemu, prikazi muškaraca brojnošću nadmašuju prikaze žena u omjeru tri prema jedan, a ujedno su i muške djelatnosti i aktivnosti češće prikazivane.

Među sisačkim primjercima četvrta figurica bi zbog izbočenih grudi i abdomena mogla uvjetno biti interpretiran kao ženska (Sl. 105: 4). Treći primjerak mogao bi prikazivati muškarca budući da se penis i mošnje jasno vide ako se figurica promatra sa strane (Sl. 105: 3). U oba slučaja, spolne karakteristike su samo slabo izražene i definitivno nisu glavna poruka figurica.

Šešir ili kaciga na prvoj figurici (Sl. 105: 1), u kombinaciji s ćelavom ili možda obrijanom glavom, tipično je muški atribut. Ovaj tip pokrivala za glavu pojavljuje se u kontekstu vojne parade na situli iz Certose,[354] s čovjekom koji ore na situli iz Montebellune[355] te ukrašava u kamenu izrađenu glavu ratnika iz Hirschlandena.[356] Jedina je sisačka figurica s jasnom indikacijom roda.

350 Rebay-Salisbury 2016b.
351 Čučković 2009.
352 Raunig 2004, 58.
353 Sofaer-Deverenski 1997; Sørensen 2000.
354 Lucke, Frey 1962.
355 Bianchin Citton 2014.
356 Zürn 1964.

Sex and gender

The sex of human representations is frequently made obvious by depicting penises for men and vulvae and/or breasts for women. Figurines that appear naked, but cannot be ascribed clearly to one sex or the other have often been interpreted as female, but in the Early Iron Age, there are also some figures that are depicted as sexless.[350] The ceramic figurines from Gemeinlebarn and Langenlebarn in Austria, for example, come in the male, female and sexless variety. Similar to the Strettweg wagon, they are part of a set that tell a story, which was relevant in the framework of the funerary practices.

Sexless ceramic figurines further appear in the ritual context of Turska kosa, Croatia,[351] where human figurines of both sexes as well as animal figurines were found with sherds of broken vessels, spindle whorls and spools, miniatures representing loafs of bread and boats. Intersex persons, which have both male and female sexual characteristics present, are known from Turska kosa and at Ripač, Bosnia and Herzegovina.[352] This might point to biological and social reproduction being a central concern in the Iron Age, and perhaps to the myth of a two-sexed child, which the Greeks later called *hermaphroditos*.

Gender categories are amongst the most important structuring principles in any society, and amongst the few that can be read from Early Iron Age human representations. Ideas about masculinity and femininity are based on male and female sex, but do not entirely depend on it.[353] Overall, male human depictions outnumber female depictions by about three to one, and male actions and activities are much more frequently depicted than women's.

Amongst the figurines from Sisak, figurine 4 can tentatively be interpreted as female, due to the protruding breasts and abdomen (Fig. 105: 4); figurine 3 may be read as male, as a penis and scrotum are apparent when viewing the figurine from the side (Fig. 105: 3). In both cases, the sexual characteristics are only weakly expressed and are certainly not the main message of the figurines.

The hat or helmet on figurine 1, in addition to the otherwise bald and perhaps shaved head, is a typically male attribute (Fig. 105: 1). This type of headdress appears in the context of a military parade on the Situla of Certosa,[354] with a ploughing man on the Situla from Montebelluna,[355] and, in stone, adorns the head of the Hirschlanden warrior.[356] It is the only figurine from Sisak with clear indications of gender.

350 Rebay-Salisbury 2016b.
351 Čučković 2009.
352 Raunig 2004, 58.
353 Sofaer-Deverenski 1997; Sørensen 2000.
354 Lucke, Frey 1962
355 Bianchin Citton 2014.
356 Zürn 1964.

Kontekst

Kontekst u kojem su pronađene keramičke figurice najvažniji je za interpretaciju njihovog značenja i funkcije. Keramičke figurice su pronađene u naseljima, grobovima i na ritualnim mjestima, a mnogo njih su slučajni nalazi bez poznatog konteksta. U grobovima se pojavljuju pojedinačno ili kao dio seta; u svetištima su često dio običaja odlaganja koji vodi do gomilanja velike količine predmeta tijekom vremena. Primjeri ritualnih mjesta na kojima je nagomilan veliki broj keramičkih figurica i minijaturnih predmeta su Němějice-Burkovák u Češkoj[357] i Turska kosa u Hrvatskoj.[358] Oba nalazišta su smještena na malim uzvisinama koje su služile kao prirodna svetišta. Činjenica da su barem neke od figurica bile odlagane i odbačene možda objašnjava zašto su bile samo rudimentarno oblikovane. Iz istodobnih centara, poput Este u Italiji,[359] poznato je da su svetišta bila posvećena različitim bogovima i božicama koji su okruživali pradavne gradove. Votivni darovi su ponekad, ali ne uvijek, specifični za pojedina božanstva ili područja njihovog djelovanja, a možda prikazuju i same osobe koje prinose žrtvu.

Četiri sisačke figurice slučajni su nalazi iz rijeke Kupe, a njihov izvorni kontekst je nepoznat. Naselje koje datira od kasnog brončanog doba do rimskog razdoblja smješteno je na okuci rijeke Kupe. Poznato je da je barem u razdoblju kasnog halštata, od 500. do 300. pr. Kr.,[360] imalo dobro organiziranu unutarnju strukturu s kućama izgrađenim u pravokutnoj mreži. Figurice možda potječu iz kućnog konteksta, a u rijeku su dospjele erozijom ili su u bačene kao žrtveni prilozi. Tijekom srednjoeuropskog željeznog doba vodeni konteksti su bili popularna svetišta.

Peta figurica otkrivena je 2019. godine tijekom iskopavanja željeznodobnog naselja na položaju Sisak-Pogorelac. Figurica je pronađena u sloju otpada sastavljenom od organskih otpadaka i puno ulomaka keramike, smještenom uz kuću s ostatcima glinenog poda i srušenim zidovima (Sl. 105: 5). Ovo upućuje na uporabu u kućanstvu u kojem je možda služila kao dječja igračka iako mogućnost da je figurica predstavljala malenog kućnog boga ili božicu ne može biti isključena, a njezin profani način odbacivanja može upućivati na promjenu namjene mjesta na koje je izvorno bila postavljena ili na promjenu vjerskih uvjerenja.

Iako je moguće objasniti i interpretirati pojedine aspekte i osobine stariježeljeznodobnih figurica s ljudskim prikazima, uključujući i one iz Siska, one i dalje ostaju zagonetne. Prikazi nas suočavaju s nadama, strastima, željama i brigama koje su željeznodobni pojedinci izražavali u međusobnoj komunikaciji i u komunikaciji s bogovima putem umjetničkog izražaja te ujedno predstavljaju moćna svjedočanstva pradavnih osjećaja i vjerovanja.

357 Chytráček *et al.* 2009.

358 Čučković 2009.

359 Ruta Serafini 2002.

360 Drnić, Groh 2018.

Context

The context in which ceramic figurines are found is central to interpreting their meaning and function. Ceramic figurines have been found in settlements, graves and ritual settings, and many more are stray finds without a known context. In graves, they appear singularly or as part of a set; in sanctuaries, they are often part of a depositional practice that leads to the accumulation of a large amount of objects over time. Examples of ritual sites where a large number of ceramic figurines and miniature objects accumulated include Němějice-Burkovák, Czech Republic,[357] and Turska kosa, Croatia;[358] both sites are located on a small elevation that served as a natural sanctuary. The fact that at least some ceramic figurines were meant to be deposited, discarded and thrown away perhaps explains why they are often shaped only in a very rudimentary way. From contemporary centres such as Este, Italy,[359] we know that sanctuaries were dedicated to different gods and goddesses that surrounded ancient cities. Votive offerings were sometimes, but not always, specific to the deities or their areas of responsibilities, as well as possibly depicting the dedicators.

Four of the figurines from Sisak are stray finds from the Kupa River; their original context is unknown. A settlement dating from the Late Bronze Age to the Roman period is located in an oxbow of the Kupa River, with a well-organized internal structure of houses built in a rectangular grid, at least in the late Hallstatt phase 500–300 BC.[360] The figurines may have come from a domestic context and been washed into the river by erosion, or they may have been thrown into the river as offerings. Throughout the Central European Iron Age, watery contexts were popular as sanctuaries.

The fifth figurine was discovered in 2019, during excavations at the Iron Age settlement of Sisak-Pogorelac. The figurine was found in a refuse layer with organic waste and many pottery fragments, adjacent to a house with the remains of a clay floor and collapsed walls (Fig. 105: 5). This suggests a domestic use, perhaps as a child's toy, although the possibility that the figurine represented a small house god or goddess cannot be excluded and its profane mode of discard may hint at a change of use of its usual place or a change of ritual beliefs.

Whilst it is possible to explain and interpret some aspects and features of human representations of the Early Iron Age – including the ones from Sisak – they remain enigmatic. The images confront us with the hopes, desires, wishes and worries that Iron Age people articulated as they communicated with each other and their gods through artistic expression, and represent powerful testimonies of ancient emotions and beliefs.

357 Chytráček *et al.* 2009.

358 Čučković 2009.

359 Ruta Serafini 2002.

360 Drnić, Groh 2018.

SL. 106
Privjesak u obliku
ženske glave i torza iz Siska
(I. Krajcar)

FIG. 106
The pendant in the shape
of a woman's head and torso from Sisak
(I. Krajcar)

8.2 OSTALI ANTROPOMORFNI PRIKAZI (IVAN DRNIĆ)

Osim prethodno opisanih antropomorfnih keramičkih figurica, prikazi ljudskog tijela ili njegovih dijelova, primarno glave, zabilježeni su i na drugim predmetima izrađenima od pečene gline ili različitih metala. Primjerice, na ulomku lonca iz Sonde 2 na Pogorelcu nalazio se plastično izveden stilizirani prikaz ljudske figure pri čemu je lice izrađeno na isti način kao i kod većine sisačkih plastika (Sl. 112: 3). Za usporedbu, prikazi ljudskih likova, uključujući i konjanike, zabilježeni su na brojnim ulomcima keramičkih posuda pronađenih na kultnom mjestu 1 na Turskoj kosi, a antropomorfni prikaz nalazio se i na piramidalnom utegu s istog položaja,[361] kao i na nekoliko utega iz japodskog sojeničarskog naselja u Ripču na rijeci Uni.[362]

Slijedi srebrni privjesak u obliku stiliziranog prikaza cijelog tijela s određenim detaljima na odjeći, što bi moglo upućivati da se radi o ženskoj figuri. Privjesak je izrađen od dva srebrna lima s 94,4% srebra i 2,1% bakra, iskucana na matrici i spojena lemljenjem (Sl. 80).[363] Na glavi privjeska nalazi se petlja kroz koju je provučena karika izrađena od srebrne žice. Slične privjeske, koje je A. Tonc definirala kao japodski tip, nalazimo tijekom 2. i 1. st. pr. Kr. na prostoru od istočne jadranske obale do južne Panonije pri čemu su najbliže analogije sisačkom primjerku zabilježene u poznatoj židovarskoj ostavi u južnom Banatu.[364]

Tehnološki, ali i estetski vjerojatno najzanimljiviji željeznodobni predmet iz Siska je dvodijelni privjesak sastavljen od pločice srebrnog lima na koju je zakovicama pričvršćena plastično izvedena ženska glava izvedena iskucavanjem lima izrađenog od legure srebra i zlata (Sl. 106). Donja je pločica izrađena od standardne legure s nešto povećanim udjelom bakra u omjeru 90,6% (Ag) naspram 9,4% (Cu), dok je u limu korištenom za iskucavanje ljudskog lika zabilježeno čak 12,5% zlata, što stvara zanimljiv koloristički efekt u odnosu na čisto srebrnu pozadinu. Privjesak visi na lančiću koji je sastavljen od četiri segmenta povezana s dva veća i jednim manjim obručem. Lančani segmenti izrađeni su od legure s visokim postotkom srebra (97,9%), dok je mjerenje kemijskog sastava jednog obruča pokazalo visok postotak bakra (39,2%) u odnosu na 60,8% srebra, za što razloge vjerojatno treba tražiti u činjenici da je ovaj element imao mehaničku, a ne vizualnu funkciju.[365]

Stilski, radi se o vrlo kvalitetnom prikazu ženskog lika izvedenom u helenističkoj tradiciji s kosom smotanom u pletenice, velikim bademastim očima i blagim zagonetnim osmjehom. Oko vrata se nalazi masivni torkves koji bi mogao predstavljati kontinentalni/latenski ikonografski element, dok okomite linije na prsima mogu predstavljati ogrlicu ili ukras na odjeći. U tehničkom i stilskom pogledu paralele bliske sisačkom privjesku nalazimo u manjoj skupini predmeta koji potječu s liburnskog prostora.

361 Čučković 2009, 107, 109–110, T. 58: 1; T. 61: 3, 6; T. 62: 1, 4, 6–7, 9; T. 79: 11.

362 Raunig 2004, 34–36.

363 Drnić, Franjić 2014, 87, Dodatak 3.

364 Jevtić, Lazić, Sladić 2006, 43–48, 135–137.

365 Drnić, Franjić 2014, 87.

OTHER ANTHROPOMORPHIC DEPICTIONS (IVAN DRNIĆ)

Other than the previously described anthropomorphic ceramic figurines, depictions of the human body or its parts, primarily the head, have also been recorded on other items made of fired clay or different metals. For example, a pot fragment, discovered in Trench 2 at Pogorelac, contained an applied, stylized depiction of the human figure, with the face rendered in a similar manner to those of most of the figurines from Sisak (Fig. 112: 3). In comparison, depictions of the human figure, including images of horseback riders, have been observed upon numerous fragments of ceramic vessels discovered at cult-related place 1 at Turska Kosa. Other anthropomorphic depictions have also been found on a pyramidal loom-weight from the same site,[361] as well as upon several weights from the Iapodian stilt house settlement at Ripče on the Una River.[362]

Another example is a silver pendant in the shape of a stylized human body, with certain details on the clothing that could point to it being a female figure. The pendant is made from two silver sheets, containing 94.4% silver and 2.1% copper, which were formed on a matrix and then soldered together (Fig. 80).[363] The head of the pendant included a loop with a hoop made of silver wire. Similar pendants dating to the 2nd and 1st centuries BC, defined by A. Tonc as Iapodian type, have been found in the area between the eastern Adriatic coast and southern Pannonia, with the closest analogies to the find from Sisak coming from the well-known hoard from Židovar in the southern Banat region.[364]

Technologically, but also aesthetically, the most interesting Iron Age find from Sisak is the bipartite pendant composed of a plastically formed female head made by hammering of a sheet of gold and silver alloy that was fastened to a sheet of silver by rivets (Fig. 106). The lower sheet was made out of the standard alloy with a somewhat increased portion of copper, in a 90.6% (Ag) to 9.4% (Cu) ration, while the sheet that was used to shape the female figure was 12.5% gold, creating an interesting coloristic effect by contrasting with the purely silver background. The pendant hangs from a chain that is composed of four segments connected to two larger hoops and one smaller one. The chain segments are made of an alloy with a large percentage of silver (97.9%). The chemical composition of one hoop has a high percentage of copper (39.2%) in relation to silver (60.8%), which can be explained by the fact that the piece serves a mechanical rather than visual function.[365]

Stylistically, this is a high-quality depiction of the female figure made in the Hellenistic tradition, with braided hair, large almond-shaped eyes and a slight, mysterious smile. A massive torque is around her neck that could indicate continental/La Tène iconographic elements, while the vertical lines on the chest

361 Čučković 2009, 107, 109–110, Pl. 58: 1; Pl. 61: 3, 6; Pl. 62: 1, 4, 6–7, 9; Pl. 79: 11.

362 Raunig 2004, 34–36.

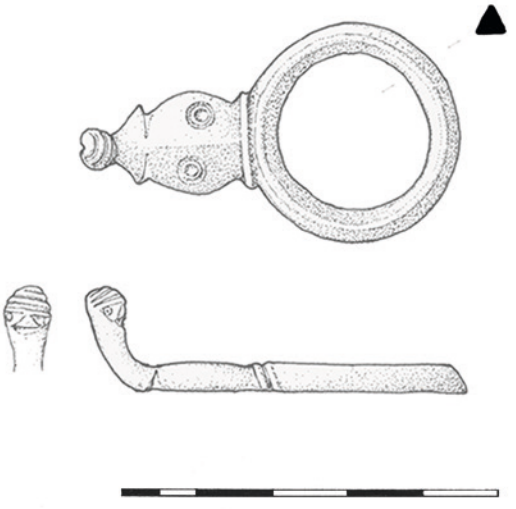
363 Drnić, Franjić 2014, 87, Appendix 3.

364 Jevtić, Lazić, Sladić 2006, 43–48, 135–137.

365 Drnić, Franjić 2014, 87.

SL. 107
Pojasna kopča s prikazom ljudske glave / ženskog lika iz Siska (I. Krajcar, M. Galić)

FIG. 107
The belt buckle with the depiction of a human head / female figure from Sisak (I. Krajcar, M. Galić)



Realistični prikazi ženskih glava i poprsja s detaljima frizure i nakita zabilježeni su na pojasnoj kopči iz Podgrađa kod Benkovca, kao i na privjesku s fibule tipa Baška iz Baške, na limovima koji su bili dio liburnskih pločastih fibula iz Nina te na srebrnom limu iz groba 336 iz Jezerina u dolini Une.[366] Predložena datacija za ovu grupu predmeta, koju A. Tonc definira kao liburnsku, je 3. – 2. st., s određenom mogućnošću trajanja i početkom 1. st. pr. Kr.

Prikaz ljudske glave nalazi se i na prstenastoj pojasnoj kopči koja tipološki pripada inačici 4C prema tipologiji G. Bataillea datiranoj u kraj 3. i prvu polovicu 2. st. pr. Kr. (LT C2), pri čemu antropomorfni prikaz sisačku kopču čini jedinstvenom među sličnim primjercima (Sl. 107).[367] Na glavi se jasno razaznaju frizura, široki trokutasti nos i oči ispod kojih se naziru usta. S obzirom na to da se radi o karakterističnom predmetu latenske kulture, prikaz glave ne bi bio posebnost jer je simbolika ljudske glave u okvirima latenske umjetnosti zauzimala zaista posebno mjesto. Prikazi glava, koje često nose i maske, nalaze se na različitim predmetima, od oružja, posebno mačeva, preko elemenata nošnje (fibula, torkvesa, narukvica), elemenata konjske opreme, brončanog posuđa, okova drvenih posuda te keramičkih posuda, do novca, ali i samostojećih skulptura kao u slučaju poznate kamene glave iz Mšeckih Žehrovica.[368] Kako bismo bolje dočarali važnost te simbolike donosimo citat P. Jacobsthala (1944), pionira proučavanja latenske umjetnosti: *S obzirom na to da je glava Keltu bila duša, središte emocija, kao i samog ljudskog života, simbol božanskog i moći onostranog, među Keltima je štovana iznad svega ostalog.*

Ipak, ako se sisačka kopča bolje promotri, moguća je i drugačija interpretacija prikaza. Naime, realistično oblikovana glava na trnu prelazi u trokutasto proširenje koje bi moglo predstavljati torzo sa shematiziranim rukama, a zvonoliki dio s dvije kružnice činio bi donji dio tijela, vjerojatno odjeven u haljinu. Na taj se način dobiva prikaz cijelog tijela, odnosno ženskog lika kakav je, primjerice, poznat s kopče pojasa od štapićastih uvijenih članaka iz Surčina.[369]

366 Tonc 2012, Sl. 1.

367 Bataille 2001, 454, Sl. 3.

368 Megaw, Megaw 2001.

369 Drnić 2015a, 90–91, Sl. 24: 1–1a.

could represent a necklace or decorations on her clothes. In technological and stylistic terms, parallels for the pendant from Sisak can be found in a smaller assemblage that derives from Liburnian territory. Realistic depictions of female heads and busts, with detailed hairstyles and jewelry, have been recorded on a belt buckle discovered at Podgrađe near Benkovac, a pendant on a Baška type fibula from Baška, on sheets that were parts of Liburnian plate fibulas from Nin, and on a silver sheet from grave 336 from Jezerine in the Una River valley.[366] This group of finds, defined by A. Tonc as Liburnian, has been dated to the 3rd/2nd century BC, and, possibly even somewhat later, into the beginning of the 1st century BC.

A depiction of a human head was also recorded on a belt buckle that, as defined by G. Bataille, typologically belongs to the 4C type, therefore dating to the late 3rd century and the first half of the 2nd century BC (LT C2). This find from Sisak is the only one with an anthropomorphic depiction (Fig. 107).[367] The head clearly displays a similar hairstyle, wide triangular nose, eyes and mouth. Seeing as this is a characteristic find of the La Tène culture, the depiction of the head itself would not have been a unique feature, seeing as the human head held a truly special place in their symbolic system. Depictions of heads, often masked, are found on different items, including weapons (especially swords), elements of the attire (fibulas, torques, bracelets), elements of horse-riding equipment, bronze fittings, fittings of wooden vessels, ceramic vessels, coins, and self-standing sculptures; as is the case with the famous stone head from Mšecke Žehrovice.[368] The symbolic importance of the head is clearly defined in a quote by P. Jacobsthal (1944), a pioneer in the study of La Tène art: *Amongst the Celts the human head was venerated above all else, since the head was, to the Celt, the soul, center of the emotion, as well as of life itself, a symbol of divinity, and of the powers of the other-world.*

However, if one studies the buckle from Sisak in more detail, another possible interpretation appears. Namely, the realistically shaped head at the fastener transitions into a triangle-shape that could represent a torso with wide schematized arms, and the bell-shaped part below with two circles could then make up the lower part of the body, probably in a dress. If this interpretation is correct, then the whole body of a human figure is portrayed, perhaps even the female figure that is known from finds such as a belt buckle made of rod-shaped spirally twisted links from Surčin.[369]

366 Tonc 2012, Fig. 1.

367 Bataille 2001, 454, Fig. 3.

368 Megaw, Megaw 2001.

369 Drnić 2015a, 90–91, Fig. 24: 1–1a.

SL. 108
Figurice ovna i konja iz Siska
(I. Krajcar)

FIG. 108
The ram and horse figurines from Sisak
(I. Krajcar)

8.3 PRIKAZI ŽIVOTINJA (IVAN DRNIĆ)

U kontekstu sisačkog željeznodobnog naselja prikazi životinja zabilježeni su kao samostojeće figure izrađene od keramike ili bronce ili češće kao dekorativni elementi na drugim predmetima, kao što su keramičke i brončane posude ili dijelovi nošnje (narukvice, fibule). O animalnoj simbolici koja je zasigurno imala važnu ulogu u duhovnosti i mitologiji europskih kasnobrončanodobnih i željeznodobnih društava dosta je pisano, pa će se ovdje sažeto iznijeti interpretacije za pojedine vrste životinja.

Zasigurno jedan od kvalitetnijih figuralnih prikaza iz Siska brončana je plastika u funkciji privjeska s prikazom ovna s naglašenim spolnim organom i obručem za vješanje na leđima (Sl. 108).[370] Figurice koje predstavljaju konje, pse, bikove i ovnove nalazimo na prostoru Italije te središnje i jugoistočne Europe od kasnog brončanog doba,[371] iako većina predmeta iz databilnih cjelina pripada starijem željeznom dobu. Znatan broj ovih predmeta nalazimo na japodskom prostoru, a pojedine primjerke i u okvirima dolenjske skupine (Dolenjske toplice, Podzemelj) te na prostoru južne Panonije (Donja Dolina, Batina, Dalj). Uglavnom potječu iz ženskih grobova iz razdoblja od 7. do 4. st. pr. Kr., a pretpostavlja se da su imali funkciju amuleta. Kao i za niz sisačkih predmeta, najbližu analogiju za privjesak u obliku ovna nalazimo na groblju donjodolinske željeznodobne zajednice. U bogatom ženskom grobu kojega dijelovi nošnje pokojnice datiraju u drugu polovicu 7. i početak 6. st. pr. Kr., uz desnu natkoljenicu nalazio se privjesak u obliku ovna s obručem za vješanje na leđima, nešto nezgrapnije izveden u usporedbi sa sisačkim primjerkom.[372] Osim figuralnih plastika, prikaze ovnova, najčešće glave, nalazimo i u obliku staklenih i jantarnih perli koje su u većem broju zabilježene u grobovima pod humcima dolenjske halštatske skupine u Novom mestu,[373] a nekoliko prikaza je poznato i s perli i fibula s japodskog (Jezerine)[374] i liburnskog (Kosa kraj Ljupča, Trošenj-grad)[375] prostora te na keramičkim posudama, tzv. askosima, iz Dalja.[376] Simbolika ovna, široko rasprostranjena u različitim pretpovijesnim društvima, veže se uz snagu, plodnost (što bi kod sisačke figurice bilo dodatno naglašeno predimenzioniranim falusom) i vatru.[377]

Jedini prikaz konja predstavlja prilično stilizirana keramička figura kratkih nogu, s repom i glavom s prikazom grive koja je izvedena jednostavnim stiskom prstiju, slično kao kod izrade lica na antropomorfnim figurama, a koja je i jedina naznaka da da je ovdje prikazan konj (Sl. 108). Zasigurno najveći broj keramičkih figura konja, ali i konjanika, potječe iz kultnog mjesta 1 s Turske kose, a nekoliko zoomorfnih figura zabilježeno je i na nalazištu Klinac, nažalost kao slučajni nalazi, među kojima se barem u jednom slučaju

370 Vinski 1950, 331; Balen-Letunić 2004, 328; Balen, Drnić, Mihelić 2012, kat. br. 8.
371 Teßmann 2009, 195, Sl. 9.
372 Truhelka 1904, 85, T. 40.
373 Bakarić, Križ, Šoufek 2006, kat. br. 269, 278, 287.
374 Marić 1968, T. 3: 1.
375 Brusić 2002, 229, 233, sl. 33: 5; Balen Letunić 2010.
376 Hoffiller 1933, 15-16, T. 34: 3-4. .
377 Balen Letunić 2010, 139; Potrebica 2013, 158.

DEPICTIONS OF ANIMALS (IVAN DRNIĆ)

In the context of the Iron Age settlement from Sisak, depictions of animals have been found in the form of self-standing figures made of pottery or bronze, as well as, more commonly, decorative elements upon other items, such as ceramic and bronze vessels or pieces of attire (bracelets, fibulas). A lot has been written about the symbolism of animals and their important role in the spirituality and mythology of European Late Bronze and Iron Age communities, so only a brief interpretations of specific animals will be presented below.

The pendant depicting a ram with accentuated genitals and a hoop for hanging on the back is certainly one of the highest-quality figural depictions from Sisak (Fig. 108).[370] Similar figurines discovered in Italy and central and southeastern Europe that depict horses, dogs, bulls, and rams can be traced back to the Late Bronze Age,[371] even though most finds from well-dated contexts can be ascribed to the Iron Age. A significant number of these finds come from Iapodian territory, but some were found in the context of the Dolenjska group (Dolenjske Toplice, Podzemelj), as well as in southern Pannonia (Donja Dolina, Batina, Dalj). Most of them were found in female graves dated to the period between the 7th and the 4th century BC, and they are assumed to have been amulets. Just like with a lot of finds from Sisak, the closest analogies for the ram-shaped pendant can be found at the Iron Age cemetery at Donja Dolina. A rich female grave, dated to the second half of the 7th and the beginning of the 6th century BC based on pieces of attire, yielded a ram-shaped pendant with a hoop for hanging on the back, somewhat more robust than the one from Sisak. It was found next to the right thigh bone.[372] Other than figural depictions of rams, most often the head, rams also appear in the form of glass and amber beads. Large numbers of these have been found in the mound burials of the Dolenjska Hallstatt group in Novo Mesto,[373] and several others are known from beads and fibulas from the Iapodian (Jezerine)[374] and Liburnian (Kosa near Ljubač, Trošenj-grad)[375] areas, as well as from ceramic vessels, i.e. *askoi* from Dalj.[376] The symbolism of rams, widely distributed amongst different prehistoric communities, is connected to strength, fertility (in the case of the figurine from Sisak, this could be accentuated through the highly oversized genitals), and fire.[377]

The only depiction of a horse is the, rather stylized ceramic figurine with short legs, a tail, and a head with a mane that was shaped by simple finger pressing (just like the faces on the anthropomorphic figurines). This mane is in fact also the only indication that it the figure is horse. The largest number of ceramic horse figurines, as well as horse riders, was found at

370 Vinski 1950, 331; Balen-Letunić 2004, 328; Balen, Drnić, Mihelić 2012, cat. no.8
371 Teßmann 2009, 195, Fig. 9.
372 Truhelka 1904, 85, Pl. 40.
373 Bakarić, Križ, Šoufek 2006, cat. no. 269, 278, 287.
374 Marić 1968, Pl. 3: 1.
375 Brusić 2002, 229, 233, sl. 33: 5; Balen Letunić 2010.
376 Hoffiller 1933, 15-16, Pl. 34: 3-4..
377 Balen Letunić 2010, 139; Potrebica 2013, 158.

SL. 109
Keramičke posude i poklopac ukrašeni životinjskim glavama (I. Krajcar)

FIG. 109
Ceramic vessels and the lid, decorated with animal heads from Sisak (I. Krajcar)

radi o prikazu konja.[378] Prikazi konja sveprisutni su u starijem željeznom dobu, od situlske umjetnosti preko elementa nošnje (pektorali, fibule) do figurativne plastike, ali, kao što navodi H. Potrebica, upravo iz tog razloga je teže definirati neka određena simbolička značenja koja bi konji imali u kontekstu mitologije ili religije.[379] Tako s jedne strane konj na simboličkoj razini utjelovljuje muškost i elitni ratnički status,[380] ali s druge strane prikaze konja nalazimo i na brojnim predmetima koji se smatraju dijelovima ženske nošnje i posljedično tome komunikatorima ženskog identiteta, ali i istaknutog društvenog položaja, kao što su fibule[381] ili semantički još potentniji trapezoidni pektoralni privjesci koji objedinjuju antropomorfni (žena) i zoomorfni (konjske protome) prikaz.[382] U kontekstu grčke mitologije, ali i šire indoeuropske tradicije, konj se dovodi u vezu s vodom kao granicom između ovog i "onostranog" svijeta, pri čemu konj ima funkciju teopompa, odnosno nositelja duše pokojnika u zagrobni život.[383] Također, konj je prisutan i unutar solarne simbolike, pri čemu su najpoznatiji prikaz Helija, boga Sunca, koji krstari nebom u kočiji u koju su upregnuta četiri krilata konja.[384]

'cult-related place 1' at Turska Kosa, and several other zoomorphic figurines were noted at Klinac, including at least one depiction of a horse.[378] Depictions of horses are omnipresent in the Early Iron Age, and range from those on situlas, elements of attire (pectorals, fibulas), and figurative plastic. As noted by H. Potrebica, however, that is exactly why it is difficult to define specific symbolic religious and mythological meanings that horses could have had.[379] On one hand, the horse is, on a symbolic level, a manifestation of manhood and the elite status of a warrior.[380] On the other hand, depictions of horses are found on numerous items that are thought to be parts of the female attire and, consequently, communicators of femininity, but also a high social status, such as fibulae,[381] or semantically even more potent trapezoidal pectoral pendants that combine anthropomorphic (woman) and zoomorphic (horse-shaped protomes) depictions.[382] In the context of Greek mythology, as well as the wider Indo-European tradition, the horse is connected to water as the border between this world and the "other", wherein the

378 Majnarić Pandžić 1986, Sl. 12: 6; Drnić 2019, 393, T. 111: 7.
379 Potrebica 2013, 159–160.
380 Frei 2018; 2019.
381 Metzner-Nebelsick 2007.
382 Kukoč 2003; Blečić Kavur 2018.
383 Miličević Bradač 2003.
384 Kukoč 2003.

378 MajnarićPandžić 1986, Fig. 12: 6; Drnić 2019, 393, Pl. 111: 7.
379 Potrebica 2013, 159–160.
380 Frei 2018; 2019.
381 Metzner-Nebelsick 2007.
382 Kukoč 2003; Blečić Kavur 2018.

SL. 110
Zlatna narukvica ukrašena prepletenim zmijama i ptičjim glavama iz Siska
(I. Krajcar)

FIG. 110
Golden bracelet decorated with intertwined snakes and bird heads from Sisak
(I. Krajcar)

Slijedeća životinja čije su glave ukrašavale drške finih keramičkih posuda je pas. (Sl. 109) Ovaj karakterističan tip posuđa vrlo kvalitetne izrade rasprostranjen je u kasnohalštatskom razdoblju na prostoru od Dolenjske (Dolenjske toplice, Novo mesto), preko Pokuplja (Kiringrad, Sisak-Pogorelac) do srednje Posavine (Donja Dolina) i zapadnog Balkana (Sanski Most), a sasvim je moguće da se radilo o posuđu namijenjenom gozbovanju. Riječ je najčešće o zdjelama, ali i drugim posudama, primjerice loncima ili poklopcima, čije su drške ili tijela ukrašavana životinjskim rogovima, ušima i protomama za koje J. Dular smatra da predstavljaju glave pasa i ovaca,[385] pri čemu trokutasto oblikovane glave s uspravno oblikovanim ušima, kao u slučaju jednog sisačkog poklopca, sasvim sigurno prikazuju kanide (Sl. 109). Prikazi pasa poznati su i u okviru situlske

horse has the role of a *theopompus,* i.e. the one who carries the soul of the deceased into the afterlife.[383] Additionally, the horse is also present in solar symbolism, with the most famous example being Helios; the god of the sun who sails the sky in a carriage pulled by four winged horses.[384]

The next animal whose heads was used to decorate the handles of fine ware is the dog (Fig. 109). This characteristic, high-quality type of vessel was, in the Hallstatt period, used across the area of Dolenjska (Dolenjske Toplice, Novo Mesto), the Pokuplje region (Kiringrad, Sisak-Pogorelac), the central Posavina region (Donja Dolina), and the western Balkans (Sanski Most), and it is quite possible that these vessels were used at feasts. These were most

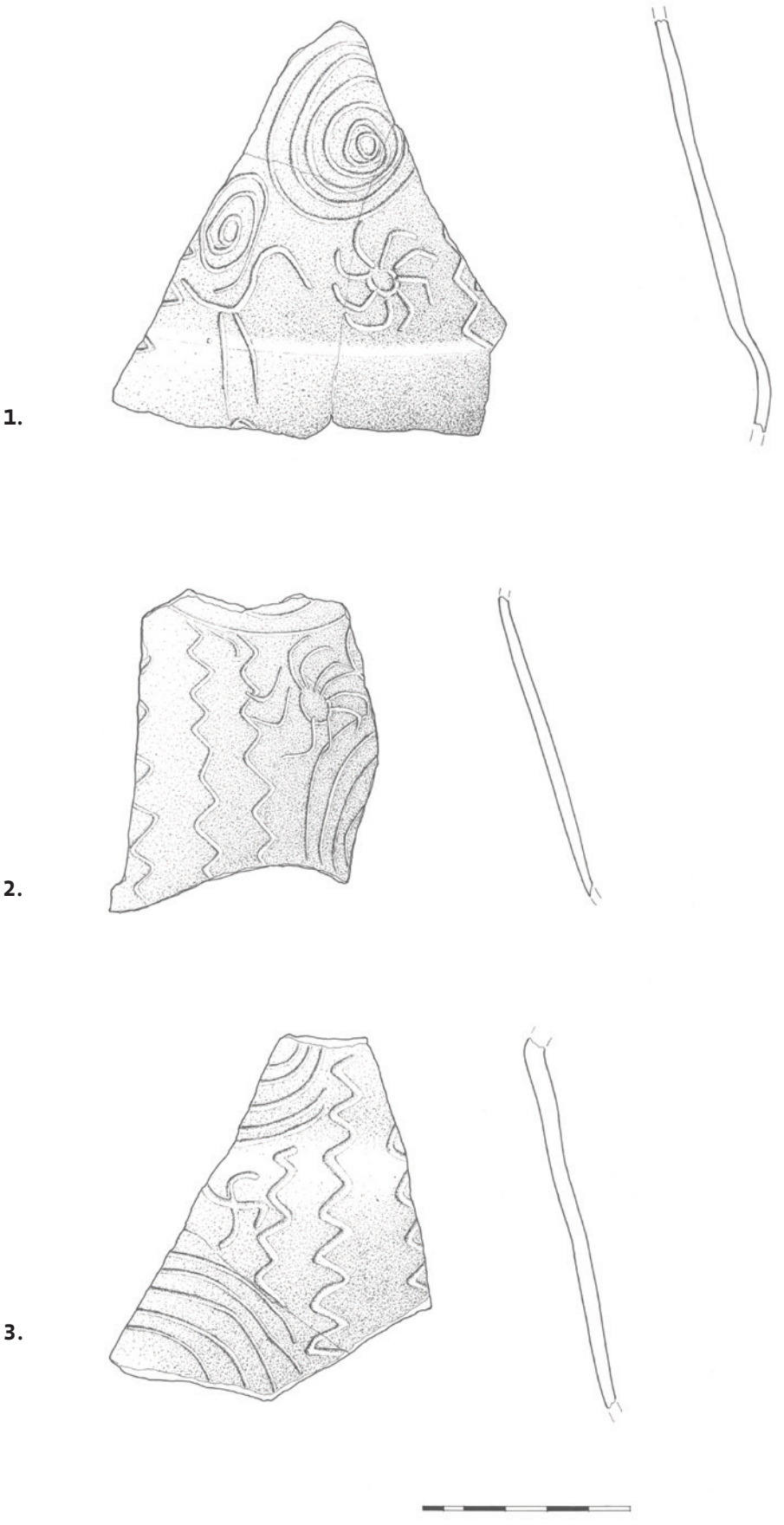
385 Dular 1982, 86.

383 Miličević Bradač 2003.

384 Kukoč 2003.

SL. 111
Figuralni prikaz s vrata keramičkog lonca iz mlađeželjeznodobnog naselja na položaju Državni arhiv u Sisku (M. Galić)

FIG. 111
The figural depiction from the neck of a ceramic pot from the Late Iron Age settlement at the Državni Arhiv position in Sisak (M. Galić)



umjetnosti, često u kontekstu lova,[386] te kao plastične figure izrađene od pečene gline (Turska kosa)[387] i bronce (desetak primjeraka s japodskih grobalja u Kompolju i Prozoru).[388] Je li pas imao određenu simboliku u okviru željeznodobne duhovnosti teško je ustvrditi, ali ako se fokus načas prebaci na grčku mitologiju, zasigurno najpoznatiji pas antičkog svijeta, slavni Kerber, predstavlja liminalno biće, koje čuva prijelaz između svijeta živih i mrtvih.

Predmet koji nosi dvostruku animalnu simboliku masivna je zlatna narukvica izrađena tehnikom iskucavanja (Sl. 110). Ovaj je predmet stilski blizak onome što se u okvirima latenske umjetnosti naziva plastičnim stilom, iako ni tipološki ni ikonografski zapravo nema paralela u okvirima latenskog umjetničkog registra. Za razliku od apstraktnih ili figuralnih, ali fluidnih i promjenjivih prikaza karakterističnih za plastični stil, sisačka narukvica je ukrašena nizom isprepletenih, realistično oblikovanih zmija koje pomalo podsjećaju na tipične latenske vitice. Otvoreni krajevi narukvice ukrašeni su glavama ptica grabljivica s velikim okruglim očima i kratkim trokutastim kljunom. I dok je motiv ptice grabljivice čest u okvirima latenske umjetnosti (fibule, pojasne kopče, ukrasni elemeni kola itd.), zmije se pojavljuju nešto rjeđe, a u halštatskoj ikonografiji gotovo u potpunosti nedostaju.[389] U keltskoj, a posebice galo-rimskoj duhovnosti, zmija se dovodi u vezu s konceptima kao što su plodnost, regeneracija i liječenje. Zmije su zabilježene i u "kompozitnom" obliku s ovnovskim rogovima, koji osim navedene simbolike naglašavaju snagu i mušku plodnost. U svojoj drugoj pojavnosti zmije su simbol negativnih, tamnih sila podzemlja.[390] Prikazi zmija zabilježeni su na nekoliko korica srednjolatenskih mačeva i na nekoliko prikaza na kotlu iz Gundestrupa, uključujući i zmiju s rogovima.[391] S druge strane zmije se češće pojavljuju kao motiv u duhovnoj i materijalnoj kulturi, primjerice toreutici, balkanskog (narukvice iz Bogdanovaca i Čuruga), grčkog, makedonskog i tračkog prostora,[392] a nalazimo ih i na poznatim dačkim spiralnim srebrnim i zlatnim narukvicama.[393]

Za kraj poglavlja o animalnoj simbolici spomenimo i složeni figuralni prikaz s vrata keramičkog lonca pronađenog u naseobinskom sloju 2. – 1. st. pr. Kr. na položaju Povijesni arhiv. Na najvećem ulomku, uz pticu koja se s obzirom na dužinu nogu i kljuna vjerojatno može okarakterizirati kao neka vrsta vodarice, rode ili čaplje, nalaze se motivi Sunca u obliku kruga s polukružnim zrakama ili u obliku slova V, te dvije spirale, manja i veća (Sl. 111: 1). Na drugom ulomku, koji pripada istoj posudi, ponovno se nalazi prikaz Sunca, dijelovi spirala u kombinaciji s tri vertikalno postavljene cik-cak linije (Sl. 111: 2). Treći je ulomak

386 Turk 2005. Zanimljivo, prikazi pasa češći su na pojasnim kopčama nego na brončanim posudama.

387 Čučković 2009, 76, 139, T. 6: 10, T. 88: 3.

388 Teßmann 2009, 195, Sl. 8: 1–11.

389 Potrebica 2013, 162.

390 Green 1992, 224–230.

391 Štrajhar, Gaspari 2013, 38–39.

392 Tonkova 2011.

393 Spânu, Cojocaru 2009.

commonly bowls, but other vessels are also known. For example, pots or lids with handles or bodies were decorated with animal horns, ears or protomes which, according to J. Dular, represented the heads of dogs or sheep. The triangularly shaped heads with straight ears, seen on one lid (?)[385] from Sisak, definitely represent canid (Fig. 109). Depictions of dogs are also present in situla art, often in hunting contexts,[386] and appear as plastic figurines made of fired clay (Turska Kosa)[387] and bronze (around ten examples come from the Iapodian cemeteries at Kompolje and Prozor).[388] It is hard to say whether the dog had a certain symbolic meaning within Iron Age spirituality. However, if the focus briefly shifts to Greek mythology, definitely the most famous dog of the ancient world – the Kerberos, is a liminal being that guards the border between the world of the living and the world of the dead.

A find that portrays double animal symbolism is a massive gold bracelet made by hammering (Fig. 110). Stylistically, this find is similar to what is known in La Tène art as the plastic style, although it has no typological or iconographic parallels in the artistic expression of La Tène art. In contrast to abstract or figural, but fluid and changeable depictions, characteristic for the plastic style, the bracelet from Sisak is decorated by a series of intertwined, realistically shaped snakes that somewhat resemble La Tène vines. Open ends of the bracelet are decorated with heads of birds of prey with large eyes and short triangular beaks. While birds of prey are quite a common motif in La Tène art (fibulas, belt buckles, decorative elements of wagons, etc.), snakes appear somewhat less often, and almost never appear in Hallstatt iconography.[389] In Celtic, especially Gallo-Roman spirituality, the snake is connected with concepts such as fertility, regeneration, and healing. Snakes have also been recorded in "composite" forms with ram horns that, in addition to the symbolic meanings listed above, also accentuate power and male fertility. In another forms, snakes are a symbol of the negative, dark forces of the underworld.[390] Snake depictions have been recorded on several Middle La Tène sword sheaths, and on several depictions from the Gundestrup cauldron, one of which is of a horned snake.[391] On the other hand, snakes more commonly appear as a motif in the spiritual and material culture, seen, for example, upon the toreutics of the Balkans (bracelets from Bogdanovci and Čurug), Greece, Macedonia and Thrace,[392] as well as on the famous Dacian silver and gold spiral bracelets.[393]

At the end of this chapter on animal symbolism, it is important to discuss the complex depiction upon the neck of a ceramic pot discovered in the settlement layer, dated to the 2nd – 1st century BC,

385 Dular 1982, 86.

386 Turk 2005. Interestingly, depictions of dogs are more common on belt buckles than on bronze vessels.

387 Čučković 2009, 76, 139, Pl. 6: 10, Pl. 88: 3.

388 Teßmann 2009, 195, Fig. 8: 1–11.

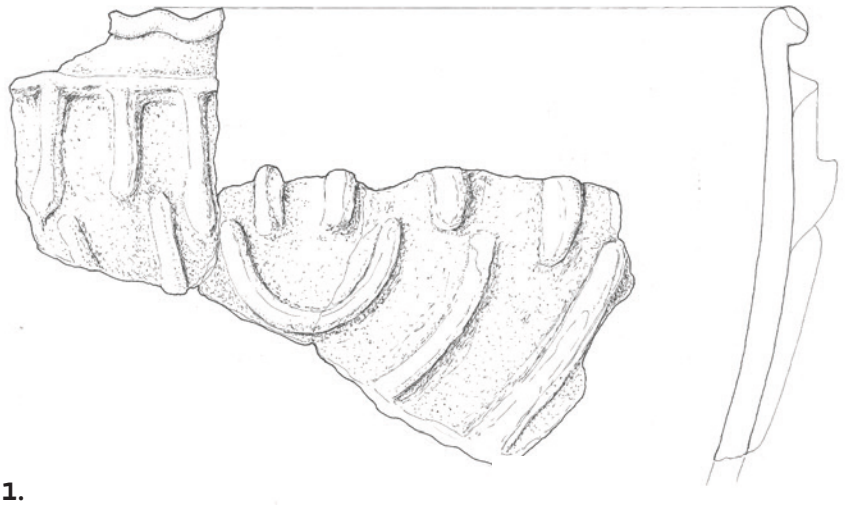
389 Potrebica 2013, 162.

390 Green 1992, 224–230.

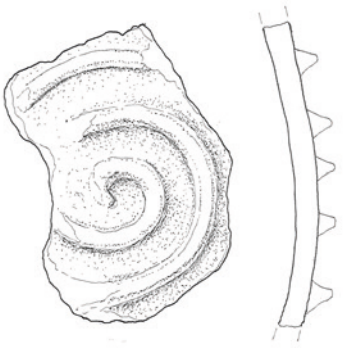
391 Štrajhar, Gaspari 2013, 38–39.

392 Tonkova 2011.

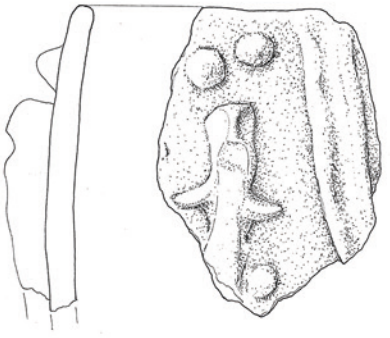
393 Spânu, Cojocaru 2009.



1.



2.



3.

SL. 112
Ulomci keramičkih posuda ukrašenih plastičnim trakama iz željeznodobnog naselja na položaju Pogorelac u Sisku
(M. Galić)

FIG. 112
Fragments of pottery vessels decorated with plastic ribbons from the Iron Age settlement at the Pogorelac position in Sisak
(M. Galić)

ukrašen spiralama, cik-cak linijama i motivom svastike (Sl. 111: 3). Svi navedeni motivi činili su složenu kompoziciju s mogućim narativnim (nama nepoznatim) sadržajem. Iako je motiv ptica vodarica poznat u latenskoj ikonografiji, primjerice s obrazina kasnolatenskih kaciga tipa Novo mesto,[394] čini se da bi prikaz sa sisačkog ulomka, u kombinaciji s motivima Sunca, spirala i svastike, ipak mogao predstavljati odjek starijih tradicija porijeklom iz kasnoga brončanog i starijeg željeznog doba, kada su ovi motivi često bili reproducirani na keramičkim i metalnim predmetima, noseći određenu simboliku u solarnom kozmološkom sustavu zajednica kulture polja sa žarama, ali i mlađim halštatskim društvima. Ptice vodarice imale su važnu ulogu u mitologiji zbog svoje mogućnosti letenja i prekida veze sa zemljom, a simbolizirale su vezu između neba i vode.[395]

Glave ptica vodarica često su ukrašavale i brončano posuđe, kao što je slučaj s drškom etruščanskog simpula iz Siska (Sl. 87) ili završetkom ručke situle, vjerojatno proizvedene u Dakiji, na kojoj su se, kao i na rimskim kasnorepublikanskim predlošcima, nalazile ataše u obliku stiliziranih delfina (Sl. 95).

8.4 PRIKAZI NA KERAMICI (IVAN DRNIĆ)

U određenim slučajevima keramičko posuđe služilo je kao medij za produciranje dekorativnih, a ponekad i umjetničkih sadržaja koji su odražavali estetiku zajednica u čijem kulturnom kontekstu su i nastale. Uzevši u obzir brojne antropološke i etnološke primjere koji su relevantni za željeznodobne zajednice s juga Panonske nizine, važno je naglasiti da je veći dio navedenih sadržaja vjerojatno produciran na propadljivim materijalima kao što su drvo i tekstil, zbog čega je većina predmeta, a time i ikonografija koju su nosili, zauvijek izgubljena. I keramičke posude izrađivane u sisačkom željeznodobnom naselju ukrašavane su različitim tehnikama i motivima koji se uglavnom uklapaju u širi estetski okvir željeznodobnih zajednica na potezu od Dolenjske i Pokuplja preko jugozapadne Panonije do zapadnog Balkana. Dio ukrasa, kao što su različite plastično izvedene trake ili bradavičasta zadebljanja, osim dekorativne ima i funkcionalnu ulogu, dok su motivi izvođeni tehnikama kao što su ubadanje, urezivanje, žlijebljenje itd. primarno imali funkciju ukrasa. Zbog jednostavnosti, za većinu motiva kao što su skupine linija, trokuti, rombovi i sl. teško je pretpostaviti dodatno značenje, a samo u nekoliko slučajeva motivi su nešto složeniji i potencijalno nose neku dodatnu informaciju.

394 Mihaljević, Dizdar 2007.

395 Green 1992, 211–214; Kukoč 2003; Potrebica 2013, 150–152. O simbolizmu ptica i odnosu ljudi-ptice u dolenjskoj halštatskoj skupini: Frei 2018; 2019.

from the Povijesni Arhiv position. The largest fragment displays a bird that can, based on the length of the legs and beak, probably be understood as some sort of waterbird (stork or a heron), alongside solar motifs either in the shape of a circle with semicircular rays, or in the shape of the letter V. These images are also accompanied by two spirals, one small and one large (Fig. 111: 1). A second fragment of the same vessel also contains a depiction of the sun and parts of spirals in combination with three vertical zig zag lines (Fig. 111: 2). A third fragment is decorated with spirals, zig zag lines and a swastika (Fig. 111: 3) . All of the listed motifs made up a complex composition with a possible narrative the content of which is, to us, unknown. Although waterbird motifs appear in La Tène iconography, e.g. upon the sides of Late La Tène helmets of the Novo Mesto type,[394] it seems that the depiction from Sisak, combined with motifs of the sun, spirals and swastika, could be a reflection of older, Late Bronze and Early Iron Age traditions. In these traditions, these motifs were commonly reproduced on ceramic and metal objects, and they held certain symbolic meanings in the solar cosmological system of both the Urnfield culture and the younger Hallstatt culture. Waterbirds also had an important role in the mythology of these cultures due to their ability to fly and break contact with the earth, also symbolizing the ties between the skies and water.[395]

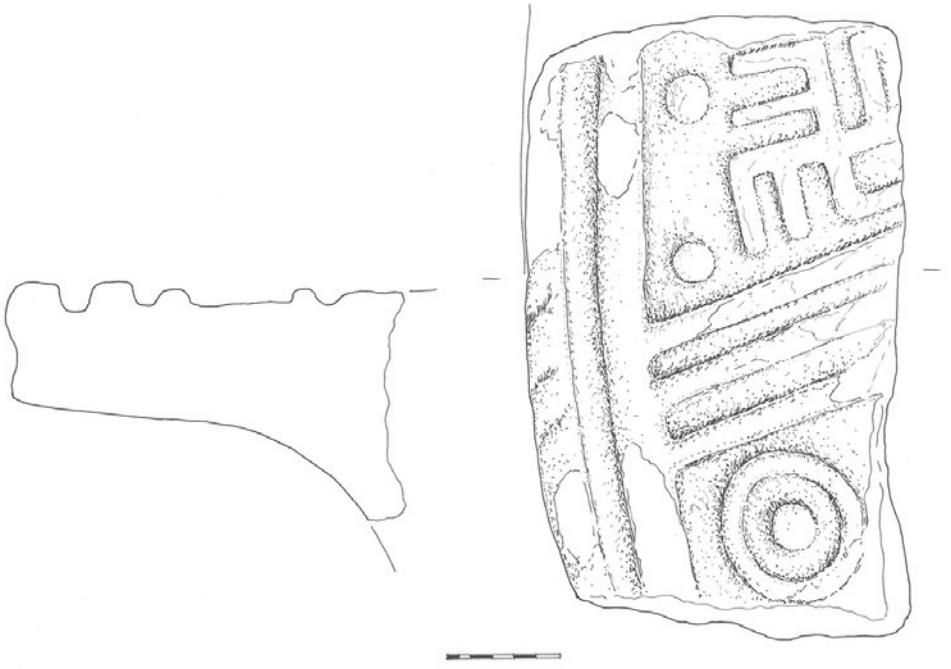
The heads of waterbirds also often decorated bronze vessels, as is the case with the handle of an Etruscan simpulum from Sisak (Fig. 87), or the end of a situla handle, probably made in Dacia, which, just like the Roman Late Republican examples, had attachments in the shape of stylized dolphins (Fig. 95).

DEPICTIONS ON POTTERY (IVAN DRNIĆ)

In certain cases, ceramic vessels were used as a medium to produce decorative, sometimes even artistic content that contained the aesthetic preferences of the communities within which they were produced. Considering the numerous anthropological and ethnological examples that are relevant to Iron Age communities from the south of the Pannonian plain, it is important to highlight the fact that most of the said content was probably produced on perishable materials, such as wood and textiles, which is why most items, as well as any attached iconography, have been lost forever. The ceramics produced at the Iron Age settlement in Sisak were also decorated with various techniques and motifs that predominantly fit into the wider aesthetic framework of Iron Age communities that lived in the area between the Dolenjska and Pokuplje regions, southwestern Pannonia and the western Balkans. Some of the decorations, such as different plastic ribbons or knobs, had both a decorative and a functional role. Motifs, made by techniques such as stabbing, incising, gauging and the like, primarily had a decorative function. Due to their simplicity, most motifs, such as clusters of lines, triangles, rhombs and the like, cannot definitively be ascribed with any additional meaning. Only in a few cases are they somewhat more complex and might provide additional information.

394 Mihaljević, Dizdar 2007.

395 Green 1992, 211–214; Kukoč 2003; Potrebica 2013, 150–152. On the symbolism of birds and man-bird relations in the Dolenjska Hallstatt group: Frei 2018 ; 2019.



SL. 113
Dio keramičkog preklada (ili žrtvenika?) iz kasnohalštatskog naseobinskog sloja na položaju Pogorelac u Sisku (I. Krajcar, M. Galić)

FIG. 113
Part of a ceramic firedog (or altar?) from the Late Hallstatt settlement layer at the Pogorelac position in Sisak (I. Krajcar, M. Galić)

SL. 114
Dugme konjske opreme
s prikazom trojnog zavoja – triskela iz Siska
(I. Krajcar)

FIG. 114
The button of horse-riding gear
with the depiction of a triple loop – *triskelion* from Sisak
(I. Krajcar)

Nekoliko složenijih motiva izvedeno je apliciranjem plastičnih traka tvoreći različite uzorke, u jednom slučaju motiv spirale koji se nalazi i na prethodno opisanom prikazu s pticom s položaja Povijeni arhiv (Sl. 112: 2). I na Sisku susjednim područjima plastičnim su trakama izvođeni potencijalno kompleksniji simboli, primjerice na posudama iz Ripća i Golubića ovom su tehnikom izvedeni prikazi ljudskih ruku i zmije.[396] Motiv šake nalazio se i na loncu iz Dolenjskih toplica, zajedno s motivom svastike koji se, osim na ulomku vrata lonca koji također pripada prikazu s pticom s položaja Povijesni arhiv (Sl. 111: 3), nalazi i na dršci zdjele ukrašene dvama životinjskim glavama (Sl. 109) te na keramičkom predmetu koji potječe iz kasnohalštatskog naseobinskog sloja na Pogorelcu, koji možda predstavlja dio preklada, ali nije isključena ni mogućnost da se radi o žrtveniku kakvi su zabilježeni na nekoliko stariježeljeznodobnih lokaliteta (Sl. 113).[397] O svastici i njenoj prisutnosti u duhovnosti različitih društava diljem svijeta postoji brojna literatura, a s obzirom na velik broj primjera čini se da je predstavljala vrlo važan simbol u duhovnosti željeznodobnih zajednica jugoistočnih Alpa, južne Panonije i zapadnog Balkana, uključujući i one sisačke. Iako najstariji primjeri potječu već iz mlađeg kamenog doba, posebnu važnost svastika dobiva u okvirima brončanodobnog solarnog simbolizma koji se zadržao i u željeznodobnom imaginariju. U latenskoj ikonografiji ulogu solarnog simbola preuzima motiv trojnog zavoja, odnosno triskela, koji je u Sisku zabilježen na jednom brončanom dugmetu koje je bilo dio konjske opreme, a potječe iz rijeke Kupe (Sl. 114).[398]

Several more complex motifs were created by applying plastic ribbons to make up different patterns. In one case, it is a spiral motif (Fig. 112: 2) similar to the previously described one which accompanied the depiction of a bird from Povijesni Arhiv position. In areas around Sisak, plastic ribbons were used to create potentially more complex symbols. For example, on vessels from Ripać and Golubić, this technique was used to form depictions of human hands and snake.[396] A fist was portrayed on a pot from Dolenjske Toplice, alongside a swastika. In addition to being on the neck fragment of a pot with a depiction of a bird from Povijesni Arhiv position (Sl. 111: 3), the same motif was recorded on a ceramic object from the Late Hallstatt settlement layer at Pogorelac. This find might be a part of a firedog, but it is also possible that it was a part of an altar (Fig. 113), the likes of which have been recorded at several Early Iron Age sites.[397] A lot has been published about the swastika and its presence in the spirituality of different societies throughout the world. Considering the vast number of examples, it seems that it was a very important symbol in the spirituality of Iron Age communities of the southeastern Alps, southern Pannonia and the western Balkans; including the community at Sisak. Although the oldest examples can be dated to the Neolithic period, the swastika acquired special meaning within the framework of Bronze Age solar symbolism, a meaning that have been transferred into Iron Age imagery. In La Tène iconography, the role of the solar symbol was taken over by a triple loop (triskelion), that has, in Sisak, been recorded on one bronze button that was part of horse-riding equipment, retrieved from the Kupa River (Fig. 114).[398]

396 Raunig 2004, 27–30, T. 1: 4, 6–7; T. 2: 2–5.
397 Molnár, Farkas 2010; Kerman 2014.
398 Dizdar, Drnić 2018, 91, Sl. 12: 3; Mihaljević, Dizdar 2007, 130.

396 Raunig 2004, 27–30, Pl. 1: 4, 6–7; Pl. 2: 2–5.
397 Molnár, Farkas 2010; Kerman 2014.
398 Dizdar, Drnić 2018, 91, Fig. 12: 3; Mihaljević, Dizdar 2007, 130.

9. RIMSKO OSVAJANJE SEGESTIKE/SISCIJE

THE ROMAN CONQUEST OF *SEGESTICA/SISCIA*

Ivan Drnić, Ivan Radman-Livaja

9.1 POVIJESNI I POLITIČKI KONTEKST (IVAN RADMAN-LIVAJA)

Oktavijan je 35. godine pr. Kr. započeo vojnu operaciju koja je imala dalekosežne posljedice za cijeli naš današnji prostor. Pitanje je u kojoj je mjeri u tom trenutku budući rimski car mogao bio svjestan činjenice da će tim pohodom Ilirik trajno inkorporirati u granice rimske države.[399] Antički izvori nabrajaju nekoliko razloga za njegov pohod – vjerojatno onih koje je sam Oktavijan iznio Senatu – no mnogi povjesničari su skloni su vjerovati da se Oktavijan prvenstveno htio pripremiti za očekivanu eskalaciju sukoba sa svojim još uvijek formalnim saveznikom Markom Antonijem.

Kad je 43. pr. Kr. Oktavijan s Markom Antonijem i Lepidom sklopio politički savez prozvan drugim trijumviratom, mladi je političar postao jedan od najmoćnijih ljudi u Rimskoj Republici. S obzirom na to kako je završio prvi trijumvirat, pronicljiviji su ljudi u Rimu mogli procijeniti da ni drugi trijumvirat neće krasiti miroljubivo i konstruktivno ozračje. U godinama koje su uslijedile Oktavijan je postupno jačao svoju poziciju. Lepida se riješio, spretno manipulirajući Senat nakon njihove zajedničke pobjede nad Sekstom Pompejem 36. pr. Kr. na Siciliji. Lepid, optužen za urotu i pokušaj uzurpacije vlasti jer je tražio preraspodjelu provincija s Oktavijanom, ipak je sačuvao živu glavu i realno nebitnu službu vrhovnog pontifa, ali su mu oduzete sve funkcije, kao i provincije za koje je bio nadležan, a njegove su trupe bez borbe prešle na Oktavijanovu stranu. Prava vlast u Republici ostaje tada *de facto* samo u rukama Oktavijana i Marka Antonija, a većini je postajalo jasno da se ni jedan ni drugi neće dugoročno zadovoljiti podjelom moći.

Ako je suditi po izvorima, nakon što se riješio Seksta Pompeja Oktavijan se odlučio posvetiti rješavanju problema u Italiji i Africi, no ispadi domorodaca istočnog alpskog područja i zapadnog Balkana prisilili su ga na promjenu planova. Ne samo što su Salasi,[400] Taurisci i Japodi prestali plaćati danak, nego su se upuštali i u pljačkaške pohode, zbog čega su posebno prozvani

399 Za Oktavijanov ilirski rat *vide Appianus, Illyrica 16-28; Cassius Dio, 49, 35-38;* Kromayer 1898, 1–13; Veith 1914, 17–103; Swoboda 1932, 3–88; Rice Holmes 1928, 130–135; Josifović 1956, 138–162; Schmitthenner 1958, 200–217; Wilkes 1969, 46–58; Mócsy 1974, 21–23; Šašel Kos 1986, 134–147; 1997, 187-198; 1999, 255–264; 2005, 393–471; 2012, 93-100; 2013, 187–193; 2018, 41–44; Bilić-Dujmušić 2006, 41–57; Domić Kunić 2006, 91–100; 2018, 34–40; Matijašić 2009, 147–158; Dzino 2010, 101–116; Radman-Livaja 2012, 161–162; 2017, 171–176; Džino, Domić Kunić 2013, 148–157; Goldsworthy 2014, 174–178; Kovács 2014, 24–26; Zaninović 2015, 407–426.

400 Potonji alpski narod nema veze s Ilirikom, ali kako su operacije protiv Salasa vođene istovremeno kad i one u Iliriku, antički ih izvori spominju u istom kontekstu (Šašel Kos 2005, 420–422).

HISTORICAL AND POLITICAL CONTEXT (IVAN RADMAN-LIVAJA)

In 35 BC, Octavian started a military operation that had far-reaching consequence for the entire area of Illyricum. However, the degree to which the future emperor was aware that this action would result in the permanent inclusion of Illyricum into the borders of the Roman state is questionable.[399] Ancient sources list several reasons behind his campaign – probably those that Octavian himself presented to the Senate – but many historians were inclined to believe that Octavian primarily wanted to prepare himself for the expected escalation of the conflict with Mark Anthony, who was, at this point in time, still his formal ally.

In 43 BC, when Octavian, along with Mark Anthony and Lepidus, made the political pact called the Second Triumvirate, the young politician became one of the most powerful people in the Roman Republic. Knowing how the First Triumvirate ended, wise people in Rome could have assumed that the second one would not be characterized by a peaceful and constructive atmosphere. In the following years, Octavian gradually strengthened his position. He got rid of Lepidus by skillfully manipulating the Senate after the two defeated Sextus Pompeius on Sicily in 36 BC. Lepidus, accused of conspiracy and attempting to usurp the government, on the grounds that he had asked for a redistribution of the provinces with Octavian, managed to save his head, but was stripped of all functions, and provinces with his troops peacefully crossing to Octavian's side. True power was then, *de facto*, left in the hands of Octavian and Mark Anthony, and it became clear to the majority of people that neither one would, in the long run, be satisfied with this division of power.

If sources are to be believed, after getting rid of Sextus Pompeius, Octavian decided to focus on solving the problems in Italy and Africa. However, the aggressive attitude of the natives in the eastern Alpine areas and the western Balkans made him change

399 For Octavian's Illyrian war, see *Appianus, Illyrica 16-28; Cassius Dio, 49, 35-38;* Kromayer 1898, 1–13; Veith 1914, 17–103; Swoboda 1932, 3–88; Rice Holmes 1928, 130–135; Josifović 1956, 138–162; Schmitthenner 1958, 200–217; Wilkes 1969, 46–58; Mócsy 1974, 21–23; Šašel Kos 1986, 134–147; 1997, 187-198; 1999, 255–264; 2005, 393–471; 2012, 93-100; 2013, 187–193; 2018, 41–44; Bilić-Dujmušić 2006, 41–57; Domić Kunić 2006, 91–100; 2018, 34–40; Matijašić 2009, 147–158; Dzino 2010, 101–116; Radman-Livaja 2012, 161–162; 2017, 171–176; Džino, Domić Kunić 2013, 148–157; Goldsworthy 2014, 174–178; Kovács 2014, 24–26; Zaninović 2015, 407–426.

SL. 115
Denar s prikazom Oktavijana iz Siska (I. Krajcar)

FIG. 115
The denarius with the depiction of Octavian from Sisak (I. Krajcar)

Japodi. Senatu je Oktavijan svoju intervenciju obrazložio potrebom za osiguravanjem granica Italije, kao i kažnjavanjem naroda koji su prekršili zadane obaveze, te osvetom za poraze koje su Rimljani pretrpjeli u Iliriku tijekom prethodnog desetljeća. Isticao je i potrebu za preventivnim ratnim operacijama protiv Dačana, iako je malo vjerojatno da je to uistinu ozbiljno planirao. Ujedno se nije libio naglašavati kako se on brine za sigurnost države i ispravljanje nanesenih nepravdi, za razliku od svog nepoduzetnog kolege. Historiografija je, kao što je već spomenuto, dodala da mu je ratni pohod u unutrašnjost Ilirika trebao poslužiti kao priprema za nadolazeći sukob s Markom Antonijem, kako na strateškom, tako i na političkom planu. Trebao je pripremiti svoje trupe za po svemu sudeći neminovan građanski rat, a kontrolom zapadnog Balkana mogao je Marku Antoniju prepriječiti kopneni put ka Italiji. Ujedno bi u Rimu, stjecanjem ratne slave u borbi s barbarima, ojačao svoj politički položaj, ali i ugled. Te se pretpostavke ne temelje nužno na neoborivim argumentima. Upitna je, naime, tvrdnja da se Oktavijan već 35. pr. Kr. ozbiljno pripremao za rat s Markom Antonijem. Nesumnjivo je računao (i) na tu mogućnost, no te godine sukob još nije izgledao

his plans. Not only did the Salasi,[400] Taurisci and Iapodes stop paying tax, but they also conducted pillaging expeditions, the Iapodes being mostly to blame. Octavian explained his intervention to the Senate by saying he needed to secure the Italian border, punish the peoples who had breached their obligations, and get revenge for the defeats the Romans had suffered in Illyricum during the previous decade. He emphasized the need to wage preventive war against the Dacians, although it is not very likely he actually planned to do so. He also did not shy away from highlighting that he was worried about the security of the state and correcting suffered injustices, unlike his unenterprising colleague. Historiography has, as already mentioned, added that he used the war campaign in Illyricum as preparation for the forthcoming battle with Mark Anthony, both in the strategic, and political sense. He needed to prepare his troops for what seemed

400 The latter Alpine people have nothing to do with Illyricum, but, as the operations against the Salasi were led at the same time as those in Illyricum, ancient sources mention them in the same context (Šašel Kos 2005, 420–422).

neizbježan. Iako su Oktavijan i njegovi savjetnici vjerojatno uzimali u obzir i mogućnost da Marko Antonije kopnenim putem pokuša prodrijeti do Italije, takav bi potez ipak bio malo vjerojatan. Marko Antonije je, naime, kontrolirao sve važne jadranske luke preko puta Apulije, imao je flotu na raspolaganju, pa nije bilo nikakve strateške potrebe da se u Italiju uputi preko slabo istražene unutrašnjosti Balkana. Poput svih prije njega, lako i daleko brže je mogao prebaciti trupe brodovima u Brindizij i krenuti na Rim. Utoliko kontrola doline Save i Segestike Oktavijanu nije bila neophodna za obranu Italije. U strateškom smislu možda mu je bilo važnije saznati s kakvim trupama uopće raspolaže, ali ne toliko u smislu broja legija i njihove popunjenosti – takvo što je Oktavijanovom stožeru moralo biti dobro poznato – već njihove uvježbanosti, motiviranosti i lojalnosti. Oktavijanova vojska bila je neosporno velika, jer je osim trupa kojima je zapovijedao prije 36. pr. Kr. preuzeo i poražene pompejevce, kao i Lepidove legije. Tako da je 35. pr. Kr. možda raspolagao čak s 43 do 45 legija, iako nesumnjivo vrlo raznolikog brojnog stanja, pa ukupne procjene variraju od 100.000 do 200.000 legionara, no tu treba dodati i augzilijare čiji se broj procjenjuje na oko 25.000 konjanika i 40.000 lakih pješaka.[401]

Kvaliteta te velike vojske bila je nepoznanica. Nezadovoljni vojnici su se u jesen 36. pr. Kr. već bili pobunili na Siciliji, pa Oktavijan nije imao iluzija da dio trupa u slučaju građanskog rata ne bi mijenjao stranu. Ni broj dezertera ne bi bio zanemariv. Mada se pretpostavka o nekom tadašnjem dugoročnom strateškom planu za rat s Markom Antonijem vjerojatno može odbaciti – iako je, *post festum*, nakon konačne pobjede 33. pr. Kr. Oktavijan i to isticao u propagandne svrhe kako bi naglasio svoju dalekovidnu mudrost – čini se uvjerljivim pretpostaviti da je lukavi političar procijenio kako mu pohod na Ilirik može samo pomoći u učvršćivanju kontrole nad vojskom, kao i u jačanju političke potpore i popularnosti. Ujedno bi povećao borbenu spremnost svoje vojske, a da je pri tome ne bi trebao uzdržavati na talijanskom tlu.

Kako se dotad osobno nije posebno istaknuo vojnim umijećem, bio je svjestan da ne može samo računati na slavu svog pooočima i da nije dobro da ga se percipira kao političara bez ozbiljnijeg ratnog iskustva. Pokazati i simpatizerima i oponentima da može uspješno voditi ratne operacije bio je dovitljiv politički potez, tim više što nije previše riskirao protiv puno slabijeg protivnika. Moralo mu je biti jasno da bi u slučaju građanskog rata, kada glave počnu padati, svi neodlučni dobro razmislili na čiju će stranu stati. U takvim situacijama, pristupiti onome koji dokazano zna pobjeđivati redovito se čini kao razuman izbor, a Oktavijan 35. pr. Kr. po tom pitanju nije mogao ulijevati preveliko povjerenje, pa je tu svoju slabost svakako morao što prije riješiti. Uz sve navedeno, taj pohod vjerojatno nije bio samo plod Oktavijanovog političkog oportunizma: jedan od razloga vjerojatno leži i u činjenici što je za otkazivanje poslušnosti domorodačkog stanovništva u Iliriku dobar dio odgovornosti padao i na njega, jer je zbog rata sa Sekstom Pompejom povukao većinu vojske iz Ilirika i time bitno olakšao urušavanje sigurnosne situacije u

401 *Appianus, B. C., V, 127; Orosius, 6. 18; Velleius, Paterculus 2, 80*; Veith 1914, 108; Brunt 1987, 498–501; Nagy 1991, 59.

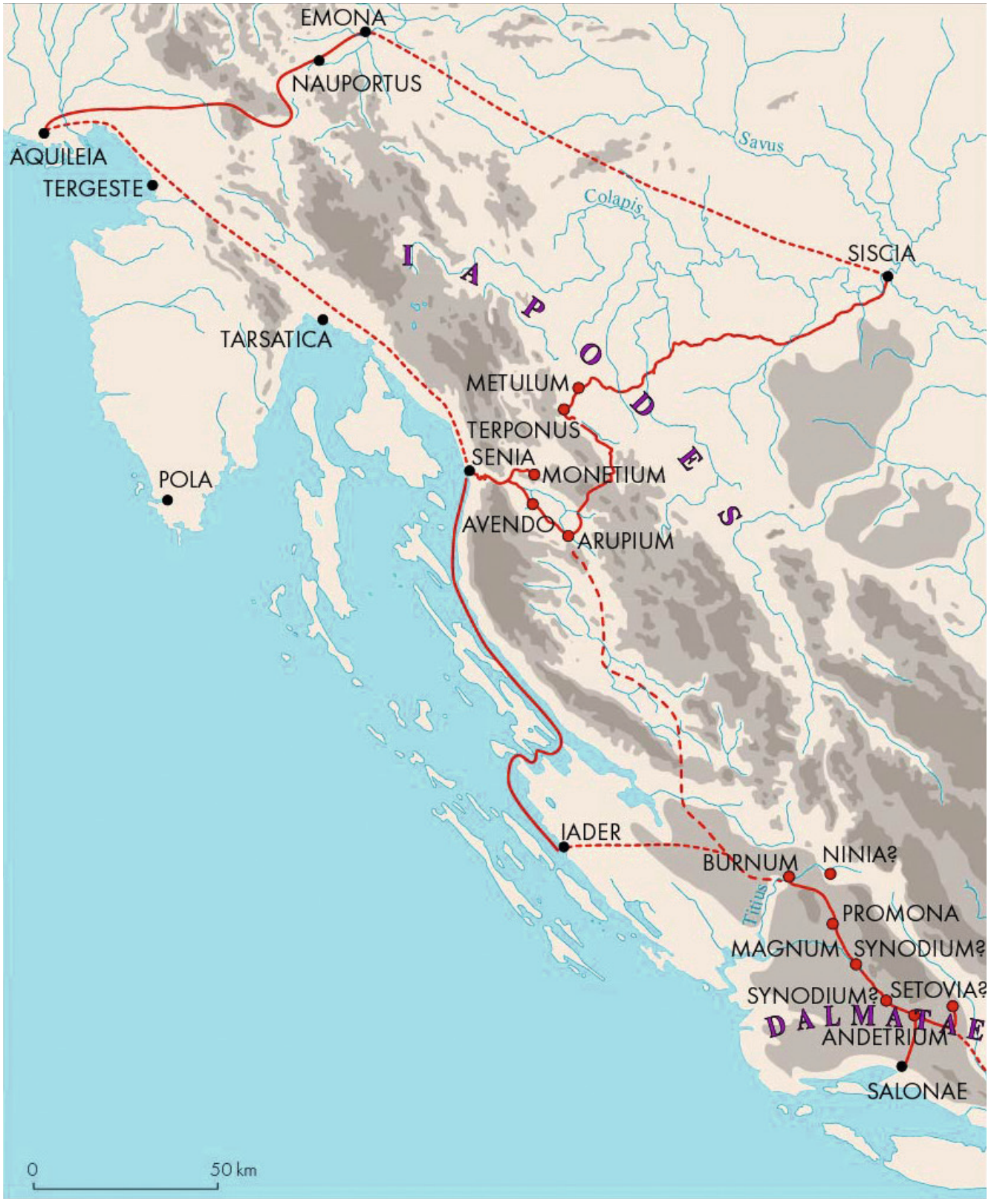
like an unavoidable civil war. By controlling the Balkans, he could cut off Mark Anthony's continental path towards Italy. At the same time, by gaining glory in battle against the barbarians, he would strengthen his political stance and reputation in Rome.

These assumptions are not necessarily based on irrefutable arguments. Namely, the claim that Octavian was seriously preparing for conflict with Mark Anthony already in 35 BC is questionable. He was undoubtedly considering the possibility, but, at the time, the conflict would not have seemed unavoidable. Although Octavian and his advisers may have been considering the possibility that Mark Anthony would try to reach Italy across the continent, such a move would have been unlikely. Mark Anthony controlled all of the important Adriatic harbors across Apulia and had a fleet at his disposal, so there was no strategic need to cross to Italy over the poorly known Balkans. Just like everyone before him, he could have easily, and far more quickly, transferred his troops by ship to *Brundisium* and head for Rome. Therefore, Octavian did not need to control the Sava River valley and *Segestica* in order to defend Italy. In a strategic sense, it might have been more important for him to find out what kind of troops he had at his disposal. It was not a matter of the actual strength of his legions – Octavian's camp must have known that information – but rather a matter of level of training, motivation and loyalty. Unquestionably, Octavian's army was big, because, in addition to the troops he had commanded before 36 BC, his force now included the defeated supporters of the Pompeians, as well as Lepidus' legions. Therefore, in 35 BC, he might have had between 43 and 45 legions, albeit with varying numbers of men, so the total numbers vary between 100000 and 200000 legionaries. Auxiliary troops should be added as well, with their number estimated to have been around 25000 troopers equestrians and 40000 light footmen.[401]

The quality of this army may have indeed been a mystery to Octavian, however. The unhappy soldiers had already rebelled in Sicily in 36 BC, so Octavian was under no illusion that a part of his force would not change sides in a civil war. The number of potential deserters could not be ignored either. Even though the narrative about a long-term strategic plan against Mark Anthony can probably be discarded – despite Octavian's *post festum* emphasis of this fact after his final victory in 33 BC, an act of propaganda designed to accentuate his far reaching wisdom – it seems convincing to assume that the cunning politician had deduced that the campaign in Illyricum could only benefit him; confirming his control over his army, and strengthening his political support and popularity. At the same time, he would increase his army's combat readiness, without having to keep them on Italian soil.

Octavian had also previously not stood out for his war-waging skills and was aware of the fact that he could not rely on his stepfather's glory alone and must no longer be seen as a politician without serious war experience. Showing both his supporters and opponents that he could successfully lead war operations

401 *Appianus, B. C., V, 127; Orosius, 6. 18; Velleius, Paterculus 2, 80*; Veith 1914, 108; Brunt 1987, 498–501; Nagy 1991, 59.



SL. 116
Karta sa smjerom napredovanja Oktavijanovih trupa prema Segestici/Sisciji (Šašel Kos 2005)

FIG. 116
A map showing the directions of the advancements made by Octavian's troops towards *Segestica/Siscia* (Šašel Kos 2005)

provinciji. Uvođenje reda u Iliriku, po mogućnosti brzom pobjedom, bio je najbolji način da se izbjegnu neugodna pitanja Senata koja bi zasigurno uslijedila da je kojim slučajem oklijevao s intervencijom.[402]

was a smart political move, even more so because he was not taking too big of a risk by making war against a far weaker opponent. It must have been clear to him that, in the event of a civil war, when heads start falling, all indecisive parties would think about which side to join. In such situations, to flock to the individual who had proved that he could win seems a reasonable choice, and, in 35 BC, Octavian was not such an individual, and this weakness needed to be addressed as soon as possible. In addition to all that has just been presented, this campaign was probably not only the result of Octavian's political opportunism: one of the reasons is probably the fact that he was partially responsible for the rebellion of the native population in Illyricum, because during the war with Sextus Pompey, he had withdrawn the majority of his army from Illyricum, thereby making Rome's hold on the province less secure. Bringing order to Illyricum, possibly by a quick victory, was the best way to avoid the Senate's unpleasant questions that would have been asked had he shown any hesitation about the intervention.[402]

9.2 OKTAVIJANOV POHOD U ILIRIKU (IVAN RADMAN-LIVAJA)

OCTAVIAN'S CAMPAIGN IN ILLYRICUM (IVAN RADMAN-LIVAJA)

Nemoguće je procijeniti točan broj legija koje je Oktavijan poveo u rat, no na temelju već spomenutih podataka o oružanoj sili s kojom je raspolagao nakon 36. pr. Kr. može se barem donekle pokušati pretpostaviti snaga njegove vojske u pohodu na Ilirik. U stručnoj se literaturi najčešće navode brojke od oko 40 do 50.000 ljudi, odnosno 8 do 12 legija, što se čini kao uvjerljiva pretpostavka, iako tome vjerojatno treba dodati i određen broj augzilijara, pa je snaga njegove vojske možda mogla doseći i kojih 80.000 vojnika.[403] Nijedan nam izvor ne navodi poimence koje su točno legije sudjelovale u pohodu 35. pr. Kr., no povjesničari spominju *legio XV Apollinaris* kao vjerojatnu mogućnost.[404] U tom je kontekstu moguće pretpostaviti da je Oktavijan u pohod odveo i VII, VIII, IX i XI legiju.[405] Iako se može pretpostaviti da odluka o napadu nije bila plod dugoročnog strateškog promišljanja već je prvenstveno bila uvjetovana trenutnom političkom situacijom, Oktavijan i njegov vojni stožer – u kojem su se isticali časnici poput Gaja Antistija Veta, Fufija Gemina, Marka Helvija, Statilija Taura, Valerija Mesale Korvina, Marka Vipsanija Agripe te, vrlo vjerojatno, Tiberija Klaudija Nerona, oca čovjeka koji će ga jednog dana i naslijediti na carskom prijestolju – dobro su isplanirali pohod te jasno definirali ciljeve i redoslijed operacija.

It is impossible to estimate the exact number of legions that Octavian led to war. However, based on the data concerning the armed forces he had at his disposal after 36 BC, it is possible to evaluate the size of the army he took to Illyricum. Expert publications most often list numbers between a some 40 000 and 50 000 men, i.e. between 8 and 12 legions, which seems to be a reasonable assumption, although a certain number of auxiliaries should also be added. As such the strength of his army might have reached about 80 000 soldiers.[403] Not even one source lists the names of the exact legions that took part in the campaign of 35 BC, but historians mention *legio XV Apollinaris* as a possibility.[404] For similar reasons, it is also possible to assume that Octavian also commanded legions VII, VIII, IX and XI in the campaign.[405] Although it can be assumed that the decision to attack was not the result of strategic planning, but was primarily conditioned by the political situation at the time, Octavian and his military headquarters planned the campaign well and clearly defined the goals and schedule of operations. This headquarters included officers like Gaius Antistius Vetus, Fufius Geminus, Marcus Helvius, Statilius Taurus, Valerius Messalla Corvinus, Marcus Vipsanius Agrippa, and, most likely, Tiberius Claudius Nero, the father of the man who would one day inherit the imperial throne.

402 Za širi politički i strateški kontekst, kao i Oktavijanove razloge za pohod vide Rice Holmes 1928, 113–130; Swoboda 1932, 3–17; Syme 1939, 232–241; Schmitthenner 1958, 189–200, 218–222; Reinhold 1988, 66–68; Nagy 1991, 57–60; Pelling 1996, 27–47; Šašel Kos 2005, 397–403, 458–471; 2018, 44–49; Dzino 2010, 101–107; Džino, Domić Kunić 2013, 148–154; Goldsworthy 2014, 170–178; Zaninović 2015, 405–407.

403 Veith 1914, 108–109; Swoboda 1932, 17; Dzino 2010, 107; Radman-Livaja 2012, 162; 2017, 173.

404 Ritterling 1925, 1747–1748 ; Šašel 1985, 549; 1995, 229; Wheeler 2000, 267.

405 Ritterling 1925, 1664, 1690; Keppie 1984, 133, 207-209; Reddé 2000, 119–120; Strobel 2000, 526; Radman-Livaja 2018, 153.

402 For a wider political and strategical context, as well as for Octavian's reasons for the campaign, see Rice Holmes 1928, 113–130; Swoboda 1932, 3–17; Syme 1939, 232–241; Schmitthenner 1958, 189–200, 218–222; Reinhold 1988, 66–68; Nagy 1991, 57–60; Pelling 1996, 27–47; Šašel Kos 2005, 397–403, 458–471; 2018, 44–49; Dzino 2010, 101–107; Džino, Domić Kunić 2013, 148–154; Goldsworthy 2014, 170–178; Zaninović 2015, 405–407.

403 Veith 1914, 108–109; Swoboda 1932, 17; Dzino 2010, 107; Radman-Livaja 2012, 162; 2017, 173.

404 Ritterling 1925, 1747–1748; Šašel 1985, 549; 1995, 229; Wheeler 2000, 267.

405 Ritterling 1925, 1664, 1690; Keppie 1984, 133, 207-209; Reddé 2000, 119–120; Strobel 2000, 526; Radman-Livaja 2018, 153.

Zbog ograničenog opsega ovog pregleda prepričat ćemo samo prvu važnu ratnu operaciju, odnosno događanja 35. pr. Kr. u kojima je Oktavijan osobno sudjelovao, kada su se na udaru našli Japodi i Segestika. Japodska su plemena izričito bila prozvana kao kršitelji sporazuma s Rimom, ne samo zbog neplaćanja danka već i kao pljačkaši, pa je kaznena ekspedicija usmjerena protiv njih u očima Senata bila sasvim opravdana. O pohodu protiv njih, kao i napadu na Segestiku, imamo sačuvane zapise Apijana (nešto iscrpnije) te Diona Kasija (bitno sažetije), ali s nekim detaljima koji nedostaju kod Apijana (*Appianus, Illyrica* 16-24; *Cassius Dio*, 49, 35-38). Zahvaljujući tim djelima, unatoč brojnim nedoumicama možemo barem okvirno rekonstruirati tijek ratnih operacija 35. pr. Kr. Apijan se, po svemu sudeći, primarno, ako ne i isključivo, poslužio Augustovim memoarima kao izvorom (nesačuvani *Commentarii*), pa je njegov opis borbenih djelovanja gotovo panegiričan niz Oktavijanovih mudrih odluka i hrabrih djela. Dion Kasije se, uz Augustov tekst, očito služio i nekim drugim, danas izgubljenim izvorima koji su prema mladom vojskovođi ipak bili nešto kritičniji te odmjerenije sagledavali tijek i rezultate njegovog ratovanja.[406]

Nije isključeno da je Oktavijan svoju vojsku podijelio na više dijelova kako bi mogao napredovati iz više pravaca. U literaturi prevladava mišljenje da je on osobno s glavninom krenuo iz Senije preko Velebita izravno u srce neprijateljskog teritorija (Sl. 116). Koji je dio trupa do Senije stigao brodovima, a koji je dio do tamo od Tarsatike išao uz obalu, ostaje otvoreno pitanje. Kao polazne točke različitih pravaca napredovanja spominju se i Skardona odnosno Burnum, no to se čini ipak manje vjerojatno u odnosu na pretpostavku da je dio vojske išao od Akvileje i Tergesta preko Alpa do Nauporta, odakle se prateći Savu mogao spustiti prema Segestici.

Nakon što je Oktavijan prešao Velebit, prvi su se na udaru našli cisalpinski Japodi koji su naseljavali prostor južno od Velike i Male Kapele. Rimljani su se, prešavši planinu, kretali po zaravni prema jugu i metodično pokoravali pleme po pleme. Gradovi Monetij (kod Brinja) i Avendo (Crkvina u Kompolju kod Otočca) predali su se bez borbe, pa se Oktavijan pokazao milostiv prema njihovim stanovnicima. Arupini, čije se središte nalazilo u Arupiju (gradina Vital kod Prozora blizu Otočca), čak su se, izgleda, i premišljali o pružanju otpora, pa su se svi okupili u Arupiju, no čim se rimska vojska približila povukli su se u okolne šume. Oktavijan im je zajamčio slobodu ako se mirno vrate i pokore, potvrđujući svoje namjere time što im nije uništio napušteni grad, pa su i Arupini u konačnici bezbolno kapitulirali. Nedostatak borbenosti cisalpinskih Japoda su neki povjesničari objasnili činjenicom da su upravo ti Japodi imali u prošlosti intenzivnije veze s Italijom, pa se i Ciceronove riječi o nekom savezu između Rimljana i Japoda (*foedus*) vjerojatno odnose na cisalpinske Japode (*Pro Balbo, 14.32*). Monetini, Avendeati i Arupini su tijekom rimskih građanskih ratova sredinom 1. st. pr. Kr. očito prestali ispunjavati svoje obaveze prema Republici. Na njihovu sreću, ako je suditi po Oktavijanovoj benevolentnosti, Rimljani se nisu pokazali kao velika zlopamtila. Pretpostavlja se da se cisalpinskim Japodima

406 Pretpostavlja se da je riječ o djelima povjesničara Azinija Poliona i Kremucija Korda; Šašel Kos 1986, 118–120, 142–144; 1997, 187-188; 2005, 393–397, 404.

Due to the limitations of this publication, we will only focus on the first important military operation, i.e. the events of 35 BC, that was conducted by Octavian himself, when the Iapodes and *Segestica* were in his way. Iapodian tribes were officially deemed the breakers of the agreement with Rome, not only because they did not pay taxes, but also because they were pillagers, so taking punitive action against them was seen as completely justified by the Senate. Information on the campaign against them, as well as about the attack on *Segestica,* is available in the writings of Appian (somewhat more exhaustive), and Cassius Dio (far more condensed) who provides some details which were not recorded by Appian (*Appianus, Illyrica* 16-24; *Cassius Dio*, 49, 35-38). With the help of these records, despite numerous questions, we can make at least a partial reconstruction of the military operations of 35 BC. Appian primarily, if not entirely, relied on Augustus' memoirs as a source (the unpreserved *Commentarii*), so his description of military activities is almost a panegyrical series of Octavian's wise decisions and brave deeds. Cassius Dio, alongside Augustus' text, obviously used other sources which have also been lost and were evidently a bit more critical of the young commander, looking at the processes and the results of his battles a bit more realistically.[406]

It is not impossible that Octavian had divided his army into several parts in order to advance from several directions. The publications are dominated by the opinion that he personally moved from *Senia* across the Velebit Mountain directly to the heart of enemy territory (Fig. 116). The question remains, however, of how many troops reached *Senia* by ship, and how many got there from *Tarsatica* along the coast. *Scardona*, and *Burnum* are also mentioned as some of the starting points of the advance, but that seems less likely in comparison to the assumption that part of the army went from *Aquileia* and *Tergeste* across the Alps to *Nauportus*, from which they could reach *Segestica* by following the Sava River.

After crossing the Velebit Mountain, the Cisalpine Iapodes, who had inhabited the area south of Velika and Mala Kapela, were the first in Octavian's path. The Romans, after crossing the mountain, moved south and methodically conquered these Iapodes tribe by tribe. The cities of *Monetium* (near Brinje) and *Avendo* (Crkvina in Kompolje near Otočac) gave up without a fight, so Octavian was merciful towards the inhabitants. The Arupians, with their center in *Arupium* (the Vital hillfort near Prozor near Otočac), it seems, had gathered in *Arupium* to discuss their resistance, but retreated into the forests when the Roman army approached. Octavian guaranteed their freedom if they returned peacefully and surrendered, confirming his intentions by not destroying their abandoned city, so the Arupians had finally also peacefully capitulated. The lack of resistance shown by the Cisalpine Iapodes was explained by some historians by highlighting the fact that it was precisely these Iapodes who had held more intensive ties with Italy in the past, with some

406 It is assumed that these are the works of the historians Asinius Pollio and Cremutius Cordus; Šašel Kos 1986, 118–120, 142–144; 1997, 187-188; 2005, 393–397, 404.

samo zamjeralo nepridržavanje ugovora s Rimskom Republikom i neplaćanje danka te da ih se nije smatralo odgovornima za pljačkaške pohode.

Za razliku od njih, transalpinski iliti onostrani Japodi nisu oklijevali sukobiti se s Oktavijanovim trupama. Je li to bilo zato što su bili suroviji i što ih za Rim nisu vezivali nikakvi stari savezi, ili to možemo pripisati činjenici da su oni bili najodgovorniji za pljačkaške pohode, kao što ističe Apijan, pa nisu niti očekivali milost, stvar je rasprave. Kako god bilo, prve borbe započele su tek nakon što je rimska vojska prešla Albiju, odnosno Veliku i Malu Kapelu i došla do ogulinsko-plaščanske visoravni. Tu su stanovnici Terpona (gradina se, ovisno o autorima, ubicira kod Gornjeg Modruša ili kod Ogulina) Rimljanima postavili zasjedu, no kako je Oktavijanova vojska napredovala u tri paralelne kolone, središnjoj koloni u pomoć su pritekle druge dvije. Japodi su pretrpjeli velike gubitke pa su odustali od obrane Terpona i povukli se u šumu. Zanimljivo da se Oktavijan i ovom prilikom pokazao neuobičajeno milostiv i nije srušio Terpon, već je uvjerio stanovnike da se vrate i pokore. Blagim pristupom prema domorocima uspio je tako bez većih gubitaka doprijeti do najvećeg utvrđenog japodskog grada Metula (Viničica kod Čakovca blizu Jospidola), no tamo više nije bilo mjesta pregovorima i kompromisima. Gradinu je branilo 3000 ratnika koje nije pokolebao prvi rimski napad, pa je Oktavijan morao pribjeći opsadi. Nakon izrazito teških borbi (*Appianus, Ill. 20; Florus, Epitomae, 2.23; Suetonius, Aug., 20; Cassius Dio, 49.35*), grad je ponudio predaju, koju je Oktavijan prihvatio, ali je došlo do razdora među samim stanovnicima, pa je primirje prekinuto, a rimska posada u gradu napadnuta. Nakon što je skršen zadnji otpor, većina stanovnika počinila je samoubojstvo (*Appianus, Ill.* 21; *Cassius Dio* 49.35), a Oktavijan se uputio prema Segestici, prepustivši Marku Helviju da uguši pobunu Posena, izgleda metulskih susjeda.

Osvajanje Segestike

Do Segestike Oktavijan se probijao osam dana, prvotno pokušavajući ne izazivati domorodačko stanovništvo koje više nisu činili Japodi već Panonci, ali su potonji stalno iz zasjede napadali njegove trupe, pa im je ipak odlučio za kaznu popaliti i popljačkati sela. O razlozima napada na Segestiku i Panonce Apijan i Kasije Dion se ne slažu. Prvi se drži očito službene verzije i naglašava kako je Segestika već dvaput u povijesti bila napadana od strane Rimljana, ali nikad pokorena do kraja, što je Segestance učinilo osionima. Ipak, Oktavijan nije htio osvojiti grad samo zbog tih starih grijeha, već mu je bio potreban kao logistička baza za daljnji pohod protiv Dačana i Bastarna. Po Apijanovim riječima, čak nije htio pokoriti grad nego je "samo" tražio da Segestanci prihvate rimsku posadu, izruče stotinu talaca i osiguraju koliko god mogu hrane kako bi Oktavijan mogao koristiti grad kao opskrbno središte u ratu protiv Dačana. Vladajuća elita je i na te uvjete pristala, no stanovništvo se ipak pobunilo i odbilo primiti Rimljane u grad (iako su taoce prethodno predali). Inzistiranje na nužnosti zaposjedanja Segestike zbog nekakvog dačkog pohoda koji je tobože ozbiljno planirao, kao i na davnim sukobima Rimljana i Segestanaca čini se kao Oktavijanovo obrazloženje za Senat, kojeg je vjerojatno zanimalo što su to Segestanci točno skrivili Rimskoj Republici. Da nije svatko bio impresioniran Augustovim

historians noting that when Cicero was mentioning some alliance between Rome and the Iapodes (*foedus)* in Pro Balbo, 14.32, he was probably referring to these Cisalpine Iapodes. The inhabitants of *Monetium, Avendo* and *Arupium* had, during the Roman civil wars of the mid-1st century BC, obviously stopped fulfilling the obligations of this alliance to the Republic. Luckily for them, as Octavian's benevolence would suggest, the Romans did not turn out to be vengeful. It is assumed that the Cisalpine Iapodes were only blamed for not respecting the agreement with the Roman republic and not paying taxes, not for being responsible for the pillaging campaigns.

Unlike those of the Cisalpine region, the Transalpine Iapodes did not hesitate to face Octavian's troops. Whether this was because they were more violent and were not connected to Rome via any old alliance, or because, as stated by Appian, they were behind the pillaging campaigns, so did not expect mercy, is a matter of discussion. In any case, the first battles began only after the Roman army crossed the *Albia* mountains, i.e. the Velika and Mala Kapela, and reached the Ogulin-Plaški plateau. Here, the inhabitants of *Terponus* (the hillfort is, depending on the author, mapped near Gornji Modruš or Ogulin) set a trap for the Romans. However, as Octavian's army advanced in three parallel lines, the central one was helped by the other two. The Iapodes suffered great losses, so they gave up defending *Terponus* and retreated into the woods. It is interesting that Octavian, in this instance as well, showed himself to be unusually merciful by not destroying *Terponus,* but instead convincing the inhabitants to return and surrender. By taking a mild approach with the natives, he managed, without significant losses, to reach the largest fortified Iapodian city of *Metulum* (Viničica near Čakovac near Jospidol), where finally there was no more room for negotiations and compromise. The hillfort was defended by 3000 warriors who were not discouraged by the first Roman attack, so Octavian had to wage a siege. After exceptionally fierce fighting (*Appianus, Ill. 20; Florus, Epitomae, 2.23; Suetonius, Aug., 20; Cassius Dio, 49.35*), the city offered to surrender and Octavian accepted. However, the inhabitants fought amongst themselves, so the truce was ended and the Roman troops that were in the city were attacked. After the last resistance was stifled, most of the city's inhabitants committed suicide (*Appianus, Ill*. 21; *Cassius Dio* 49.35), and Octavian headed towards *Segestica*, leaving Marcus Helvius to suppress the rebellion of the Poseni, who seem to have been neighbors of *Metulum*.

The conquest of *Segestica*

It took Octavian eight days to reach *Segestica,* primarily because he tried not to provoke the natives, who were no longer the Iapodes, but Pannonians. However, the latter continually tried to attack his troops, so he decided to plunder and burn their villages. Appian and Cassius Dio do not agree on the reasons behind the attack on *Segestica* and the Pannonians. The first author stuck to the obviously official version, and emphasized that *Segestica* had already previously been attacked by the Romans on two occasions, but was never conquered, which made the Segestans insolent. However, Octavian did not want to conquer the city only for its sins, also needing it as a logistic base for the future campaign against the Dacians and the Bastarni. According to Appian, he

SL. 117
Opsada Segestike (S. Bogojević Narath)

FIG. 117
The siege of *Segestica* (S. Bogojević Narath)

objašnjenjima vidljivo je i iz narativa Diona Kasija, čiji izvori jasno ističu da nije bilo nikakvog razloga za napad na Panonce jer se nisu ničim ni zamjerili Rimu. Za razliku od pokoravanja Japoda, to se nije moglo smatrati pravednim ratom jer očito nisu prekršili nikakve ugovore, niti su bili optuživani za pljačkanje rimskih teritorija. Oktavijan ih je napao, kako Kasije Dion kaže, samo da bi uvježbavao svoje vojnike i osigurao im opskrbu o tuđem trošku. Dionove opaske su zanimljivo svjedočanstvo o kritikama koje su pratile Oktavijanove aktivnosti prije nego što je učvrstio svoju apsolutnu vlast i eliminirao svaku opoziciju. Kako god bilo, Segestancima nije bila neka utjeha što je dio rimske elite smatrao da su nevine žrtve Oktavijanovog častohleplja, a ionako nije bilo izgledno da bi itko u Senatu proveo ozbiljnu istragu jednom nakon što je Segestika pala i rat bio okončan pobjedom.

did not even want to conquer the city, but was “only” asking the Segestans to welcome his troops, give up about a hundred hostages, and ensure as much food as they could, so that Octavian could use the city as a supply base during the war against the Dacians. The ruling elite accepted those terms too, but the inhabitants rebelled and refused to allow the Romans to enter the city (although they had previously surrendered the hostages).

The insistence of the need to conquer Segestica for a Dacian campaign that was, supposedly, being planned, along with the need to address the ancient conflicts between the Romans and the Segestans, could have been the rationale Octavian presented to the Senate; a Senate who probably wanted to know what the Segestans did to the Roman Republic. The fact that not everyone was impressed by Octavian’s explanations is visible in the narrative of Cassius Dio, whose sources clearly point out

Oktavijanu nije preostalo druge nego zaposjesti grad koji se branio svim raspoloživim sredstvima, pa je Rimljanima trebalo trideset dana da skrše otpor, iako je Oktavijan sigurno raspolagao znatnim snagama.[407] Nedvojbeno je morao izdvojiti dio svojih trupa za čuvanje dotad zauzetog područja, kao i opskrbnih putova od Velebita do Kupe, no čak i ako je polovicu svojih jedinica rasporedio diljem tog teritorija, Segestiku je mogao opsjedati s barem četiri ili pet legija ojačanih pratećim augzilijarnim jedinicama, kao i posadama riječnih brodova koje su se priključile opsadi. Toj pretpostavci ide u prilog činjenica da je nakon pobjede u gradu mogao ostaviti garnizon od 25 kohorti pod zapovjedništvom Fufija Gemina, odnosno dvije i pol legije, što pokazuje da grad napadao s još većim snagama.

Opis tijeka opsade djelomično se poklapa u Apijanovom i Dionovom tekstu, a neke se razlike mogu pripisati korištenju različitih izvora – odnosno razlikama između Augustovih friziranih memoara, kao i službenih izvješća te zapisa Augustovih suvremenika kojima politička karijera nije bila na prvom mjestu – ali i interpretacijama samih autora. Dion Kasije se tako nije libio interpolirati neke svoje opaske i promišljanja, ohrabren činjenicom da je osobno boravio u Dalmaciji i Gornjoj Panoniji kao guverner,[408] pa se smatrao i stručnjakom za to područje. Svjesno je, primjerice, odlučio izbjegavati staro ime grada, Segesta ili Segestika, iako je ono moralo biti navedeno u svim njegovim izvorima, nego se odlučio isključivo koristiti ime Siscija, bliže i poznatije čitateljstvu njegovog vremena. I Apijan i Kasije Dion navode da je Oktavijan oko grada napravio kontravalaciju, odnosno okružio grad jarcima i palisadama, što je bila standardna praksa u rimskoj poliorketici. Apijan navodi i da je Oktavijan dao izgraditi most preko rijeke (ne kaže koje), kao i još dva prilazna nasipa koje su Segestanci stalno bezuspješno napadali zasipajući ih bakljama i vatrom. Pojašnjenja radi, rimske prilazne rampe redovito su imale drvenu nosivu konstrukciju, što objašnjava napore branitelja da ih pokušaju zapaliti. Zatim dodaje da su drugi (neimenovani) Panonci pokušali doprijeti do grada kako bi pružili pomoć, no Rimljani su ih dočekali u zasjedi i odbacili. Nakon trideset dana, bez nade za spas, Segestanci su zatražili milost, a Oktavijan im je, opet blag i milostiv, molbu uslišio zadivljen njihovom hrabrošću, pa ih nije dao ni pobiti ni porobiti, već je samo dao da se dio grada zazida i unutar tog ograđenog prostora smjesti posada od 25 kohorti.

Apijanov je opis opsade u stvari dosta općenit, a nekome tko poznaje lokalnu topografiju zadaje više pitanja nego što daje odgovora. Ipak, Apijan jasno navodi da je grad zaštićen rijekom

that there was no reason to attack the Pannonians because they did nothing to oppose Rome. Unlike the conquest of the Iapodes, this could not be seen as a just war, because they had evidently not breached any agreement, nor were they accused of pillaging Roman territories. Octavian had attacked them, in the words of Cassius Dio, only to train his troops and ensure supplies at someone else's expense. Dio's remarks are an interesting testimony on the critiques that surrounded Octavian's activities before he acquired his absolute power and eliminated all opposition. In any case, the Segestans found no comfort in the fact that some of the Roman elite saw them as innocent victims of Octavian's ambitions, and it was not really likely that anyone in the Senate would conduct a serious investigation after *Segestica* had fallen and the war came to a victorious end.

Octavian had no other option but to lay siege to a city which defended itself with all available resources, so it took the Romans thirty days to break the resistance, despite the fact that Octavian had numerous troops under his command.[407] He undoubtedly had to detach some of his troops to guard the previously conquered areas, as well as the supply routes leading from the Velebit Mountains to the Kupa River. However, even if he had spread half of his troops across that territory, he could have laid siege to *Segestica* with at least four or five legions, bolstered by auxiliary units, as well as the crews of the river boats that joined the siege. This assumption is supported by the fact that, after the victory, Octavian was able to leave the city under the control of a garrison of 25 cohorts, i.e. two and a half legions, under the command of Fufius Geminus – indicating that he had attacked the city with even more units.

The description of the siege partially overlaps in the works of Appian and Cassius Dio, and some differences can be ascribed to the interpretations of the authors themselves and the fact that they used different sources – i.e. Augustus' embellished memoirs, official records, and the records of Augustus' contemporaries who did not put their political careers above everything else. Cassius Dio did not shy away from interpolating some of his own comments and thoughts, encouraged by the fact that he had spent some time in Dalmatia and Upper Pannonia as a governor,[408] so he saw himself as an expert on the area. He had consciously, for example, decided to avoid the old name of the city, *Segesta* or *Segestica,* although it would have been listed in his sources, opting only to use the name *Siscia,* which was more familiar to his readers. Both Appian and Cassius Dio record that Octavian had made a contravallation around the city, i.e. he had encircled it with ditches and palisades, which was described as common

407 Za opsadu Segestike *vide Appianus, Illyrica 22-24; Cassius Dio, 49, 37-38*; Veith 1914, 49–58; Swoboda 1932, 29; Wilkes 1969, 52–53; Mócsy 1974, 22; Šašel-Kos 1986, 139–142; 1997, 190–196; 2005, 437–442; Nagy 1991, 62–64; Hoti 1992, 137–138; Radman-Livaja 2004, 17; 2007, 161–162; 2010, 182–183; 2018, 152–153; Domić Kunić 2006, 92–100; 2018, 34–40; Dzino 2010, 109–111; Džino, Domić Kunić 2013, 155; Zaninović 2015, 419–421.

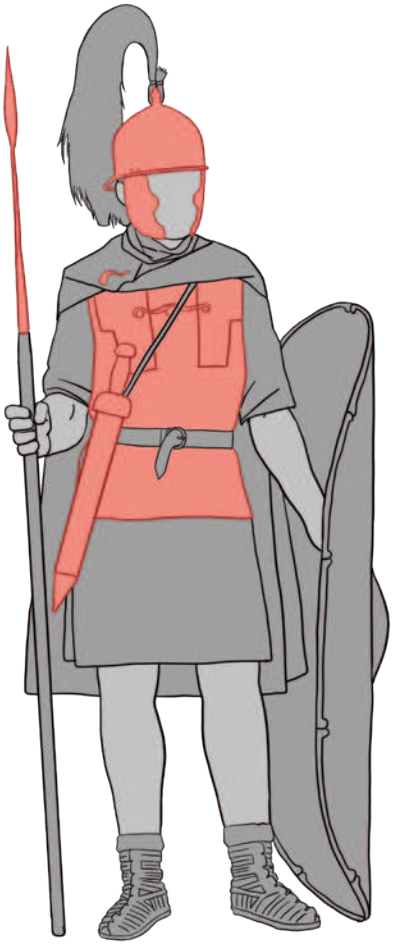
408 Od 224. do 226. po Kr. bio je legat Dalmacije, a od 226. do 228. po Kr. legat Gornje Panonije (Millar 1964, 23–24, 194).

407 For the siege of *Segestica*, see *Appianus, Illyrica* 22-24; *Cassius Dio*, 49, 37-38; Veith 1914, 49-58; Swoboda 1932, 29; Wilkes 1969, 52-53; Mócsy 1974, 22; Šašel-Kos 1986, 139-142; 1997, 190-196; 2005, 437-442; Nagy 1991, 62-64; Hoti 1992, 137-138; Radman-Livaja 2004, 17; 2007, 161-162; 2010, 182-183; 2018, 152-153; Domić Kunić 2006, 92-100; 2018, 34-40; Dzino 2010, 109-111; Džino, Domić Kunić 2013, 155; Zaninović 2015, 419-421.

408 Between 224 and 226 AD, Dio was the governor in Dalmatia, and, between 226 and 228 AD, he was the governor of Pannonia Superior (Millar 1964, 23–24, 194).

SL. 119
Oružje i oprema rimskog
legionara iz Siska (I. Krajcar)

FIG. 119
The weapons and equipment of a Roman
legionary from Sisak (I. Krajcar)



SL. 118
Rekonstrukcija rimskog legionara
(S. Bogojević Narath)

FIG. 118
A reconstruction of a Roman legionnaire
(S. Bogojević Narath)

i velikim jarkom koji ga okružuje. Kasije Dion, iako mu je opis opsade kraći, upozorava na neke bitne geografske značajke Segestike. Navodi da je, iako je grad imao snažne bedeme, njegovim stanovnicima najviše povjerenja ulijevala činjenica što im grad leži na dvije plovne rijeke, od kojih jedna, Kupa (*Colapis*), oplakuje same bedeme te se ulijeva u obližnju Savu. Nedoumicu unosi slijedeća Dionova tvrdnja, kad kaže da u njegovo vrijeme Kupa okružuje cijeli grad zbog jarka koji je dao iskopati Tiberije, no da je u vrijeme opsade međuprostor između Kupe i nedaleke Save bio utvrđen šancima i drvenim palisadama. Iz navedenog je očito da je Kasije Dion smatrao da je protohistorijska Segestika bila na istom mjestu kao i rimska Siscija, odnosno na poluotoku između Kupe i Save, a ne na Pogorelcu gdje većina povjesničara i arheologa smješta pretpovijesni grad vodeći se, među ostalim, i riječima Plinija Starijeg i Strabona.[409] Plinije jasno razlikuje grad Sisciju od otoka omeđenog meandrom Kupe koji naziva Segestikom, dok Strabon govori o dva lokaliteta, gradu Segestici i utvrdi Siskiji.[410] To što Plinije Segestiku izričito naziva otokom bi moglo upućivati na postojanje jarka koji je poluotok Pogorelac učinio umjetnim otokom. Do ne tako davno Dionova se tvrdnja mogla smatrati običnom greškom u čitanju izvora[411] odnosno krivom interpretacijom starih podataka u svjetlu zatečene topografije Siscije u vrijeme kad je vjerojatno osobno posjetio grad između 226. i 228. godine. Iako je njegovu interpretaciju prihvatio ni više ni manje nego sam Veith, kojeg su slijedili i neki drugi, kao Rice Holmes, opsada Pogorelca ipak se činila izglednijom opcijom jer je tamo arheološki dokumentirano pretpovijesno naselje.[412]

Istraživanja proteklih nekoliko godina su, međutim, potvrdila značajan razvoj mlađeželjeznodobnog naselja na lijevoj obali Kupe, nasuprot Pogorelcu.[413] Nema danas dvojbe da su tijekom 1. st. pr. Kr. bile istovremeno naseljene obje obale Kupe, a nema razloga ni sumnjati da je bila riječ o istom naselju odnosno Segestici/Sisciji. Iako sam i dalje mišljenja da je Kasije Dion netočno interpretirao položaj Tiberijevog šanca, odnosno da ga je pogrešno prispodobio s obrambenim jarkom Siscije svog vremena, u svjetlu rezultata novih istraživanja ne bi trebalo više olako odbijati pretpostavku da je rimski napad mogao biti usmjeren i na sjeverni dio sisačkog poluotoka, kao što je to opisao Veith. Jesu li stanovnici pokušali obraniti cijeli grad, ili su pak branitelji Segestike odlučili koncentrirati svoje snage samo na jednom od dva poluotoka, bilo na Pogorelcu bilo na poluotoku između Kupe i Save, ostaje otvoreno pitanje. Ukoliko pretpostavimo da je samo Pogorelac bio zaštićen velikim jarkom na južnoj strani i tako *de facto* bio pretvoren u otok, nije isključeno da su se Segestanci onamo povukli kako bi se lakše obranili, prepustivši naselje na lijevoj obali Kupe na milost i nemilost Rimljanima. Ipak, treba obratiti pozornost na Apijanov navod o

409 Faber 1973, 152; Šašel 1974, 726; Nenadić 1987, 73; Buzov 2003, 178; Šašel Kos 1997, 192; Burkowsky 1999, 18–19; Lolić 2003, 138; Drnić 2015b, 11–15.

410 Radman-Livaja 2007, 159–161; Domić Kunić 2018, 27–30; Radman-Livaja, Vukelić 2018, 409–410.

411 Radman-Livaja, Vukelić 2018, 410–413.

412 Veith 1914, 51–58; Rice Holmes 1928, 133.

413 Drnić, Miletić Čakširan 2014,147–199; Drnić 2015b, 12–13; 2018, 19–20; Radman-Livaja, Vukelić 2018, 413–414; Škrgulja 2018, 109–114.

practice in the Roman poliorcetics. Appian also records that Octavian constructed a bridge over a river (he does not say which one), as well as two other access ramps that the Segestans unsuccessfully attacked by showering them with torches and fire (Roman access ramps commonly had wooden supports, which explains the defenders' attempts to set them on fire). The author then adds that other (unnamed) Pannonians tried to reach the city to offer their help, but the Romans ambushed and defeated them. After thirty days, without hope of salvation, the Segestans asked for mercy, and Octavian, again kind and merciful, answered their pleas. Impressed by their bravery, he did not have them killed or captured, instead ordering for a part of the city to be closed off so that it could accommodate a garrison of 25 cohorts.

Appian's description of the siege is typically quite general and poses more questions than it answers for someone who knows the local topography. However, Appian clearly states that the city is protected by a river and a large surrounding ditch. Cassius Dio, although his description of the siege is shorter, lists some important geographical features of *Segestica*. He says that, although the city had strong walls, its inhabitants felt most secure because of the fact that it was situated on two rivers, one being the Kupa (*Colapis*), which flowed right next to the walls and into the other River, the Sava. Confusion arises when Dio, on the one hand, states that, in his time, the Kupa flowed around the entire city in a ditch that was made by Tiberius, and, on the other hand, declares that, at the time of the siege, the area between the Kupa and the Sava was fortified by small ditches and palisades. This makes it clear that Cassius Dio thought that the proto-historic *Segestica* was in the same spot as the Roman *Siscia,* i.e. on a peninsula between the Kupa and Sava Rivers, and not on Pogorelac, where most historians and archaeologists place the prehistoric city, based on, among other things, the words of Pliny the Elder and Strabo.[409] Pliny clearly differentiates between the city of *Siscia* and the island surrounded by the meander of the Kupa River, which he calls *Segestica,* while Strabo speaks of two sites, the city of *Segestica* and the fort of *Siscia*.[410] The fact that Pliny consciously calls *Segestica* an island could point to the existence of a ditch that turned the Pogorelac peninsula into an artificial island. Until not so long ago, Dio's claim could be seen only as a misreading of the sources,[411] i.e. a misinterpretation of old data in the light of the topography of *Siscia* at the time when he probably visited the city, between 226 and 228 AD. Although Dio's interpretation was accepted by none other than Veith, who was then followed by others, such as Rice Holmes, a siege of Pogorelac nevertheless seems to be the more likely option, because a prehistoric settlement has been archaeologically attested to at this location.[412]

409 Faber 1973, 152; Šašel 1974, 726; Nenadić 1987, 73; Buzov 2003, 178; Šašel Kos 1997, 192; Burkowsky 1999, 18–19; Lolić 2003, 138; Drnić 2015b, 11–15.

410 Radman-Livaja 2007, 159–161; Domić Kunić 2018, 27–30; Radman-Livaja, Vukelić 2018, 409–410.

411 Radman-Livaja, Vukelić 2018, 410–413.

412 Veith 1914, 51–58; Rice Holmes 1928, 133.

dvije prilazne rampe za opsadne sprave: takvo što se ne bi gradilo preko jarka ispunjenog vodom, a pogotovo ne preko rijeke, ni Kupe, a još manje Save. Isto tako piše da su Rimljani na jednom mjestu premostili rijeku. Znači li to da su napadi bili usmjereni i na dio grada koji je bio kompletno okružen vodom, kao i na dio gdje su postojali samo bedemi? Do Pogorelca se, izgleda, moglo doći samo preko vodene prepreke, no za napad na naselje na lijevoj obali Kupe mogli su koristiti nasipe jer je, kako Dion kaže, prostor između Kupe i Save bio samo utvrđen šancima i drvenim palisadama. Ovakva interpretacija dala bi za pravo i Apijanu i Dionu Kasiju, no potvrdu ove hipoteze mogu pružiti samo daljnja arheološka istraživanja. Pitanje je, uostalom, je li se mostom koji spominje Apijan uopće pokušalo izravno doći do samog naselja okruženog vodom? Rimljani su nedvojbeno bili u stanju izgraditi pontonski most, no bi li ga imalo smisla raditi pod kišom projektila? Možda je Apijanov izvor prije imao na umu nekakav most kojim su Rimljani mogli brže prebacivati trupe s jednog kraja bojišta na drugo i tako bolje osigurati cirkumvalaciju, ali dovoljno daleko da ne budu izloženi neprijateljskoj paljbi – primjerice preko Kupe južno od Pogorelca, ili pak preko Save, možda nedaleko Starog grada?[414]

Za napad preko vodene prepreke odnosno Kupe i jarka, Rimljani su po svemu sudeći koristili čamce i brodove, što izričito naglašava Kasije Dion, koji spominje više okršaja Segestanaca i Rimljana na rijeci, tijekom kojih je ubijen i Oktavijanov admiral Menas, u izvorima poznatiji kao Menodor, oslobođenik Pompeja Velikog. Ipak, čini se da je svoje izvore za taj podatak nešto površnije čitao jer tvrdi da su nedaleki saveznici Rimljanima doveli brodove preko Dunava i Save sve do Kupe. To je nesumnjivo vrlo dug put i upitno je koji bi to ni više ni manje nego nedaleki (?) saveznici preko Dunava slali pomoć koja je nekim čudom stigla na vrijeme (opsada je trajala samo mjesec dana). Apijanov tekst vjerojatno nudi logično objašnjenje: on istina ne spominje ni riječne bitke ni Menasovu zlu kob, ali kaže da su saveznici Oktavijanu izgradili brodove na Savi kako bi ih koristio u daljnjem pohodu prema Dunavu protiv Dačana. Spomen Dunava je očito zbunio Diona, a može se pretpostaviti da je da je riječ o Tauriscima koji su iz Nauporta Ljubljanicom, pa Savom, Oktavijanu dosta brzo mogli poslati brodove koje je koristio tijekom opsade.[415] Spominjanje odnosno nespominjanje Menodorove smrti opet upućuje na različite izvore koje su koristili Apijan i Dion Kasije. August, Apijanov očiti izvor, Menodorovu smrt prešućuje, a ne opisuje ni nesumnjivo teške borbe prilikom učestalih pokušaja forsiranja Kupe koje naglašavaju Dionovi izvori. Je li u svom friziranom izvješću August namjerno zatajio taj detalj i zašto bi uopće izostavio priču o junaštvu svojih vojnika koji su preko vode jurišali na neprijateljski grad? Postoji pretpostavka da je, kako bi izbjegao svaku aluziju na Menodorovu smrt, u svom opisu namjerno preskočio i opis forsiranja rijeke brodovima. Razlog tomu bile bi sumnjive okolnosti pod kojima je Menodor skončao. Vrstan pomorski zapovjednik je bio je i notorni prevrtljivac i izdajnik, poznat po višekratnom mijenjanju strana tijekom građanskog rata između 38. i 36. pr. Kr. Je li ga

414 Veith 1914, 55.

415 Šašel Kos 1986, 138–141; 1997, 192–194; 2005, 440–441; 2012, 99–100.

In the last few years, research has, however, confirmed a significant development of an Late Iron Age settlement on the left bank of the Kupa River, opposite Pogorelac.[413] Today, there is no doubt that, in the 1st century BC, there were settlements on both sides of the Kupa River, and there is no reason to doubt that it was the same settlement, i.e. *Segestica/Siscia*. Although I am still of the opinion that Cassius Dio misinterpreted the position of Tiberius' ditch, i.e. that he had wrongly equated it with the defensive ditch of the then *Siscia,* in the light of new research, it is no longer easy to deny the claim that the Roman attack was also focused on the northern part of the Sisak peninsula, as described by Veith. Whether the defenders of Segestica tried to defend the entire city, or decided to instead concentrate their power only on one of the two peninsulas, be it Pogorelac or the peninsula between the Kupa and Sava River, remains an unanswered question. If we suppose that only Pogorelac was protected by a large ditch on the south side and was, *de facto*, turned into an island, it is possible that the Segestans retreated there in order to defend themselves more easily, leaving the settlement on the left bank of the Kupa River at the mercy of the Romans.

However, there exists the issue of Appian's record of the two access ramps for siege machinery: such a thing would not be constructed across a ditch full of water, especially not across the Kupa, and even less so across the Sava River. Appian also records that the Romans had bridged the river at a certain point. Does this mean that the attacks were also aimed at the part of the city that was completely surrounded by water, as well as at the part where there were walls? It seems that Pogorelac could be reached only across the water barrier, but access ramps could have been used to attack the settlement on the left bank of the Kupa River because, as stated by Dio, the area between the Kupa and Sava River was only fortified by small ditches and wooden palisades. Such an interpretation would make both Appian and Cassius Dio right, but its confirmation could only be provided by future archaeological research. In any case, the significant question is whether or not the bridge mentioned by Appian was even used to try reaching the settlement that was encircled by water. The Romans were certainly capable of building a bridge, but would that have made sense while under arrow attack? Perhaps Appian's source referred to a bridge that the Romans used to transport their troops from one part of the battlefield to another outside of the range of the defenders' arrows, thereby ensuring better circumvallation. This bridge could have potentially been erected across the Kupa River south of Pogorelac, or across the Sava River, perhaps not far from the nowadays Old town (fortress from the 16th century)?[414]

In their attack across the water barrier, i.e. the Kupa River and the large ditch, the Romans most likely used boats and ships, as explicitly mentioned by Cassius Dio, who refers to several river-bound battles between the Segestans and the Romans, during which Octavian's admiral Menas was killed. Better known in

413 Drnić, Miletić Čakširan 2014,147–199; Drnić 2015b, 12–13; 2018, 19–20; Radman-Livaja, Vukelić 2018, 413–414; Škrgulja 2018, 109–114.

414 Veith 1914, 55.

se Oktavijan htio riješiti, davši ga likvidirati u metežu bitke, možda po Agripinom savjetu? Za tu pretpostavku realno nema dokaza, a ni Dion Kasije ne daje naslutiti ništa slično, no pitanje ostaje.[416] I Dion Kasije, kao i Apijan, tvrdi da je opsada završila nakon što su se Segestanci odlučili predati, saznavši da su njihovi saveznici upali u rimsku zasjedu i bili uništeni i više ne mogu očekivati spas

sources as Menodorus, Menas was a freedman of Pompey the Great. However, it seems that Dio read his sources somewhat superficially, for he claims that Roman allies from the immediate vicinity brought their ships along the Danube and the Sava up to the Kupa River. That is undoubtedly a very long journey, and it is uncertain which ally from the immediate vicinity (?) would send help along the Danube, and have it, by some miracle, arrive in time (the siege only lasted for a month). Appian's text seems to offer a logical explanation: while he does not, in fact, mention the river battles, or Menas' doom, he does say that allies had constructed ships for Octavian on the Sava River so that he could use them in the forthcoming campaign towards the Danube against the Dacians. The reference to the Danube clearly confused Dio, and it can be assumed that it was a reference to the Taurisci, who could have rather quickly sent ships to Octavian from *Nauportus* along the Ljubljanica, and then the Sava River, so that he may use them during the siege.[415] The mentioning of Menodorus death, or lack thereof, again points to the different sources used by Appian and Cassius Dio. Augustus, Appians obvious source, keeps quiet about Menodorus death, and does not describe the undoubtedly ferocious clashes which took place during the frequent attempts to cross the Kupa River, evidently referred to by Dios sources.

Did Augustus, in his embellished report, intentionally skip this detail? Why would he not include the story about the heroism of his soldiers who had assaulted the enemy city from the ships? There is an assumption that, in order to avoid any implication in Menodorus death, he had intentionally skipped the description of the assaults across the river. The reason for this hypothesis would be the suspicious circumstances under which Menodorus died. The accomplished naval commander was a notorious weasel and traitor, known for having changed sides several times during the Civil war between 38 and 36 BC. Did Octavian want to get rid of him by having him killed in the midst of battle, perhaps following Agrippa's advice? There is, realistically, no evidence supporting this hypothesis, and Cassius Dio does not allude to anything of that sort. However, the question remains open.[416] Both Cassius Dio and Appian claim that the siege ended when the Segestans decided to surrender after finding out that their allies had been ambushed and destroyed by the Romans, and that there was, therefore, no hope of salvation.

416 Šašel Kos 1997, 194–195; 2005, 440; 2012, 100.

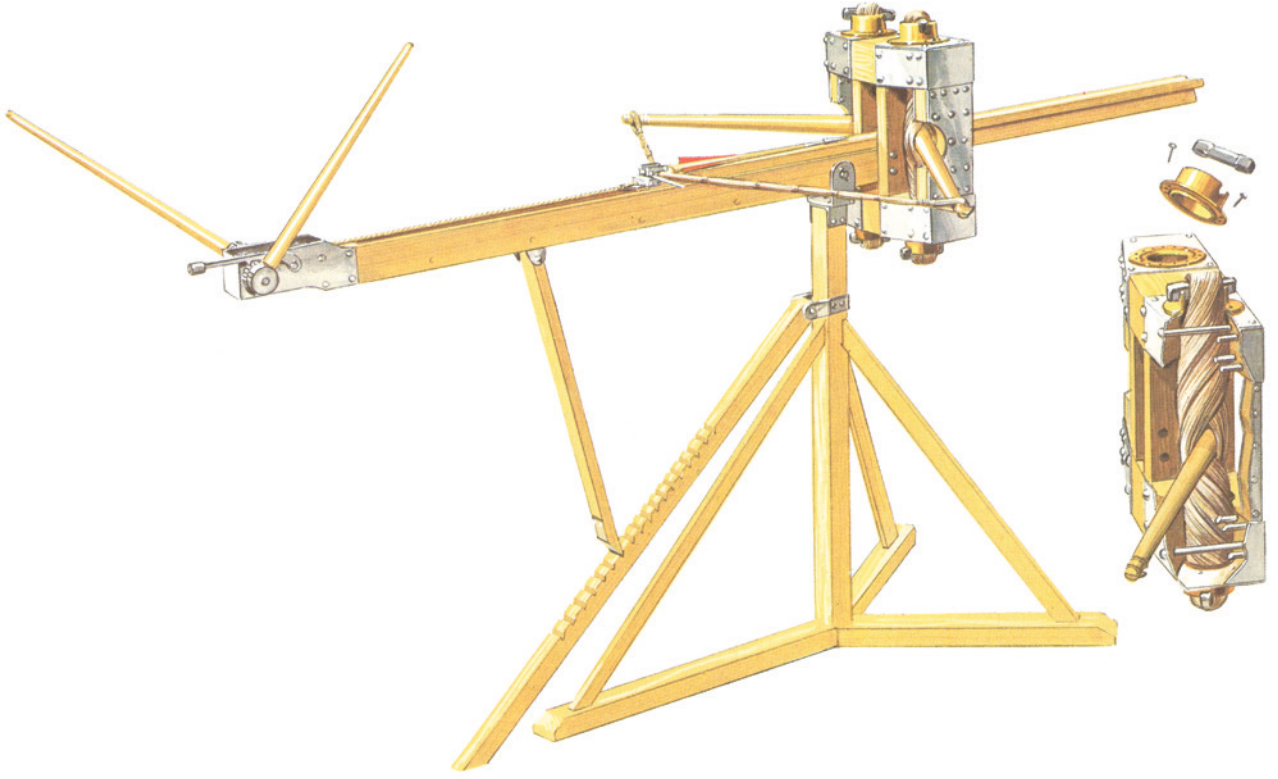
415 Šašel Kos 1986, 138–141; 1997, 192–194; 2005, 440–441; 2012, 99 –100.
416 Šašel Kos 1997, 194–195; 2005, 440; 2012, 100.

SL.120
Vrhovi strelica i projektila te olovna tanad za praće iz Siska (I. Krajcar)

FIG.120
Arrowheads, boltheads, and lead slingshots from Sisak (I. Drnić)

SL.121
Rimski *scorpio* (Connolly 1988)

FIG.121
The Roman *scorpio* (Connoly 1988)



SL.122
Tribuli iz Siska (I. Krajcar)

FIG.122
The *tribuli* from Sisak (I. Krajcar)

9.3 ARHEOLOŠKI TRAGOVI RIMSKE OPSADE I NAJRANIJE VOJNE PRISUTNOSTI NA PODRUČJU SISKA (IVAN RADMAN-LIVAJA)

Toliko nam navedena dva izvora govore o opsadi Segestike, pa preostaje još koja riječ o arheološkim tragovima borbi iz 35. pr. Kr. Novija istraživanja na lijevoj obali Kupe pokazala su da su najmlađi kasnoželjeznodobni naseobinski slojevi vjerojatno skončali u požaru, što bi moglo biti u vezi s tragičnim događajima 35. pr. Kr.[417] Također, u nekoliko muzeja se čuvaju se i stariji nalazi, mahom iz Kupe i bez jasno definiranog arheološkog konteksta, koji bi isto tako mogli imati veze s Oktavijanovim zauzimanjem Segestike jer se mogu datirati u odgovarajući kronološki okvir. U Arheološkom muzeju u Zagrebu čuva se tako više vrhova rimskih strijela, plosnatog presjeka i s krilcima s nasadom na tuljac koji je kod svih jednako oblikovan: ispod vrha strijele tuljac se oblikovao tako da se lim samo smotao na način da se obje smotane strane dotiču po cijeloj svojoj dužini (Sl. 120). To upućuje na ubrzanu izradu velike količine strijela, dakle na proizvodnju s naglaskom na kvantitetu a ne na kvalitetu. Snižavanjem standarda kvalitete bitno se povećava obim proizvodnje, pa takav pristup upućuje na ratnu situaciju u kojoj uobičajeni, nazovimo ga mirnodopski način proizvodnje vojne opreme, pedantniji, ali i dugotrajniji, ne može podmiriti povećane potrebe vojske. Zanimljivo je da analogije nalazimo u Aleziji, mjestu koje su Rimljani opsjedali niti dva desetljeća prije Segestike/Siscije.[418] Nema uopće dvojbe da su Rimljani tijekom opade morali koristiti balističke sprave i da su Segestiku zasipali i težim projektilima od strijela (Sl. 121). Iako među nalazima iz Kupe ima vrhova

417 Škrgulja 2018, 110, 124.

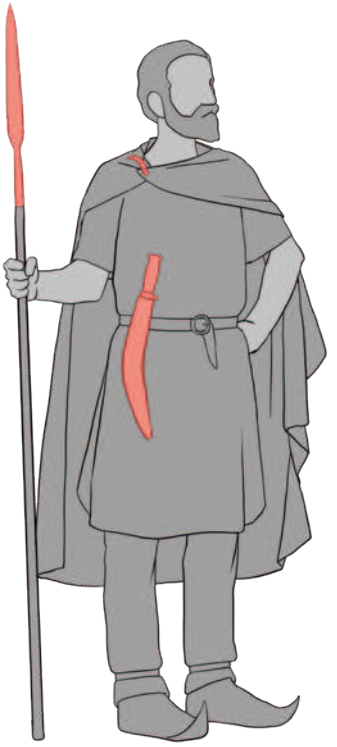
418 Radman-Livaja 2001, 125–126; 2004, 57–58.

THE ARCHAEOLOGICAL TRACES OF THE ROMAN SIEGE AND THE EARLIEST MILITARY PRESENCE IN THE TERRITORY OF SISAK (IVAN RADMAN-LIVAJA)

That is how much the two discussed sources say about the siege of Segestica, and we must now say a few words about the archaeological traces of the battle of 35 BC. Recent research on the left bank of the Kupa River has revealed that the latest Late Iron Age settlements layers were probably destroyed by a fire, which could be linked to the tragic events of 35 BC.[417] Additionally, several museums keep older finds, all of them from the Kupa River, which could also be related to Octavian's conquest of *Segestica* for they can be dated to the corresponding timeframe. The Archaeological Museum in Zagreb holds several socketed Roman barbed arrowheads of a flat cross-section, with wings and a socket for hafting that is equally shaped on all sides. The socket was formed under the arrowhead by folding the sheet in such a way that both of its ends touched length-wise (Fig. 120). This points to a quick production of a large number of arrows, with an emphasis on the quantity, not the quality. By lowering the standards of quality, the scope of production was significantly increased, and the use of this approach might indicate a war situation. In contrast, the usual, let us call it 'peacetime' mode of production of military equipment was stricter quality wise but took a lot longer, and would have been unable to cope with the needs of a campaigning army. Interesting analogies can be found at the site of *Alesia*, where the Romans laid siege not two decades before *Segestica/Siscia*.[418] There is no doubt that the Romans used artillery during the siege, and that they shot at *Segestica* with heavier projectiles

417 Škrgulja 2018, 110, 124.

418 Radman-Livaja 2001, 125–126; 2004, 57–58.



SL. 123
Rekonstrukcija segestanskog ratnika
(S. Bogojević Narath)
FIG. 123
A reconstruction of a Segestan warrior
(S. Bogojević Narath)

SL. 124
Oružje i dijelovi nošnje segestanskih ratnika
(I. Krajcar)

FIG. 124
Weapons and parts of the attire of Segestan warriors
(I. Krajcar)

rimskih balističkih projektila, teško ih je dovesti u sigurniju vezu s Oktavijanovim napadom jer pripadaju tipu uvriježenom za cijelo carsko razdoblje. Ipak, upravo je krajem 1. st. pr. Kr. došlo do tipološkog prijelaza s kratkih masivnih piramidalnih glava na izduženije i uže vrhove, pa nije isključeno da su neki od sisačkih nalaza u fundusu AMZ-a mogli biti u uporabi već tijekom opsade Segestike (Sl. 120).[419] Isto se može reći i za rimsku olovnu tanad otkrivenu tijekom jaružanja rijeke Kupe. Riječ je o primjercima oblika koji se može pratiti od 2. st. pr. Kr. barem do 2. st. po Kr., pa utoliko nije isključeno da su korišteni i 35. pr. Kr. (Sl. 120).[420]

Osim raznoraznih projektila, u Sisku su pronađeni i komadi vojne opreme i oružja koji bi također kronološki odgovarali opremi koju su mogli nositi Oktavijanovi legionari 35. pr. Kr. Posebno se ističu dvije kacige tipa Buggenum, od kojih se jedna čuva u Gradskom muzeju Sisak (Sl. 119), a druga u Berlinu.[421] U kasnorepublikansko razdoblje mogu se datirati i dva rimska gladija pronađena u Kupi, danas u Arheološkom muzeju u Zagrebu (Sl. 119),[422] kao i pilum s tuljcem i listolikim izduženim vrhom iz Magyar Nemzeti Múzeum.[423] Dijelovi rimskih karičastih oklopa (Sl. 119), kao i šatorski klinovi i tribuli (Sl. 122) iz Siska, datiraju se u puno širi kronološki okvir, pa ih je teže sa sigurnošću dovesti u vezu s opsadom 35. pr. Kr., ali ni ta mogućnost nije isključena.[424]

9.4 SEGESTANSKI RATNICI (IVAN DRNIĆ)

Kao što je opisano u prethodnom poglavlju, rimska vojska je u pohodu kroz Panoniju, a posebno tijekom tridesetodnevne opsade Segestike/Siscije, doživjela grčevit otpor lokalnog stanovništva. Predstavljeni su i arheološki tragovi rimske vojske koji su mogli potjecati iz opisanog pohoda, pa preostaje navesti predmete koje su mogli koristiti panonski odnosno segestanski ratnici. (Sl. 123) Nažalost, na području Siska dosad nisu pronađeni kasnolatenski grobovi kakvi su poznati, primjerice, u susjednoj Dolenjskoj, a u kojima se nalazilo oružje i konjska oprema, na osnovu čega bi se moglo detaljnije rekonstruirati naoružanje i opremu Segestanaca koji su se suprotstavili rimskoj sili. Također, ni izvori koji opisuju tijek opsade iz 35. pr. Kr. ne sadrže detalje o ratničkoj opremi i naoružanju branitelja.

Ipak, određen broj predmeta pronađenih u rijeci Kupi kronološki se može pripisati završnoj fazi mlađeg željeznog doba južne Panonije, odnosno sredini i drugoj polovici 1. st. pr. Kr (LT D2), a time i događajima iz 35. pr. Kr. To su prvenstveno noževi zakrivljenog sječiva tipa Pritoka-Bela Cerkev, korišteni na prostoru jugoistočnih Alpa, sjevernog Jadrana njegovog zaleđa i Pounja te u jugozapadnoj Panoniji (Sl. 124).[425] Slijede željezni vrhovi kopalja uskog lista i rombičnog presjeka ili s blago naglašenim

419 Radman-Livaja 2001, 132–136; 2004, 59–62.
420 Radman-Livaja 2000, 110–111; 2004, 58–59.
421 Waurick 1990, 20–23; Burkowsky 2001, 44–45; 2010, 204.
422 Radman-Livaja 2003, 31–33; 2004, 33–38.
423 Mráv 2010, kat. br. 1.
424 Radman-Livaja 2004, 76–79.
425 Balen 2006; Dizdar, Drnić 2018, 69–78. .

than just arrows (Fig. 121). Although the finds from the Kupa River include Roman boltheads, it is difficult to connect them with Octavian's attack, because they are ascribed to the type that was common throughout the entire Imperial period. However, right at the end of the 1st century BC, there was a typological transition from short massive pyramidal heads, to more elongated and narrower heads. Therefore, there is a possibility that some of the finds from Sisak that are kept in AMZ might have been used during the siege of *Segestica* (Fig. 120).[419] The same can be said of the Roman lead slingshots recovered from the Kupa riverbed. The shape of these finds can be traced to a period dating from the 2nd century BC up to at least until the 2nd century AD, so they could have been used in 35 BC (Fig. 120).[420]

Two helmets of the Buggenum type stand out. One is currently at the Sisak Municipal Museum (Fig. 119), and the other is in Berlin.[421] Two Roman *gladii*, recovered from the Kupar River and kept at the Archaeological Museum in Zagreb (Fig. 119), can also be dated to the Late Republican Period,[422] as can a pilum with a socket and a leaf-like elongated tip from the Magyar Nemzeti Múzeum.[423] Elements of Roman chainmail (Fig. 119), as well as tent wedges and caltrops (Fig. 122) from Sisak, are dated to a significantly wider timeframe, so it is more difficult to definitively link them to the siege of 35 BC, but the possibility cannot be excluded.[424]

SEGESTAN WARRIORS (IVAN DRNIĆ)

As has been described in the previous chapter, in its campaigns through Pannonia, and especially during the thirty-day-long siege of *Segestica/Siscia*, the Roman army was faced with ferocious resistance from the local population. Also, as we have presented the archaeological traces of the Roman army which could date to the campaign, the next thing to do is to present the items that could have been used by Pannonian, i.e. Segestan, warriors. (Fig. 123) Unfortunately, Sisak has, so far, yielded no Late La Tène graves, the likes of which have been recorded in the neighboring Dolenjska region for example, and which would include weapons and horse-riding equipment that could allow for a more detailed reconstruction of the weaponry and the equipment of the Segestan defenders. Additionally, neither of the written sources that refer to the siege of 35 BC contain details about the defenders' equipment and weaponry.

However, a certain number of finds recovered from the Kupa River can chronologically be ascribed to the final phase of the Late Iron Age in southern Pannonia, i.e. the middle and the second half of the 1st century BC (LT D2), and, thereby, the events of 35 BC. These primarily include knives with a curved blade of the Pritoka-Bela Cerkev type, used in the southeastern Alps, the

419 Radman-Livaja 2001, 132–136; 2004, 59–62.
420 Radman-Livaja 2000, 110–111; 2004, 58–59.
421 Waurick 1990, 20–23; Burkowsky 2001, 44–45; 2010, 204.
422 Radman-Livaja 2003, 31–33; 2004, 33–38.
423 Mráv 2010, cat. no. 1.
424 Radman-Livaja 2004, 76–79.

središnjim rebrom.[426] Na osnovu sastava istovremenih grobova s položaja Beletov vrt u Novom mestu pretpostavljamo da su dio nošnje ratnika činili i određeni oblici fibula, primjerice oni tipa Jezerine i Beletov vrt.[427]

Nakon opisanih događaja iz 35. pr. Kr. završava tisućugodišnji samostalan razvoj segestanske željeznodobne zajednice koja gubi političku neovisnost, a naselje na ušću rijeke Kupe u Savu, slavna Segestika/Siscija, postaje ključno rimsko vojno uporište za daljnji prodor u Panoniju.

426 Dizdar, Drnić 2018, 78–83.

427 Knez 1992.

northern Adriatic, its hinterland and the Pounje region, and in southwestern Pannonia (Fig. 124).[425] These are followed by iron spearheads with narrow blades and a rhombical cross-section, or a slightly accentuated central rib.[426] Based on the composition of the contemporaneous graves from the Beletov Vrt position in Novo Mesto, we assume that warrior attire also included certain forms of fibulas, such as those of the Jezerine and Beletov Vrt types.[427]

The millennium-long independent development of the Segestan Iron Age community ended after the described events of 35 BC. The community lost its political independence, and the settlement at the Kupa and Sava Interfluve, the famous *Segestica/Siscia*, became the key Roman military stronghold for further penetration into Pannonia.

425 Balen 2006; Dizdar, Drnić 2018, 69–78.

426 Dizdar, Drnić 2018, 78–83.

427 Knez 1992.

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