

VIMINACIJUM U PRAISTORIJI • VIMINACIUM IN PREHISTORY
iskopavanja 2005-2015. • excavations 2005-2015

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Belgrade

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**МИНИСТАРСТВО ПРОСВЕТЕ,
НАУКЕ И ТЕХНОЛОШКОГ РАЗВОЈА**

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Predgovor

Ako bi vam se ukazala prilika da sretnete putnika namernika i pitate ga zašto želi da poseti Viminacijum, rekao bi da je to nekada bila prestonica rimske provincije Gornje Mezije, da se tamo nalaze ostaci legijskog logora, monumentalnih termi, amfiteatra, akvedukta, zanatskog centra... I zaista, kad se pogleda mapa, jasno je da se Viminacijum nalazi svega stotinak kilometara od Beograda, antičkog Singidunuma, da je skoro na samoj obali Dunava i da je bio na izuzetnom geografskog položaju, što su stari Rimljani znali da iskoriste. Iz istorijskih izvora je poznato da je Viminacijum bio značajno vojno uporište, u kome je bila stacionirana rimska legija VII Claudia Pia Fidelis. Status grada je dobio u prvoj polovini II veka tokom Hadrijanove vladavine, najverovatnije 117. godine, kada je postao municipij (Municipium Aelium Viminacium), a početkom vladavine Gordijana III, 239. godine postao je kolonija. U III veku grad je bio u punom procvatu. O njegovom značaju svedoče i zapisi o posetama rimskih careva. Naime, gotovo da nije bilo rimskog imperatora koji nije prošao kroz Viminacijum i duže ili kraće boravio u njemu. U IV veku, Viminacijum je bio značajno episkopsko sedište. Definitivno je razoren sredinom V veka, u najezdi Huna i više nikada nije obnovljen. Pominje se još samo kao vojno uporište u VI veku, u vreme vladavine Justinijana. U XIX veku, u Viminacijumu su se još uvek nazirali obrisi antičkog grada i vojnog logora: široke ulice koje se seku pod pravim uglom, trgovi, pozorišta, kupatila, vodovod, gradski bedemi i kule.

Viminacijum je najpoznatiji po najvećem broju istraženih grobova iz rimskog perioda. Naime, tokom novih arheoloških iskopavanja započetih u poslednjoj četvrtini XX veka, a koja traju i danas, istraženo je skoro 14.000 grobova i pronađeno više od 40.000 predmeta koji svedoče o svakodnevnom životu njegovih stanovnika. Posebnu pažnju svojim izuzetnim stilom, koloritom i motivima, privlače oslikane grobnice nastale sredinom III i u prvoj polovini IV veka. Tokom zaštitnih iskopavanja istraženi su gradske terme, zanatski centar, mauzolej, nekoliko vila rustika i ostaci akvedukta. Neki od ovih objekata su i prezentovani i nalaze se u „Arheološkom parku“ otvorenom 2006. godine.

Tek od početka XX veka interdisciplinarni tim sastavljen od izuzetnih stručnjaka iz različitih oblasti (arheolozi, antropolozi, geofizičari, matematičari, elektroinženjeri, geolozi, petrolozi i mnogi drugi) sistematski, skoro tokom cele godine, istražuje legijski logor i grad.

Šta naš putnik namernik može danas videti na Viminacijumu osim prezentovanih arheoloških objekata? Tu je, pre svega, naučno-istraživački centar (Domus Scientiarum) objekat sa višestrukom namenom u kome su do sada organizovani mnogobrojni međunarodni simpozijumi, konferencije, radionice i kongresi. Sagrađen je u formi rimske vile rustike sa dva nivoa: gornji, u kome se nalaze radni i smeštajni prostor u kome ekipa boravi i radi tokom arheoloških istraživanja i podzemni nivo u kome su muzej, depoi i sale. Nešto istočnije od Domusa nalazi se „Mamut park“ u kome su izloženi ostaci nekoliko mamuta nađenih tokom zaštitnih iskopavanja 2009. i 2012. godine i koji od svog otvaranja pretili da zaseni slavu rimskog lokaliteta i da Viminacijum postane poznatiji kao paleontološki park.

Foreword

If you happen to stumble across a traveler and ask him why he wishes to visit Viminacium, he would have told you that the city used to be the capital of Moesia Superior and that it host the remains of a legionary fort, monumental thermae, an amphitheater, a workshop center... And indeed, when you look for it in the map, you can see that Viminacium lies some hundred kilometers from Belgrade – the antique city of Singidunum, almost on the bank of the Danube, in a remarkable geographic position, which was particularly well utilized by the Romans. The historical sources reveal that Viminacium was an important military stronghold and that Claudius' Seventh Legion (VII Claudia Pia Fidelis) was stationed in the city. Viminacium gained the status of a city in the first half of the 2nd century AD, most likely in 117 AD, during the reign of Emperor Hadrian, when it became a municipium (Municipium Aelium Viminacium). In 239 AD, under the rule of Emperor Gordian III, the city gained the status of colonia. The city reached its pinnacle during the 3rd century AD. Its significance is testified by records on imperial visits as one can hardly find a Roman Emperor that did not either pass through Viminacium or stay in the city for a longer or shorter period of time. In the 4th century AD, Viminacium was an important Episcopal center. The city met its final destruction in the mid-5th century AD, during the invasion of the Huns, as it was never rebuilt again. Following the destruction, the city is mentioned as a military stronghold in the 6th century AD, during the reign of Emperor Justinian I. The contours of the ancient town and legionary fort: wide perpendicular streets, squares, theaters, baths, water systems, city walls, and towers were still visible during the 19th century AD.

Viminacium is best known for the record number of excavated Roman Era graves. Namely, during the latest archaeological excavations, which started in the final quarter of the 20th century, and which are still undergoing, a total of 14.000 graves with more than 40.000 artifacts which testify about the daily life of its citizens were excavated. The exquisite style, coloring, and motifs of painted tombs from the middle of the 3rd or the beginning of the 4th century AD draw particular attention. Thermae, workshop center, mausoleum, several *villae rusticae*, and the remains of an aqueduct were all excavated during the rescue excavations. Some of the aforementioned structures are presented within the Archaeological Park which was opened back in 2006.

It wasn't until the beginning of the 21st century that an interdisciplinary team comprised of experts in various fields (archaeologists, anthropologists, geophysicists, mathematicians, electrical engineers, geologists, petrologists and many others) have started a systematic, almost year-round excavations of the legionary fort and the city.

Besides the presented archaeological remains, what else could our traveler see during his visit to Viminacium? First of all, a scientific-research center (Domus Scientiarum), a multi-purpose facility that hosted numerous international symposiums, conferences, workshops, and congresses. It was modeled after a Roman *villa rustica* with two levels: upper level, which includes workspace and accommodation facilities in which the team resides during the archaeological excavations and lower level in which museums, depots, and auditoriums are located. The Mammoth Park, which hosts the remains of several mammoths excavated during the rescue excavations in 2009 and 2012, is located somewhat eastern from the *Domus*, and from the moment it was opened, it threatens to overshadow the glory of the Roman site and turn Viminacium into a paleontological park.

*

Tokom dugog niza godina i zaštitnih i sistematskih istraživanja arheolozi su bili suočeni ne samo sa nalazima iz rimskog perioda. Znali su, iz istorijskih izvora da je Viminacijum ponikao na teritoriji keltskog plemena Skordiska i nalazi iz starijih perioda su se mogli očekivati, ali kakva će biti saznanja nakon obrade do sada nađenog praistorijskog materijala, do sada je bila tajna. Arheolozi su već svojim pozivom spremni na večito odgonetanje dok ih žed za novim saznanjima stalno gura napred. Tokom poslednjih godina nekoliko istraženih praistorijskih objekata dalo je sjajan materijal. Ova publikacija predstavlja rezultate tih dugogodišnjih istraživanja i iskorake u tumačenju Viminacijuma pre Viminacijuma, odnosno života u praistoriji. Pa ako onaj putnik namernik s početka priče, ode s Viminacijuma zasenjen nalazima iz drugog milenija pre naše ere, umesto onima iz rimskog perioda, nećemo biti previše iznenađeni.

Miomir Korać • Snežana Golubović

*

For many years of both rescue and systematic excavations, the archaeologists have faced more than just Roman Era finds. They knew from historical sources that Viminacium was established on the territory of the Celtic tribe of Scordisci and that even earlier finds could be expected, but the information acquired from the processing of prehistoric material from Viminacium remained a secret until now. Archaeologists are by definition eager for eternal unraveling, while the thirst for new knowledge constantly drives their research forward. In recent years, several excavated prehistoric features have provided a splendid collection of archaeological material. This publication represents the results of those perennial excavations and provides a new breakthrough in terms of defining Viminacium before Viminacium and its life during prehistory. So, if the traveler from the first lines of this story leaves Viminacium astonished with finds from the 2nd millennium BC and not the Roman ones, we will not be much surprised.

Miomir Korać • Snežana Golubović

OSTACI ŽIVOTINJA IZ HORIZONATA MLAĐE PRAISTORIJE NA LOKALITETIMA NAD KLEPEČKOM I RIT

UVOD

Tokom zaštitnih arheoloških istraživanja na lokalitetima Nad Klepečkom i Rit, u neposrednom okruženju antičkog Viminacijuma, iz celina, koje su datovane u period mlađe praistorije, ručno je sakupljan faunistički materijal.¹ Na lokalitetu Rit pretpostavljeno je naselje iz perioda starijeg eneolita i ranog bronzanog doba, dok je na lokalitetu Nad Klepečkom pretpostavljen kontinuitet u naseljavanju, od eneolita do mlađeg gvozdene doba.² Na oba nalazišta otkrivena su naselja i nekropole iz rimskog perioda, dok je na nalazištu Nad Klepečkom otkriveno i naselje iz poznog srednjeg veka.³ Budući da se radi o višeslojnim nalazištima, veliki broj arheoloških celina bio je oštećen stambenim i drugim objektima iz mlađih perioda, kao i da su arheološke celine, zbog činjenice da se radi o zaštitnim istraživanjima, često samo delimično istražene, u određenom broju celina uočeni su nalazi iz različitih perioda praistorije. U radu su predstavljeni rezultati arheozooloških istraživanja iz onih celina, koje su se mogle sa sigurnošću opredeliti u odgovarajuće epohe mlađe praistorije, odnosno, materijal, koji ne potiče iz celina sa mešovitim materijalom. Iako je faunistički skup, koji je prikazan u radu izuzetno mali za razumevanje načina ekspanzije životinja i njihovog značaja u naseljima iz epoha mlađe praistorije na pomenutim nalazištima, značajan je zbog činjenice da predstavlja do sada jedini poznat faunistički uzorak iz perioda mlađe praistorije u Braničevskom okrugu i svakako je jedan od malobrojnih poznatih faunističkih zbirki iz perioda mlađe praistorije na prostoru današnje Srbije.

METODOLOGIJA ANALIZE ARHEOZOOLOŠKOG MATERIJALA

Tokom arheoloških istraživanja, ostaci životinja su sakupljeni ručno, pa se može pretpostaviti da u uzorku nedostaju kosti i zubi sitnijih životinja, pre svega ostaci ptica, riba i sitnih sisara, ili sitniji fragmenti delova skeleta krupnih i srednjekrupnih sisara. Prilikom arheozoološke odredbe, korišćena je Komparativna zbirka Laboratorije za bioarheologiju na Filozofskom fakultetu u Beogradu i relevantna literatura.⁴ Za potrebe arheozoološke analize definisan je protokol o analizi, a svi podaci beleženi su u *Microsoft Office Access 2007* bazi podataka.⁵ Protokol o analizi podrazumevao je da se detaljno analiziraju primerci dugih kostiju, kod kojih je očuvan deo epifize ili više od pola prečnika dijafize, kratke

¹ Zaštitna arheološka istraživanja sproveo je Arheološki institut u Beogradu pod rukovodstvom dr Miomira Koraća. Ostatak životinja analizirali su autori rada.

² Bulatović *et al.*, Bulatović *et al.*, Kapuran *et al.*, Kapuran *et al.*, Mladenović *et al.*, sve u ovom zborniku.

³ Redžić *et al.* 2014, 2017, Redžić and Danković 2012.

⁴ Zeder and Lapham 2010, Boessneck 1969, Schmid 1972.

⁵ Bazu za unos arheozooloških podataka kreirali su stručnjaci iz Centra za nove tehnologije, Beograd.

ANIMAL REMAINS FROM THE LATE PREHISTORIC HORIZONS FROM THE SITES OF NAD KLEPEČKOM AND RIT

INTRODUCTION

In the course of salvage archaeological excavations at the sites of Nad Klepečkom and Rit, in the immediate vicinity of ancient Viminacium, animal remains from Late Prehistory deposits were collected by hand.¹ A Late Eneolithic/Early Bronze Age settlement was discovered at the site of Rit, whereas the site of Nad Klepečkom showed signs of continuity from the Eneolithic to the Late Iron Age.² Roman period settlements and necropolis were discovered at both sites, while a Late Medieval settlement was confirmed at the Nad Klepečkom site.³ Since these are multilayered sites where prehistoric layers have been largely disturbed by foundation digging of residential and other later period occupational deposits, and also bearing in mind that these deposits were often just partially researched due to the fact that these were salvage excavations, mixed period material was found together in a considerable number of features. Therefore, the results of the zooarchaeological analysis presented in this paper come only from those features which could be positively dated back to a certain prehistoric period, that is, mixed features were not taken into consideration. Although this faunal assemblage is of a modest volume and is insufficient for a more complete understanding of animal exploitation strategies and significance of animals in these late prehistoric settlements, it is significant since it is the only known faunal assemblage from the Late Prehistory in the Braničevo District, and is certainly one of the few known animal bone assemblages from the said period in today's Serbia.

METHODOLOGY OF ZOOARCHAEOLOGICAL ANALYSIS

During archaeological research, animal remains were collected by hand. Therefore, it can be assumed that the bones of small animals, that is, of birds, fish, and small mammals, or smaller fragments of large and medium-sized animal bones and teeth, are under-represented. Throughout the zooarchaeological analysis, the Laboratory of Bioarchaeology Comparative collection from the Faculty of Philosophy in Belgrade was used, as well as relevant references.⁴ The analysis was conducted using a defined protocol, and all of the data were recorded in a *Microsoft Office Access 2007* database.⁵ The said protocol implied a detailed analysis of long bone specimens, where any part of the epiphyses or more than

¹ Salvage archaeological research was conducted by the Institute of Archaeology in Belgrade, under the direction of dr Miomir Korać

² Bulatović *et al.*, Bulatović *et al.*, Kapuran *et al.*, Kapuran *et al.*, Mladenović *et al.*, in this volume.

³ Redžić *et al.* 2014, 2017, Redžić and Danković 2012.

⁴ Zeder and Lapham 2010, Boessneck 1969, Schmid 1972.

⁵ Database was created by the experts from the Center for new technologies, Belgrade.

PERIOD*	LOKALITET/KONTEKST SITE/CONTEXT **	ŠIFRA KONTEKSTA CONTEXT CODE	<i>Bos taurus</i>	<i>Bos sp.</i>	<i>Sus domesticus</i>	<i>Sus sp.</i>	<i>Capra hircus</i>	<i>Ovis aries</i>	<i>Ovis/Capra</i>	<i>Ovis/Capra/Capreolus</i>	<i>Equus caballus</i>	<i>Canis familiaris</i>	<i>Bos primigenius</i>	<i>Sus scrofa</i>	<i>Capreolus capreolus</i>	<i>Cervus elaphus</i>	<i>Meles meles</i>	<i>Vulpes vulpes</i>	Mammalia indet.	Aves indet.	<i>Unio crassus</i>	<i>Unio tumidus</i>	<i>Unio pictorum</i>	<i>Unio sp.</i>	<i>Helix sp.</i>	BOP/NISP
EN	R/S 44,U 1	RITP/2	8		3									1	2			1	13	1						29
	R/S 41,U 1	RITP/3	13						1					1	1	3			20							39
	NKL/KI 75	NKLP/9	5		1			1	2	1						1			19							30
	NKL/KI 89,U 1	NKLP/17	1		4	1			4										13							23
EBA	R/S 18,U 1	RITP/1	5	1	4	1	2		2		1	1				3			19							39
	R/S 18,U 2	RITP/4	6		3	1			1								3		7							21
	R/S 18,U 3	RITP/5	5	1						1									7							14
	NKL/S 77,U 9	NKLP/2	6		1		1		2				1			1			18							30
	NKL/S 69,U 1	NKLP/ 12,18	10		2	2		2	6					1		5			64		517	321	64	22	1	1017
	NKL/S 77,U 8	NKLP/11	23		10	1	2	1	1		1	1		2	1	5			53		157	54	34			346
MBA/LBA	NKL/S 77,U 6	NKLP/1	3		1			2			1				1			12		10	4				34	
EIA	NKL/S 80,U 1	NKLP/19,22	6					3		1	1				1			19						126	157	
LIA	NKL/S 77,U 3	NKLP/3,4	1		4				3					1					12						1	22
	NKL/KI 88,U 1	NKLP/8	19		11	1			3		2	3			1	18			113							171
	NKL/KI 65,U 6	NKLP/10	4		1		1	1	5		1								38							51
	NKL/S 78,U 1	NKLP/13	2		1														0					33	36	
BOP/NISP			117	2	46	7	6	5	35	2	6	7	1	6	5	38	3	1	427	1	684	379	98	22	161	2059

Tabela 1. Taksonomski sastav po arheološkim celinama na osnovu broja određenih primeraka (BOP)

* EN - Eneolit, EBA - Rano bronzano doba, MBA - Srednje bronzano doba, LBA - Kasno bronzano doba, EIA - Rano gvozdeno doba, LIA - Kasno gvozdeno doba;

** NKL - Nad Klepečkom, R - Rit, S - Sonda, U - Ukop, KI - Kontrolni iskop

Table 1 Taxa by archaeological context according to Number of identified specimens (NISP)

* EN - Eneolithic, EBA - Early bronze age, MBA - Middle Bronze Age, LBA - Late Bronze Age, EIA - Early Iron Age, LIA - Late Iron Age;

** NKL - Nad Klepečkom, R - Rit, S - Trench, U - Pit, KI - Test-trench

half of the diameter of the diaphysis were present, and also of short bones, the first and the second cervical vertebrae and sacral bones, scapula and pelvis with preserved parts of joint surfaces, lower and upper jaws (which contained parts of alveolar or articular surfaces), parts of skulls, where taxonomic determination was possible, as well as all specimens with butchering marks and pathological alterations. Detailed analysis implied the recording of the following parameters: taxonomic and skeletal part determination, degree of preservation and fragmentation, presence/absence of gnawing, burning and weathering marks, age data, biometric data, and any possible presence of butchering marks and pathological alterations. The rest of the specimens were simply counted. Quantification of the material was done by using the following methods: the number of identified specimens (NISP), the minimum number of individuals (MNI) and number of diagnostic zones (DZ).⁶ In graphical appendices and calculations which refer to the number of identified specimens (NISP), examples are presented which are taxonomically determined to the level of species or genus. Since the sample was very small, it was not possible to perceive age and sex profiles or to study biometric data, and thus discuss the nature of animal exploitation in the excavated settlements during different late prehistoric periods. In order to understand the type of animal remains depositing, the presence of different anatomic regions of different taxa in individual features were compared, and therefore the following elements were observed together: horn cores/antlers, skulls and lower jaws - as cranial parts; vertebrae, ribs and pelvises – as the axial part of the skeleton; shoulder blades, humeri and femora – as upper leg parts; and radii, ulnae, tibia and metapodial bones – as lower leg parts, while phalanges were studied separately.

TAXONOMIC COMPOSITION AND TAPHONOMY

At the sites of Rit and Nad Klepečkom, from the total number of 16 features dated back to the Eneolithic, Bronze and Early and Late Iron Age, as many as 2059 animal remains were collected, out of which 714 were those of mammals, 1183 freshwater shells, 161 shells of land snails, as well as one bird bone (table 1). Among the remains of mammals, 288 specimens were taxonomically determined to the level of species or genus, while other specimens were classified up to the level of class. Based on both methods of quantification (NISP, DZ) (Fig. 1), the most common remains were those of cattle (*Bos taurus*), followed by the remains of pigs (*Sus domesticus*) and sheep/goats (*Ovis/Capra*), which were represented in similar percentages. A small number of horse (*Equus caballus*) and dog (*Canis familiaris*) remains were found in the horizons of the Bronze and the Iron Age. As far as wild mammals are concerned, the most common animal is the red deer (*Cervus elaphus*), present in all the horizons. The remains of wild boars (*Sus scrofa*) and roe deer (*Capreolus capreolus*) were found in all the horizons except in the horizon of the Late Iron Age, one fox (*Vulpes vulpes*) bone was found in the Eneolithic layer, while the remains of a badger (*Meles meles*) and auroch (*Bos primigenius*) were found in two features dated back to the Bronze Age period. Shells of the freshwater mussels of the genus *Unio* were found in large numbers in the Bronze Age features, while the shells of the garden snail from the genus *Helix* were testified in the Bronze and Iron Age layers. However, since the samples found within the four different horizons are individually small, it is not possible to discuss the interrelationship of animals in the economies of the settlements investigated at these sites.

⁶ Watson 1979.

kosti, prvi i drugi vratni pršljenovi i sakralna kost, lopatica i karlica sa očuvanim delom zglobne površine, vilice, kod kojih je očuvan deo alveole ili zglobna površina i delovi lobanja, kod kojih je bila moguća bliža taksonomska odredba, kao i svi primerci sa prisustvom tragova procesuiranja skeleta i tragova patoloških promena. Detaljna analiza podrazumevala je beleženje sledećih parametara: taksonomske odredbe, odredbe dela skeleta, stepena očuvanosti primerka i fragmentacije, prisustvo/odsustvo tragova zuba, vatre i raspadanja, podatke o starosti, karakteristične mere, kao i eventualno prisustvo tragova procesuiranja trupova i tragova patoloških promena. Ostali primerci su prebrojani. Za potrebe kvantifikacije, korišćene su sledeće metode: broj određenih primeraka (BOP), minimalni broj jedinki (MBJ) i brojanje dijagnostičkih zona (DZ), prema Watsonu.⁶ U grafičkim priložima i u kalkulacijama, koje se odnose na brojanje određenih primeraka (BOP) prikazani su primerci koji su bliže taksonomski određeni (do vrste ili roda). Budući da je uzorak veoma mali, nije bilo moguće proučavati starosne i polne profile, kao ni metričke podatke i na taj način diskutovati o načinu eksploatacije životinja u različitim epohama mlađe praistorije na pomenutim nalazištima. Kako bi se razumeo uzrok deponovanja životinjskih ostataka u pojedinačnim celinama, upoređivano je prisustvo različitih anatomskih regija različitih taksona u pojedinačnim celinama tako da su zajedno posmatrani sledeći elementi: rogov, lobanja i donja vilica kao kosti glave; pršljenovi, rebra i karlica, kao aksijalni deo skeleta; lopatica, humerus i femur kao gornji delovi nogu i radijus, ulna, tibija i metapodijalne kosti kao donji delovi nogu, dok su falange proučavane odvojeno.

TAKSONOMSKI SASTAV I TAFONOMSKE SPECIFIČNOSTI ARHEOZOOLŠKOG MATERIJALA

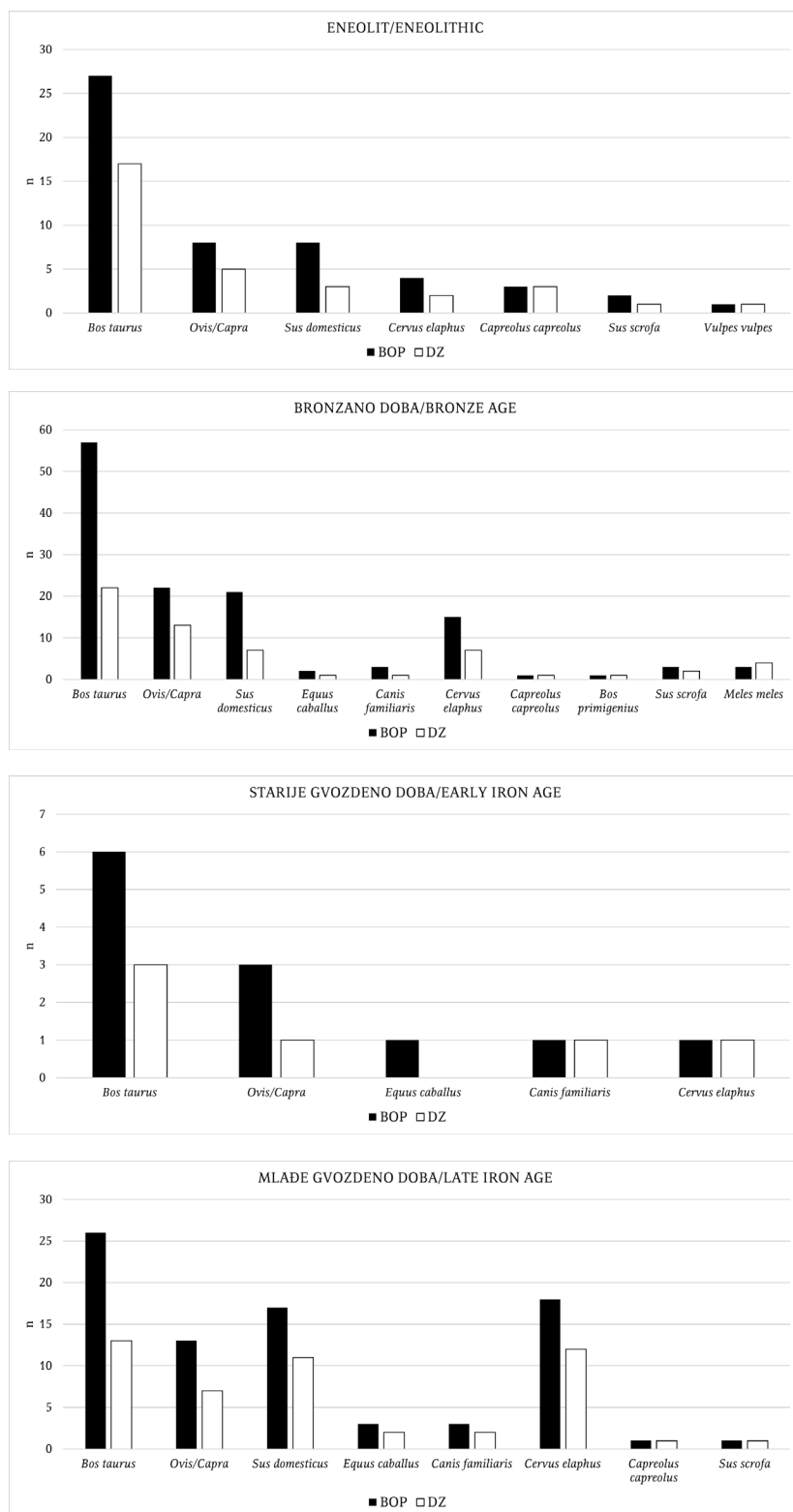
Na nalazištima Rit i Nad Klepečkom iz ukupno 16 arheoloških celina iz perioda eneolita, bronzanog doba, starijeg i mlađeg gvozdenog doba ukupno je sakupljeno 2059 životinjskih ostataka, od čega 714 čine ostaci sisara, 1183 ljuštore slatkovodnih školjki, 161 ljuštore kopnenih puževa, a pronađena je i jedna kost ptice (tabela 1). Među ostacima sisara 288 primeraka je bliže taksonomski određeno (do vrste ili roda), dok su ostali primerci određeni do klase. Na osnovu oba metoda kvantifikacije (BOP, DZ) (sl. 1), u svim horizontima najzastupljeniji su ostaci govečeta, a za njima slede ostaci svinja i ovikaprina, koji su zastupljeni u sličnim procentima. Mali broj ostataka konja i pasa pronađen je u horizontima bronzanog i gvozdenog doba. Od divljih sisara najzastupljeniji su ostaci jelena, koji su prisutni u svim horizontima. Ostaci divljih svinja i srndaća pronađeni su u svim horizontima osim u horizontu starijeg gvozdenog doba, dok je u jednoj celini iz eneolitskog horizonta pronađena kost lisice, u dve celine iz horizonta bronzanog doba pronađene su kosti jazavca i jedna kost divljeg govečeta. Ljuštore slatkovodnih školjki roda *Unio* u većem broju pronađene su u celinama iz ranog bronzanog doba, dok se ljuštore kopnenih puževa roda *Helix* nalaze u celinama bronzanog i gvozdenog doba. Budući da su uzorci u okviru četiri različita horizonta pojedinačno veoma mali, u radu nije moguće raspravljati o međusobnom značaju životinja u ekonomijama naselja, koja su na ovim nalazištima istražena.

Tragovi površinskog raspadanja prisutni su na manjem broju kostiju iz svih horizonata (sl. 2), pa se može pretpostaviti da su ostaci životinja relativno brzo deponovani. Udeo tragova zuba pasa, takođe, na manjem broju kostiju iz svih horizonata, osim u horizontu starijeg gvozdenog doba, iz koga potiče najmanji uzorak, upućuje na pretpostavku da

⁶ Watson 1979.

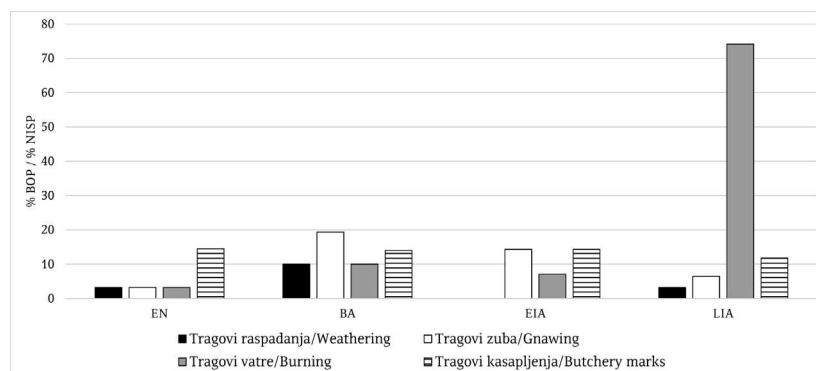
OSTACI ŽIVOTINJA IZ HORIZONATA MLAĐE PRAISTORIJE...
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Sl. 1/1-4. Taksonomski sastav u različitim horizontima na osnovu broja određenih primeraka (BOP) i broja dijagnostičkih zona (DZ)

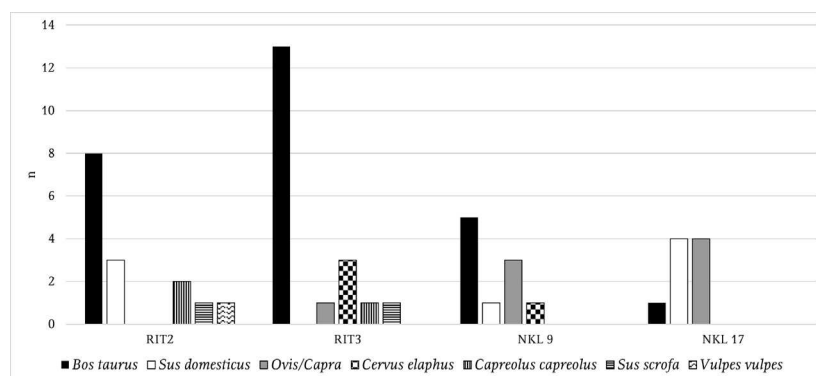
Fig. 1/1-4 Taxonomic composition by periods based on the Number of identified specimens (NISP) and the number of diagnostic zones (DZ)



Sl. 2. Udeo tragova tafonomskih procesa u različitim horizontima na osnovu broja određenih primeraka (BOP)
 * EN - Eneolit, EBA - Rano bronzano doba, MBA - Srednje bronzano doba, LBA - Kasno bronzano doba,
 EIA - Rano gvozdeno doba, LIA - Kasno gvozdeno doba

Fig. 2 The share of traces of weathering, gnawing, burning and butchery marks by periods based on the Number of identified specimens (NISP)

* EN - Eneolithic, EBA - Early bronze age, MBA - Middle Bronze Age, LBA - Late Bronze Age, EIA - Early Iron Age, LIA - Late Iron Age



Sl. 3. Taksonomski sastav u pojedinačnim celinama iz perioda eneolita na osnovu broja određenih primeraka (BOP)

Fig. 3 Taxonomic composition by Eneolithic features based on the Number of identified specimens (NISP)

su ostaci hrane bili dostupni psima u naseljima iz mlađe praistorije na ovim nalazištima. Tragovi vatre su u svim horizontima prisutni u sličnim procentima, osim u horizontu koji odgovara latenskom naselju, što je posledica velikog udela gorelih kostiju u jednoj otpadnoj jami.⁷ Tragovi procesuiranja životinjskih trupova, čiji je udeo sličan u svim horizontima, zabeleženi su na ostacima ekonomski najznačajnijih domaćih životinja (govečeta, svinje, ovikaprina) i na ostacima divljih životinja (jelen i divlje goveče) (sl. 3).

OSTACI ŽIVOTINJA IZ ENEOLITSKIH HORIZONATA

Na nalazištu Rit ostaci životinja iz eneolitskih horizonata potiču iz dve istražene poluzemunice (sonda 41-ukop 1 i sonda 44 – ukop 1), koje su na osnovu pokretnog arheološkog materijala opredeljene da pripadaju vremenu *Sälcuța* IV grupe, odnosno prvom kvartalu 4. milenijuma pre n.e. prema apsolutnim datumima, dok na nalazištu Nad Klepečkom

⁷ Detaljnije o ovom kontekstu pogledaj u poglavlju: Ostaci životinja iz horizonta mlađeg gvozdenog doba

Traces of weathering on the bone surfaces are present on a small number of specimens from all horizons (Fig. 2), so it can be assumed that the animal remains were relatively quickly buried. The share of gnawing marks was also visible on just a small number of bones from all horizons, except the one from the Late Iron Age, which is the smallest sample, so it suggests that food remains were available to dogs in these settlements. The traces of fire are present in similar proportions in all the horizons, except in the one corresponding to the Late Iron Age settlement, which is the consequence of a large share of burnt bones from a waste pit.⁷ Traces of butchering the share of which is similar in all the horizons were recorded on the remains of the most common domestic animals (cattle, pigs, and sheep/goats), as well as on the remains of wild animals (red deer and aurochs) (Fig. 3).

ENEOLITHIC ANIMAL REMAINS

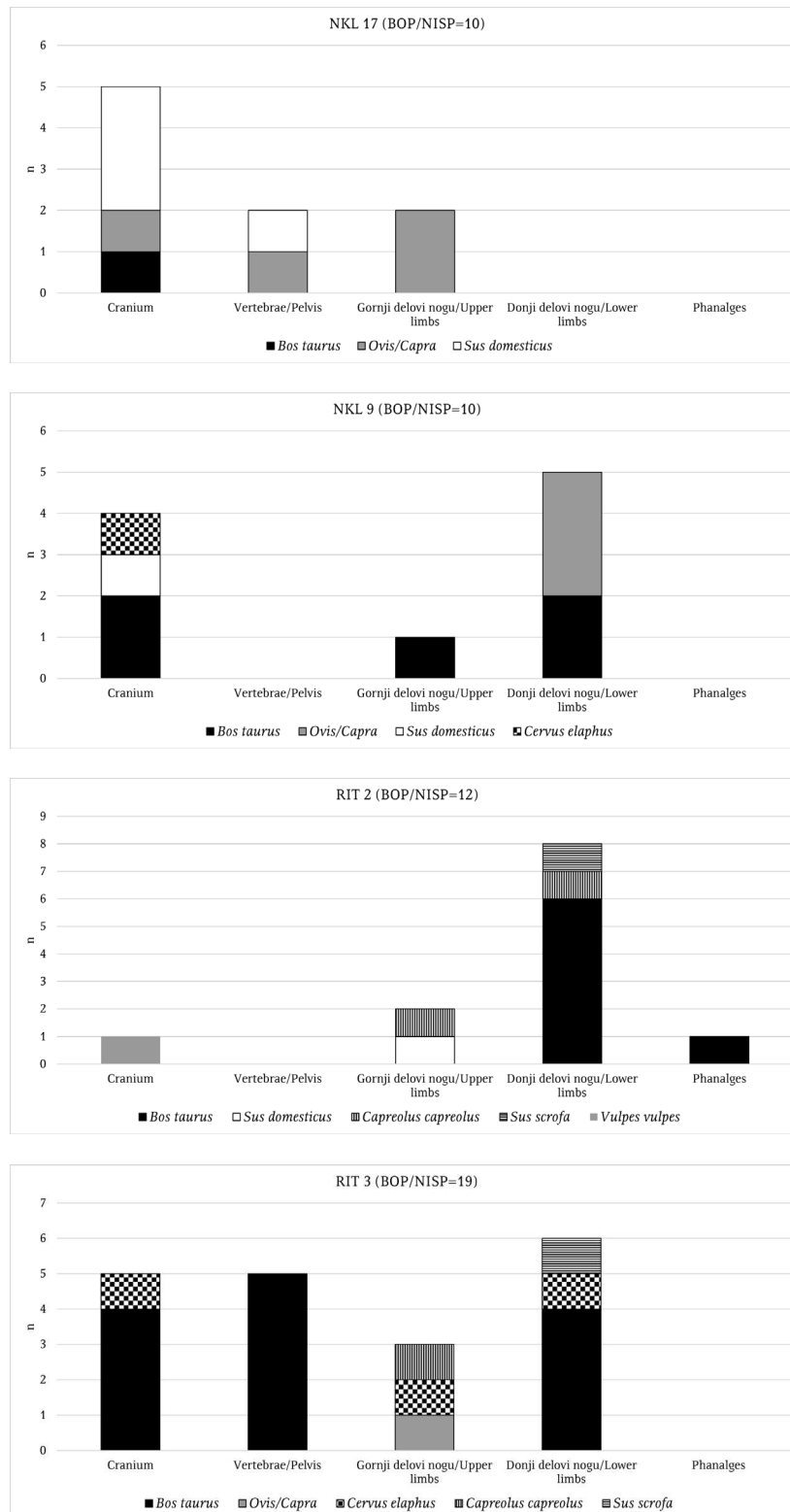
At the site of Rit animal remains from the Eneolithic layers originate from two excavated semi-pit houses (trench 41 – pit 1, and trench 44 – pit 1), dated back to the Sălcuța IV group, based on archaeological finds, that is to say, the first quarter of the 4th millennium BC, based on AMS dates; whereas the animal remains from the Nad Klepečkom site come from archaeological features, that is, from the partially excavated structure (test – trench 75, area with ceramics and bones), which, again based on the archaeological finds, belongs to the Kostolac cultural group, as well as from a structure (test – trench 89, pit 1) in which objects were found dated back to the Baden cultural group, along with Early Eneolithic artifacts.⁸

In all of the features from the Eneolithic period, based on both quantification methods (NISP, DZ), remains of domestic animals (cattle, pig, sheep/goat) are more represented than those of wild ones (red deer, roe deer, wild boar, fox) (Fig. 1, Fig. 3). Cattle are the most common species in all of the features, except in the earliest one which corresponds to the period of Baden cultural group and Early Eneolithic, where sheep/goat and pig remains are more numerous than those of cattle. This type of species distribution falls within other Eneolithic faunal assemblages from the region, since usually the most common species are either cattle or sheep/goat, while pig remains are also high in quantity, whereas most often hunted animals were red deer, roe deer and wild boar.⁹ Based on the presence of different anatomical regions and taxonomic composition from the Eneolithic features, it can be assumed that these animal remains are the remnants of food and/or butchers waste (Fig. 4). Meat rich bearing skeletal parts (upper limbs, pelvises), although present, are represented to a lesser extent than skeletal parts that bear less meat and that were often discarded during slaughtering (heads, lower limbs, phalanges). Due to the presence of different skeletal elements of the animals used in diet, it can be assumed that domestic animals were farmed and processed within the settlement. Butchery marks were detected on cattle and sheep/goat remains from both features at the Nad Klepečkom site and they probably refer to the processes of skinning (cuts on the bones of the cranial skeleton) or disarticulation and meat removal (cut and chop marks on pelvic and long bones). One red deer antler tine from the same site (test – trench 75, area with ceramics and bones) bears

⁷ For more details on this context, see the section: Late Iron Age animal remains

⁸ Bulatović *et al.*, this volume.

⁹ Филиповић and Булатовић, *in press*.



Sl. 4/1-4. Zastupljenost različitih delova skeleta u pojedinačnim celinama iz perioda eneolita na osnovu broja određenih primeraka (BOP)

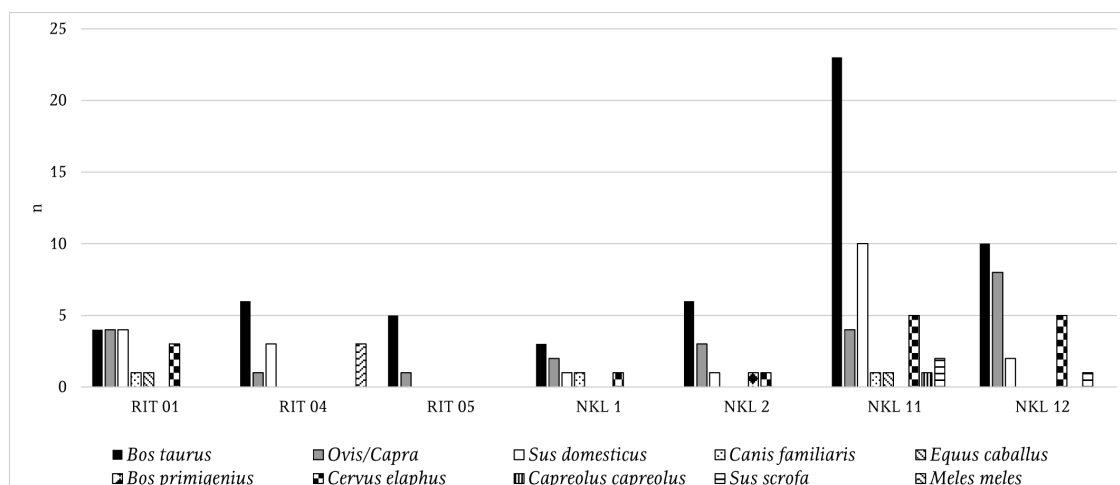
Fig. 4/1-4 Representation of different skeletal elements by Eneolithic features based on the Number of identified specimens (NISP)

cut marks typical of tine separation from the antler, so it can, therefore, be assumed that deer antlers were used as raw material for making different types of objects.

BRONZE AGE ANIMAL REMAINS

At the site of Rit animal remains from the Bronze Age layers originate from three different features dating back to the period of Early Bronze Age, based on AMS dates and the archaeological finds from semi-pit houses (trench 18, pits 1 and 2), as well as from a feature whose purpose has not been defined (trench 18, pit 3).¹⁰ On the other hand, animal remains from the Nad Klepečkom site come from four different features, three of which belong to Early Bronze Age settlement (trench 77, pit 9; trench 77, pit 8; trench 69, pit 1), whereas the fourth one belongs to Dubovac-Žuto Brdo-Girle Mare cultural group.¹¹

Based on both quantifying methods (NISP, DZ), cattle are the most represented species in all the Early Bronze Age features, followed by sheep/goat and pig remains (Fig. 1, Fig. 5). A metatarsal horse bone was found in two residential features at both sites (Fig. 6), while dog remains were found in two features, that is, two pit houses from the Early and Middle Bronze Age periods. Wild animals are represented by the remains of red deer and wild boar, as well as by individual cases of roe deer, aurochs and badger remains. As far as Bronze Age animal bones collections on the territory of Serbia are concerned, among do-



Sl. 5. Taksonomski sastav u pojedinačnim celinama iz perioda bronzanog doba na osnovu broja određenih primeraka (BOP)

Fig. 5 Taxonomic composition by Bronze Age features based on the Number of identified specimens (NISP)

mestic animals mostly used in the diet, proportions of cattle, sheep/goat and pig remains are alternate depending on the site, while the percentage of wild animal remains, mainly red deer, is not negligible.¹² Horse remains from Central Balkan territory begin to appear in the Early Bronze Age,¹³ usually in small numbers in the faunal collections from Bronze Age settlements. Therefore, the presence of horse remains at the sites of Rit and Nad

¹⁰ Bulatović *et al.*, this volume.

¹¹ Kapuran *et al.*, this volume.

¹² Greenfield 1986a, b, 1996, Blažić 1995, Becker 1991.

¹³ Greenfield 2006, Bulatović, *in preparation*, Bökönyi 1990, Greenfield 1986a.

ostaci životinja potiču iz dve istražene arheološke celine, odnosno iz delimično istraženog objekta (kontrolni iskop 75, površina sa keramikom i kostima), koji na osnovu pokretnih nalaza odgovara kostolačkoj kulturnoj grupi, kao i iz objekta (kontrolni iskop 89, ukop 1), u kome su otkriveni nalazi koji odgovaraju badenskoj kulturi, kao i nalazi koji odgovaraju periodu mlađeg eneolita.⁸

U svim eneolitskim celinama, na osnovu oba metoda kvantifikacije (BOP, DZ) (sl. 1), ostaci domaćih životinja (goveče, svinja, ovca/koza) su zastupljeniji od ostataka divljih, među kojima su otkriveni ostaci jelena, srndaća, divlje svinje i lisice. Domaće goveče je najzastupljenije u svim celinama, osim u najmlađoj eneolitskoj celini, koja odgovara vremenu badenske kulture i mlađeg eneolita, gde su ovikaprini i svinje zastupljenije od govečeta (sl. 3). U eneolitskim faunisitčkim zbirkama u regionu, kao vodeće vrste javljaju se najčešće domaće goveče ili ovikaprini, dok su svinje takođe zastupljene u značajnom procentu, a od lovnih vrsta, najčešći su ostaci jelena, srndaća i divlje svinje.⁹ Na osnovu zastupljenosti različitih anatomskih regija i taksonomskog sastava iz četiri eneolitske celine, može se pretpostaviti da životinjski ostaci predstavljaju ostatke hrane ili mesarskog otpada (sl. 4). Delovi skeleta, koji nose dosta mesa (gornji delovi nogu, karlice), iako prisutni, zastupljeni su u manjoj meri od delova skeleta, koji nose manje mesa i koji se često odbacuju prilikom klanja (kosti glave, donji delovi nogu, falange). Zbog prisustva različitih delova skeleta životinja korišćenih u ishrani može se pretpostaviti da su domaće životinje gajene i procesuirane u okviru naselja. Tragovi procesuiranja životinjskih trupova uočeni su na ostacima govečeta i ovikaprina iz obe celine na nalazištu Nad Klepečkom i oni, na osnovu njihove lokacije i orijentacije, upućuju na dranje kože (urezi na kostima kranijalnog skeleta), dezartikulaciju i skidanje mesa (tragovi sečenja na karlici i dugim kostima). Na jednom parošku roga jelena sa lokaliteta Nad Klepečkom (kontrolni iskop 75, površina sa keramikom i kostima) nalaze se tragovi odvajanja od stabla, te se može pretpostaviti da su rogovi jelena korišćeni kao sirovine za izradu različitih vrsta predmeta.

OSTACI ŽIVOTINJA IZ HORIZONATA BRONZANOG DOBA

Na nalazištu Rit, iz horizonta bronzanog doba životinjski ostaci potiču iz tri celine koje su na osnovu pokretnih nalaza i apsolutnih datuma opredeljene u vreme ranog bronzanog doba, i to iz dve poluzemunice (sonda 18, ukopi 1 i 2), kao i iz celine, kojoj nije definisana namena (sonda 18, ukop 3).¹⁰ Na lokalitetu Nad Klepečkom životinjski ostaci sakupljeni su iz četiri arheološke celine, od kojih tri pripadaju naselju ranog bronzanog doba (sonda 77, ukop 9; sonda 77, ukop 8; sonda 69, ukop 1), dok četvrta celina (sonda 77, ukop 6) pripada Dubovac-Žuto Brdo-Girila Mare kulturnoj grupi.¹¹

Na osnovu oba metoda kvantifikacije (BOP i DZ) (sl. 1), među ostacima sisara, ostaci domaćeg govečeta su najzastupljeniji u svim celinama iz horizonta bronzanog doba, a slede ih ostaci ovaca, koza i svinja (sl. 5). U dva stambena objekta ranog bronzanog doba na nalazištu Rit i Nad Klepečkom pronađena je i po jedna metatarzalna kost konja (sl. 6), dok su u dve celine, u zemunici iz ranog bronzanog doba i kontekstu iz srednjeg bronzanog doba otkriveni ostaci psa. Od divljih životinja najčešći su ostaci jelena i divlje svinje, a u

⁸ Bulatović *et al.*, ovaj zbornik

⁹ Филиповић and Булатовић, у *шһамһу*.

¹⁰ Bulatović *et al.*, ovaj zbornik.

¹¹ Kapuran *et al.*, ovaj zbornik.

Klepečkom is in accordance with our knowledge about the emergence of this animal in the period of Late Prehistory on the territory of Serbia. The AMS date obtained for the metatarsal horse bone from the semi-pit house at the site of Rit coincides with the beginning of the 20th century BC, that is, 1977-1907 BC (91.6% probability),¹⁴ which means that it is a little younger than the AMS date obtained for the horse calcaneus from the site of Bujanj dated back to 2140-1920 BC (95.4% probability).¹⁵

Based on taxonomic composition and representation of different anatomical regions in individual Bronze Age features, it can be assumed that the Bronze Age animal remains from the sites of Rit and Nad Klepečkom primarily represent butchers' waste, since the material is largely dominated by skeletal elements that bear less meat or the ones discarded during slaughter. However, since meat rich anatomical regions are also present, although in fewer numbers, it can be assumed that the material also consists of food leftovers (Fig. 7).

Freshwater shells of the genus *Unio* have been unearthed within three Bronze Age features at Nad Klepečkom site. Two Early Bronze Age features are especially interesting - trench 69, pit 1 (Fig. 8), in which a total of 924 shells were found, as well as trench 77, pit 8 with 245 shell remains. Based on the morphology and dimensions of shell lids¹⁶ three species of shells were identified, among which *Unio crassus* is the most frequent, and it is followed by *Unio pictorum* and *Unio tumidus*. It is suggested that these shells were cooked/baked and intentionally broken in order to extract the meat, which is assumed based on the fact that majority of the shells have a specific type of fracture at the distal end, as well as their colour which is typically yellow-whitish or silverish. They could have been used by the inhabitants as a dietary supplement. Ethnographic studies¹⁷ point out that the meat of *Unio* shells, which in modern society are generally not considered edible, was used as animal, most often pig food, or as bait for fishing, which points to the possibility that they were used for similar purposes in the



Sl. 6. Metatarzalne kosti konja sa nalazišta Rit i Nad Klepečkom (rano bronzano doba)

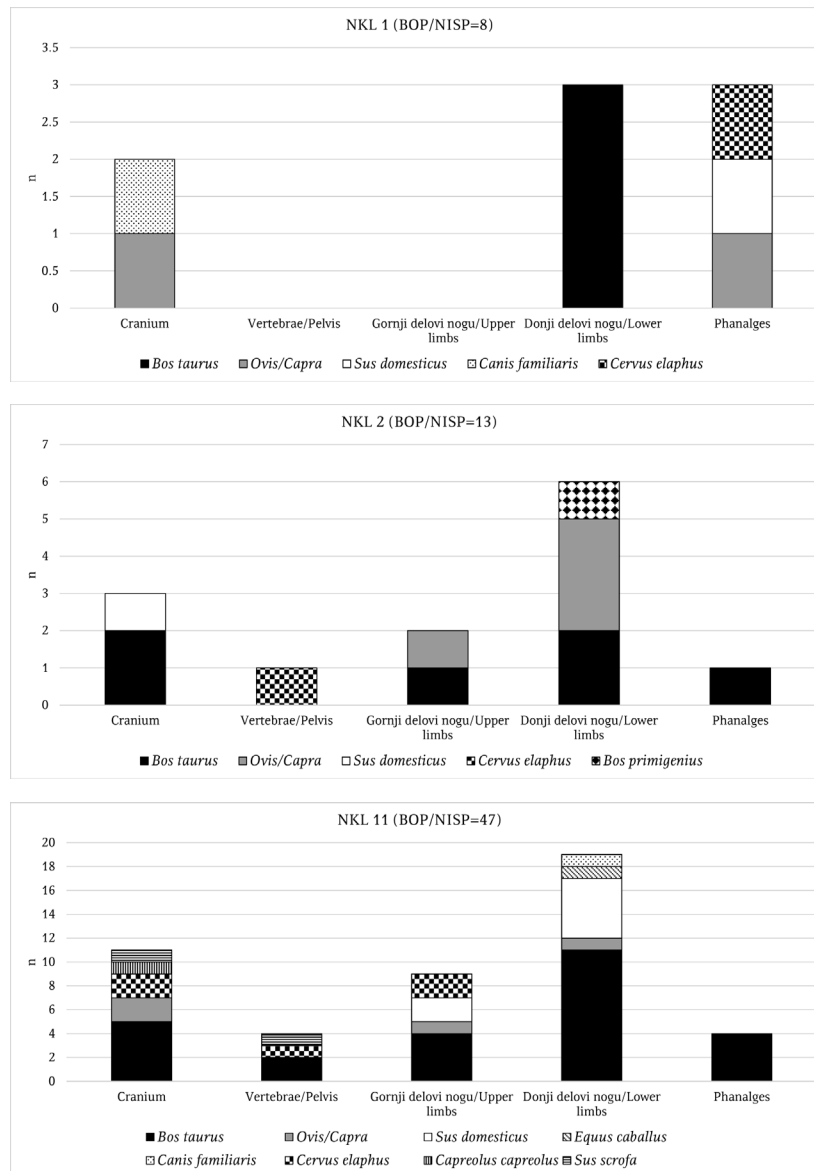
Fig. 6 Metatarsal bones of horses from Rit and Nad Klepečkom sites (Early Bronze Age)

¹⁴ Bulatović *et al.*, this volume.

¹⁵ Bulatović and Vander Linden 2017.

¹⁶ Glöer and Diercking 2010, Moteka 2015, Abdrakhmanov *et al.* 2018.

¹⁷ Tadić 1961, 1956.



Sl. 7/1-3. Zastupljenost različitih delova skeleta u pojedinačnim celinama iz perioda bronzanog doba na osnovu broja određenih primeraka (BOP)

Fig. 7/1-3 Representation of different skeletal elements by Bronze Age features based on the Number of identified specimens (NISP)

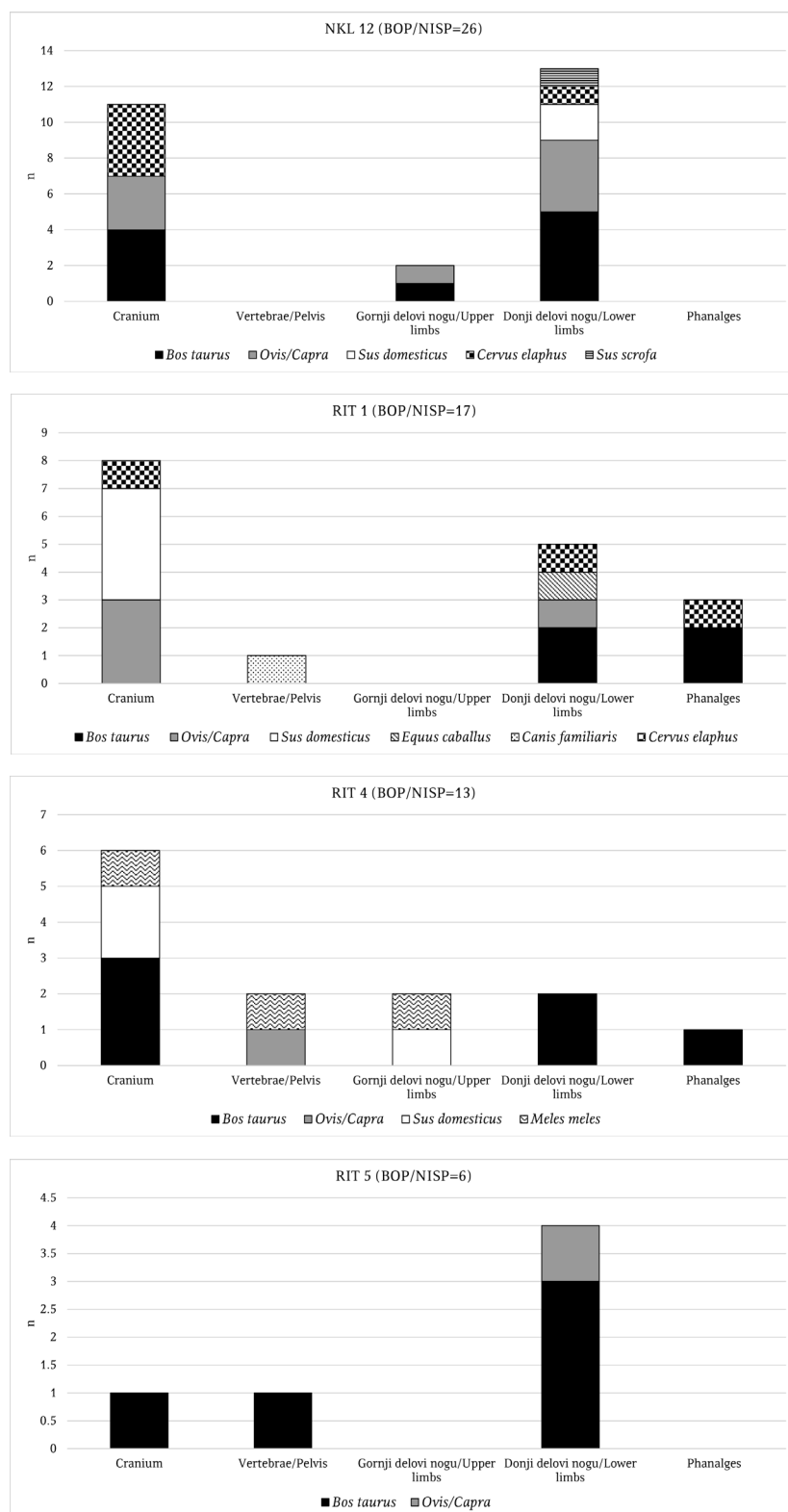
pojedinačnim slučajevima otkriveni su ostaci srndaća, divljeg govečeta i jazavca. U bronzanodopskim faunističkim zbirkama u Srbiji, domaće životinje, koje su korišćene u ishrani, goveče, ovikaprini i svinja u zavisnosti od nalazišta smenjuju se kao vodeće vrste, dok udeo divljih životinja, pre svega jelena nije zanemarljiv.¹² Ostaci konja na teritoriji Centralnog Balkana javljaju se počevši od ranog bronzanog doba,¹³ najčešće u veoma malom broju u faunističkim zbirkama iz bronzanodopskih naselja, te prisustvo konja u naseljima ranog bronzanog doba na nalazištima Rit i Nad Klepečkom odgovara dosadašnjim saznanjima o pojavi ove životinje u mlađoj praistoriji na prostoru današnje Srbije. Apsolutni datum,

¹² Greenfield 1986a, b, 1996, Blažić 1995, Becker 1991.

¹³ Greenfield 2006, Bulatović, *in preparation*, Bökönyi 1990, Greenfield 1986a.

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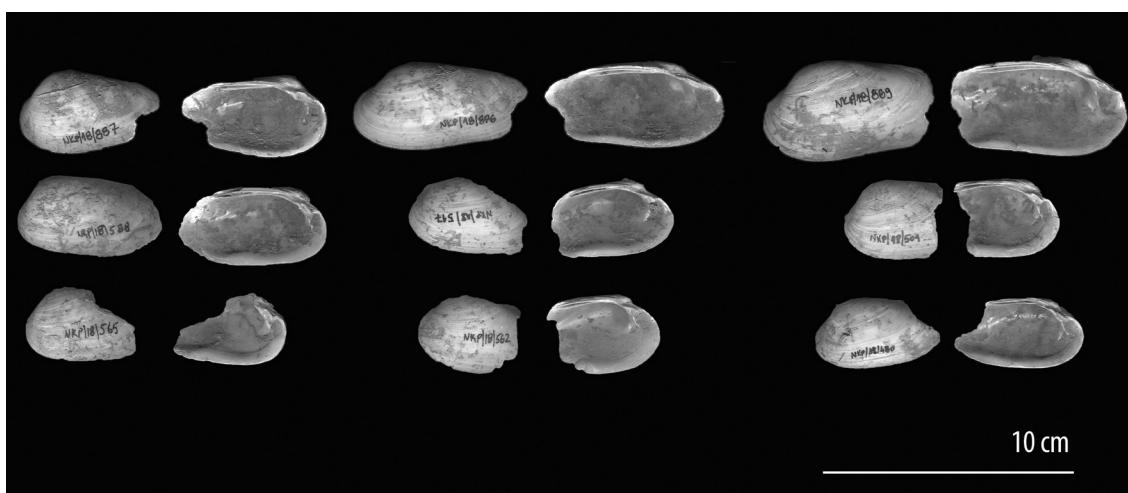
Sl. 7/4-7. Zastupljenost različitih delova skeleta u pojedinačnim celinama iz perioda bronzanog doba na osnovu broja određenih primeraka (BOP)

Fig. 7/4-7 Representation of different skeletal elements by Bronze Age features based on the Number of identified specimens (NISP)

koji je dobijen za metatarzalnu kost konja iz poluzemunice na nalazištu Rit (sl. 6) i koji odgovara početku 20. veka p.n.e, odnosno 1977-1907 g.p.n.e. (91.6% verovatnoće),¹⁴ malo je mlađi od apsolutnog datuma, koji je dobijen za kalkaneus konja sa nalazišta Bujanj, a koji iznosi 2140 –1920 (95.4% verovatnoće).¹⁵

Na osnovu taksonomskog sastava i zastupljenosti različitih anatomskih regija u pojedinačnim bronzanodopskim celinama, može se pretpostaviti da ostaci životinja iz bronzanog doba na nalazištima Rit i Nad Klepečkom predstavljaju mesarski otpad, budući da uglavnom preovlađuju delovi skeleta, koji na sebi nose manje mesa ili oni koji se odbacuju prilikom klanja, kao i ostatke hrane, budući da su, iako u manjem broju, prisutne i anatomске regije životinja korišćenih u ishrani, koje nose veću količinu mesa (sl. 7).

U tri celine na lokalitetu Nad Klepečkom pronađene su ljušture slatkovodnih školjki roda *Unio*. Posebno se izdvajaju dve celine iz ranog bronzanog doba, ukop 1 iz sonde 69 (sl. 8), u kome su pronađene 924 ljušture, kao i ukop 8 iz sonde 77, gde je pronađeno 245



Sl. 8. Ljušture slatkovodnih školjki roda *Unio* iz ukopa 1 u sondi 69 na nalazištu Nad Klepečkom

Fig. 8 Freshwater shells of the *Unio* genus from pit 1 in trench 69 at the Nad Klepečkom site

ljuštura ovih školjki. Na osnovu morfologije i dimenzija kapaka,¹⁶ utvrđeno je prisustvo tri vrste slatkovodnih školjki, od kojih je vrsta *Unio crassus* najzastupljenija, dok su u manjem broju prisutne vrste *Unio pictorum* i *Unio tumidus*. Većina ljuštura ima specifične prelome na distalnom kraju, dok je njihova boja beličastožuta ili sivkasta, pa se na osnovu pomenutih tafonomskih specifičnosti, može pretpostaviti da su školjke termički obrađivane i lomljene, kako bi bilo izvađeno meso. Ove školjke su mogle biti korišćene u ishrani stanovnika naselja iz ranog bronzanog doba kao dodatni izvor hrane. Na osnovu etnografskih studija¹⁷ poznato da je meso školjki roda *Unio*, koje se u savremenom društvu uglavnom ne smatra jestivim, korišćeno u ishrani životinja, najčešće svinja, ili kao mamac u ribolovu, te postoji mogućnost da su ove školjke sakupljane i iz ovih razloga. Metričke karakteristike ljuštura upućuju na pretpostavku da potiču iz lokalnog biotopa, tj. da su verovatno sakupljane iz obližnje reke Klepečke.¹⁸ Veće koncentracije školjki roda *Unio*, koje su dokumen-

¹⁴ Bulatović *et al.*, ovaj zbornik.

¹⁵ Bulatović and Vander Linden 2017.

¹⁶ Glöer and Diercking 2010, Moteka 2015, Abdrakhmanov *et al.* 2018.

¹⁷ Tadić 1961, 1956.

¹⁸ Vuković - Bogdanović *et al.*, in preparation.

Bronze Age period settlements at the Rit and Nad Klepečkom sites. Metric characteristics of the shells suggest that they originate from a local biotope, that is, that they were probably collected at the nearby Klepečka River.¹⁸ High concentrations of shells of the genus *Unio* documented at other sites as well, even from the Late Neolithic¹⁹ and Eneolithic²⁰ periods, let alone from the period of Early Bronze Age,²¹ point to the importance of freshwater shells in the diet of Late Prehistory societies in the region of Central Balkans.

EARLY IRON AGE ANIMAL REMAINS

Animal remains from the Early Iron Age period are very scarce, and come from a single feature (trench 80, pit 1) of the Nad Klepečkom site, dating back to this period based on ceramic finds typical of the Basarabi cultural group.²² The animal bone assemblage from this feature is comprised of a small number of mammal remains and those of land snail of the *Helix* genus. The largest number of mammal bones, which were taxonomically determined to the level of species, belongs to the animals used in the diet (cattle, sheep/goat), with three additional bones belonging to horse, dog and red deer. Among skeletal elements, more prevalent are the regions with a small amount of meat, but, since the regions with larger quantities of meat are also present, although in smaller numbers, we can assume that these bones represent food remnants (Fig. 9). Traces of carcass processing were observed only on cattle tibia and a radius belonging to a large mammal, and they are both reminiscent of disarticulation and filleting processes. As far as land snail remains are concerned, since these animals tend to go underground during their hibernation period,²³ we cannot exclude the possibility that this is a natural accumulation of snails, either during the Iron Age, or later periods. However, the possibility of inhabitants using snails as an additional food source should not be excluded, since there are similar examples, like the one from the early Neolithic site of Zlatara near Ruma, where a large concentration of over 700 shells was interpreted as to have been used in the diet.²⁴

LATE IRON AGE ANIMAL REMAINS

Analyzed animal remains from the period of Late Iron Age come from four different features (trench 77, pit 3; trench 78, pit 1; test – trench 65, pit 6; test – trench 88, pit 1) linked to the Scordiscan settlement at the Nad Klepečkom site. This settlement is dated back to the period from the 1st century BC to the 1st century AD, based on the archaeological material and one AMS date.²⁵

Remains of domestic animals commonly used in the diet (cattle, sheep/goat, and pig) were found in all of the features, but their percentage ratio based on NISP varies from one feature to the other. Apart from these species, among domestic animals, there

¹⁸ Vuković - Bogdanović *et al.*, in preparation.

¹⁹ Dimitrijević and Mitrović 2016.

²⁰ Bulatović, in preparation.

²¹ Greenfield 1986b, Blažić 1995, 335, Becker 1991.

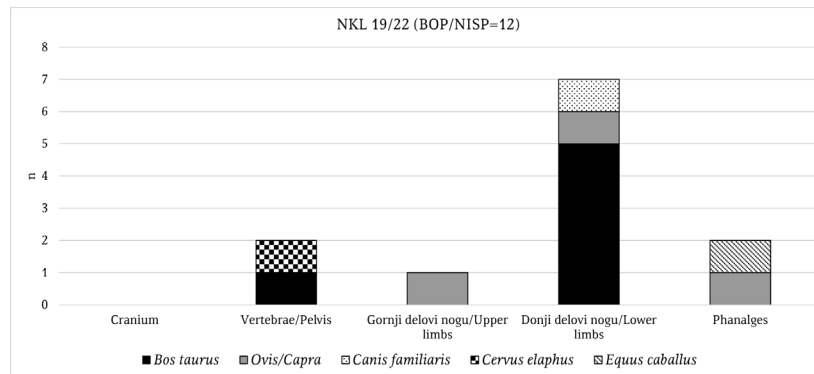
²² Kapuran *et al.*, this volume.

²³ Pollard 1975.

²⁴ Blažić 1995, 332.

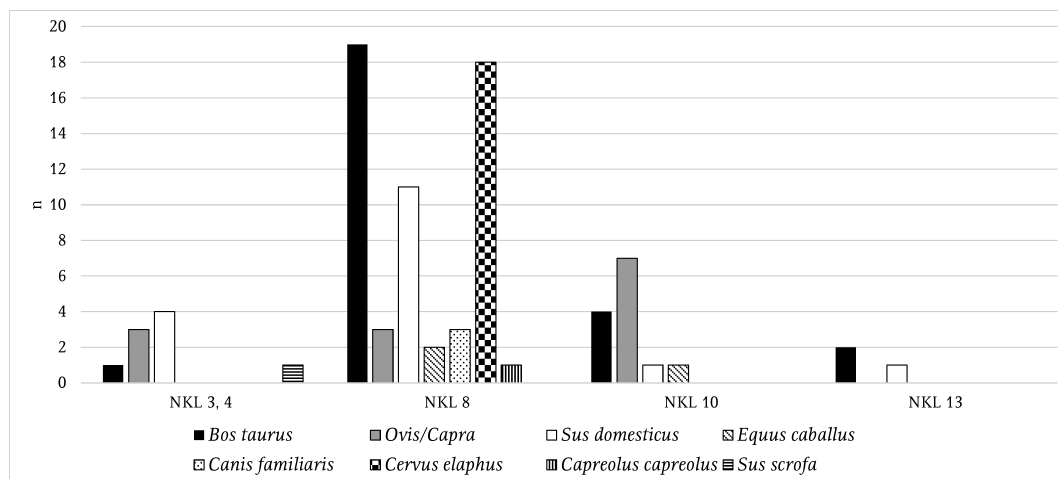
²⁵ Mladenović *et al.*, this volume.

tothane i na drugim nalazištima, ne samo iz perioda ranog bronzanog doba u regionu,¹⁹ već i iz perioda kasnog neolita²⁰ i eneolita,²¹ ukazuju na značaj, koji su slatkovodne školjke imale u ishrani u mlađoj praistoriji na prostoru Centralnog Balkana.



Sl. 9. Zastupljenost različitih delova skeleta u celini iz perioda starijeg gvozdеноg doba na osnovu broja određenih primeraka (BOP)

Fig. 9 Representation of different skeletal elements from the Early Iron Age feature based on the Number of identified specimens (NISP)



Sl. 10. Taksonomski sastav u pojedinačnim celinama iz perioda mlađeg gvozdеноg doba na osnovu broja određenih primeraka (BOP)

Fig. 10 Taxonomic composition by Late Iron Age features based on the Number of identified specimens (NISP)

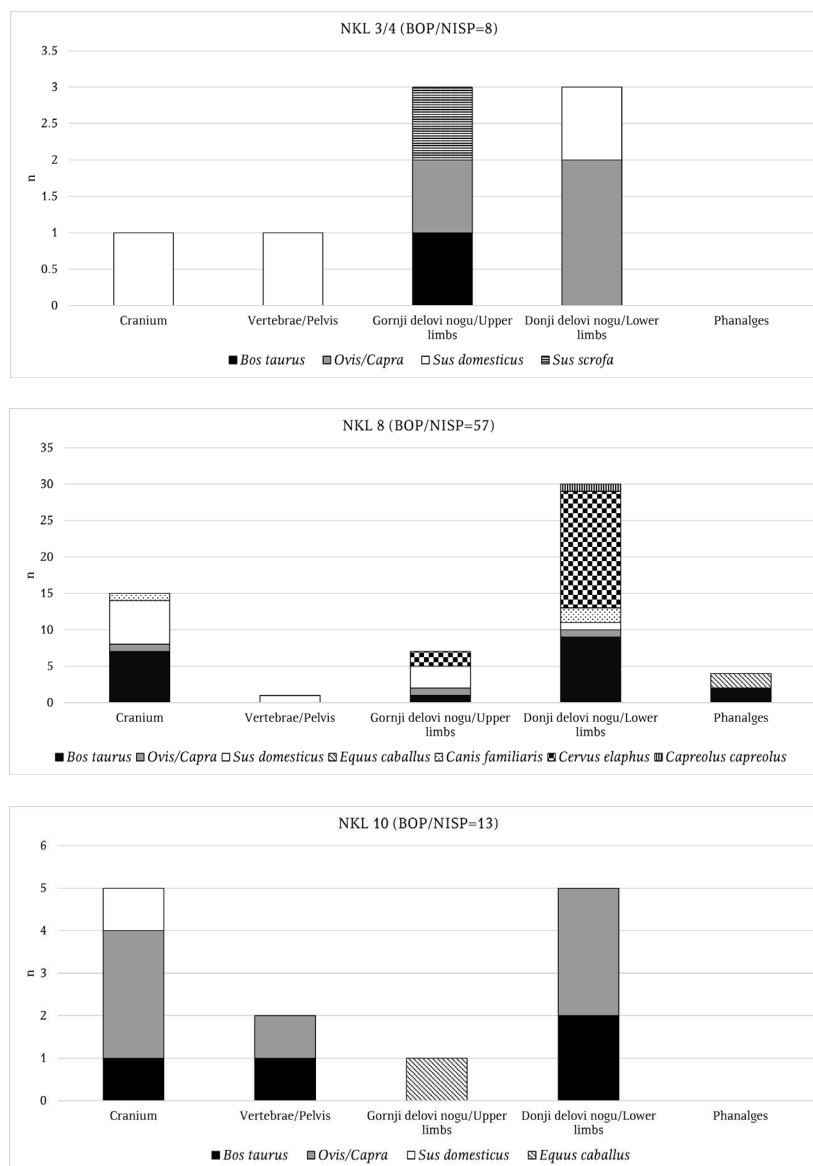
OSTACI ŽIVOTINJA IZ HORIZONTA STARIJEG GVOZDENOG DOBA

Iz horizonta starijeg gvozdеноg doba, sakupljeni i analizirani životinjski ostaci potiču samo iz jedne celine, i to iz ukopa 1 u sondi 80 na lokalitetu Nad Klepečkom, koji je na osnovu pokretnog arheološkog materijala datovan u vreme poznog starijeg gvozdеноg

¹⁹ Greenfield 1986b, Blažić 1995, 335, Becker 1991.

²⁰ Dimitrijević and Mitrović 2016.

²¹ Bulatović, *in preparation*.



Sl. 11/1-3. Zastupljenost različitih delova skeleta u celinama iz perioda mlađeg gvozdenog doba na osnovu broja određenih primeraka (BOP)

Fig. 11/1-3 Representation of different skeletal elements by Late Iron Age features based on the Number of identified specimens (NISP)

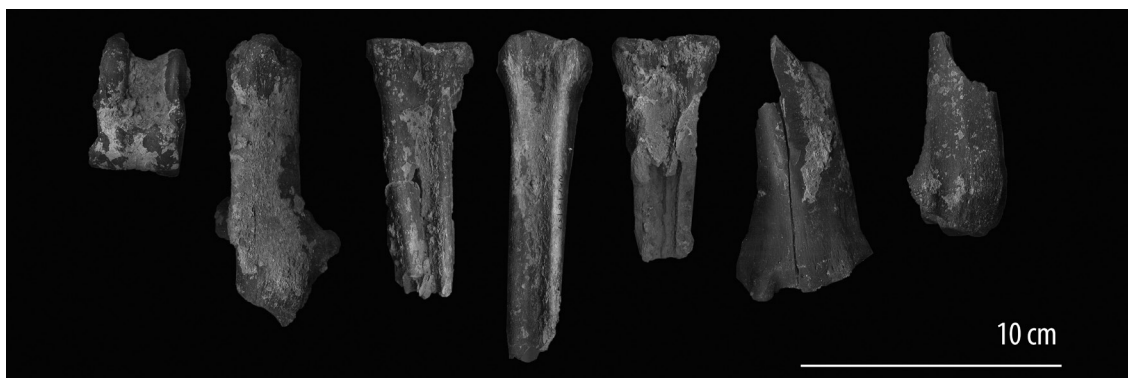
are also remains of horses in two features, as well as that of a dog in a single feature. As far as wild animals are concerned, the most common are the remains of red deer, followed by roe deer and wild boar (Fig. 10). The remains of the land snail of the *Helix* genus were also discovered in two features. At the Late Iron Age period sites from today's Serbia, cattle are the most common species, and they are followed by either pig or sheep/goat remains. Wild animal remains, especially of red deer, are also not negligible at these sites.²⁶ Based on both the share of different anatomical regions, as well as on the taxonomic composition of the assemblage, it can be assumed that the animal remains from these features are the remains of food or butchery waste (Fig. 11). The largest portion of animal bones

²⁶ Radišić 2016, Blažić 1992, 1995

doba, budući da keramička produkcija iz ove celine odgovara fenomenu, koji je poznat pod nazivom Basarabi kultura.²² Faunističku zbirku ove celine čini manji broj ostataka sisara i ljuštura kopnenih puževa roda *Helix*. Najveći broj kostiju sisara, koje su bliže taksonomski određene, odgovara vrstama, koje su korišćene u ishrani (goveče, ovikaprini), a pronađena je i po jedna kost konja, psa i jelena. Među anatomskim regijama zastupljenije su regije sa manjom količinom mesa, a u manjem broju i regije, koje nose više mesa, te se može pretpostaviti da ovi ostaci predstavljaju delimično ostatke hrane (sl. 9). Tragovi procesuiranja trupova nalaze se samo na tibiji govečeta i radijusu krupnog sisara, a oni upućuju na dezartikulaciju i filetiranje. Ljuštura puževa su beličaste i žućkaste boje, a nisu primećene antropogene modifikacije na njima. Budući da se kopneni puževi tokom hibernacije ukopavaju,²³ nije isključeno da se radi o prirodnoj depoziciji puževa, koji su mogli tokom praistorije, ali i u mlađim periodima ovde da se ukopaju. Takođe, ne treba isključiti ni mogućnost da je meso puževa korišćeno, poput mesa slatkovodnih školjki, kao dodatni izvor hrane u mlađoj praistoriji. Na ranoneolitskom nalazištu Zlatara kod Rume, uočena je velika koncentracija (od preko 700 ljuštura) kopnenih puževa, za koje je pretpostavljeno da su korišćeni u ishrani.²⁴

OSTACI ŽIVOTINJA IZ HORIZONTA MLAĐEG GVOZDENOG DOBA

Analizirani ostaci životinja iz horizonta mlađeg gvozdеног doba potiču iz četiri arheološke celine na nalazištu Nad Klepečkom, koje su u vezi sa naseljem Skordiska, koje se na osnovu pokretnog arheološkog materijala i jednog apsolutnog datuma (sa nalazišta Rit) datuje u vreme od I v.p.n.e. do I v.n.e.: sonda 77, ukop 3, sonda 78, ukop 1, kontrolni iskop 65, ukop 6 i kontrolni iskop 88, ukop 1.²⁵



Sl. 12. Ostaci donjih delova nogu jelena sa tragovima vatre iz ukopa 1 u kontrolnom iskopu 88 na nalazištu Nad Klepečkom

Fig. 12 Burnt red deer lower leg fragments from the trench 1 (test – trench 88) at the Nad Klepečkom site

U svim celinama pronađeni su ostaci domaćih životinja, koje su korišćene u ishrani (goveče, ovikaprini i svinja), a njihov međusobni udeo na osnovu oba metoda kvantifikacije (BOP i DZ) (sl. 1) varira između različitih celina, dok su ostaci konja pronađeni u dve

²² Kapuran *et al.*, ovaj zbornik.

²³ Pollard 1975.

²⁴ Blažić 1995, 332.

²⁵ Mladenović *et al.*, ovaj zbornik.

from this settlement comes from pit number 1, from the test – trench 88, which probably served as a waste pit. This feature is specific because of its high proportion of burnt bones, as many as 94% of the total number of identified specimens (NISP). The feature is comprised of the similar ratio of cattle and red deer remains, mostly of limb fragments, majority of which was completely carbonized or partly calcined (Fig. 12), probably at a high temperature, based on the bone color and fracture patterns. Since the bones are fully burnt and partly calcined, it can be assumed that they were exposed to fire when the meat was already removed from them, that is, that the burning is not related to the food preparation process.²⁷ Based on the share of different skeletal elements and their lateralization, it is possible to presume that the assemblage from this feature among others consists of remains of at least two red deer and two cattle individuals. Knife marks, present on the cattle metacarpus, red deer radius and metatarsus, and pig humerus and atlas, point to various stages of carcass processing - from skinning to meat removal. According to taphonomic alterations, the proportion of anatomical regions and the taxonomic composition, it can be assumed that the animal remains in the waste pit represent food leftovers, which were subsequently burnt.

CONCLUSIONS

One of the main characteristics, as well as a great disadvantage of the studied faunal collections from the sites of Late Prehistoric periods excavated in the vicinity of ancient Viminacium, are very small assemblages, which prevented the understanding of economic strategies and other human-animal interactions within these communities. Albeit small, these faunistic assemblages are significant due to the fact that they are the only known faunal collections from the aforementioned periods in the Braničevo District. Since the so far documented faunal assemblages from the territory of Serbia dating back from the here studied periods, such as the Eneolithic,²⁸ are reduced to just a couple of sites at which the samples were often few, the data in this paper should just to a minimum extent complement the knowledge regarding the diet, husbandry practices and the economy as a whole of the communities settled in the Central Balkan region. Although it was not possible to discuss the interrelationship between different species of domestic and wild animals in the settlements in question, it was possible to assume in what way these remains were deposited, based on taxonomic composition, the traces of taphonomic alterations, as well as the share of different anatomical regions. The presumption is that animal remains in most of the features are food remains, based on the fact that the most common animals were domestic and hunted species usually used in the diet. Since the domestic cattle, pig, sheep/goat, red deer, wild boar, and roe deer remains are present in most of the features, it can be assumed that the meat of these animals was used by the inhabitants of these settlements which existed in roughly the same place between the 4th millennium BC and 1st century AD. Based on the share of different skeletal elements, it can be assumed that the most common domestic animals were bred and processed within the settlements, while, due to the small number of wild animal bones, the hunting practices and transport of carcasses of caught animals cannot be discussed. Butchery marks that were recorded on the animals used in the diet indicate different stages of carcass

²⁷ Lyman 1994, 384–391.

²⁸ The exception is the sample from the Eneolithic horizons at the Bubanj site (Bulatović *in press*)

celine, a psa samo u jednoj. Od divljih životinja najčešći su ostaci jelena, a pronađeni su i ostaci srndaća i divlje svinje (sl. 10). U dve celine otkriveni su i ostaci kopnenih puževa roda *Helix*. Na latenskim nalazištima u regionu, goveče je po pravilu najzastupljenija vrsta, dok se na drugom mestu smenjuju svinja i ovikaprini, dok udeo divljih životinja, pogotovo jelena, nije zanemarljiv u latenskim faunističkim zbirkama.²⁶ Na osnovu udela različitih anatomskih regija može se pretpostaviti da ostaci životinja iz ovih celina predstavljaju ostatke hrane ili mesarskog otpada, na osnovu taksonomskog sastava, odnosno prisustva životinja, koje su korišćene u ishrani, kao i na osnovu udela različitih anatomskih regija (sl. 11). Najveći faunistički uzorak iz ovog latenskog naselja potiče iz ukopa 1 u kontrolnom iskopu 88, koji verovatno predstavlja otpadnu jamu. Ovaj uzorak je specifičan zbog velikog udela gorelih kostiju (94% od BOP-a). U celini su u sličnom procentu zastupljeni ostaci govečeta i jelena, uglavnom gornji i donji delovi nogu, koji su u potpunosti karbonizovani i delimično kalcinirani (sl. 12). Boja kostiju i obrasci preloma upućuju na visoku temperaturu gorenja. Budući da su kosti u potpunosti gorele i da su delimično kalcinirane, može se pretpostaviti da su bile izložene vatri kada je meso već bilo skinuto sa njih, odnosno da gorenje nije u vezi sa pripremom hrane.²⁷ Na osnovu udela različitih skeletnih elemenata i njihove lateralizacije, može se pretpostaviti prisustvo najmanje dve jedinke jelena i dve jedinke govečeta. Tragovi noža, koji su uočeni na metakarpusu govečeta, radijusu i metatarzusu jelena i na humerusu i atlasu svinje iz ove celine, upućuju na različite stadijume procesuiranja trupova ovih životinja, od dranja kože do skidanja mesa sa kostiju. Na osnovu tafonomskih specifičnosti, udela anatomskih regija i taksonomskog sastava, pretpostavka je da ostaci životinja u ovoj otpadnoj jami predstavljaju ostatke hrane, koji su naknadno goreli.

ZAKLJUČAK

Jedna od osnovnih karakteristika, a ujedno i velika mana proučavanih faunističkih uzoraka iz horizonata mlađe praistorije na nalazištima, koja su istražena na prostoru kasnijeg, antičkog Viminacijuma, su veoma mali uzorci, koji su onemogućili razumevanje ekonomskih strategija i većine drugih ljudsko-životinjskih interakcija u okviru ovih zajednica. Iako male, ove faunističke zbirke su značajne zbog činjenice da predstavljaju jedine do sada poznate arheozoološke zbirke iz pomenutih perioda na prostoru Braničevskog okruga. Budući da se do sada dokumentovani faunistički skupovi iz regiona iz nekih od proučavanih perioda, poput eneolita,²⁸ svode na svega nekoliko nalazišta, u kojima je uzorak često mali, podaci iz ovog rada bi trebalo da bar u maloj meri upotpune dosadašnja saznanja o ishrani zajednica, koje su naseljavale Centralni Balkan u mlađoj praistoriji. Iako nije bilo moguće raspravljati o međusobnom značaju različitih domaćih i lovni vrsta u istraženim naseljima, na osnovu taksonomskog sastava, tafonomskih specifičnosti i udela različitih anatomskih regija životinja u okviru pojedinačnih celina, koje najčešće predstavljaju ostatke stambenih objekata ili otpadnih jama, bilo je moguće pretpostaviti način njihovog deponovanja. Pretpostavka je da ostaci životinja u većini istraženih celina predstavljaju ostatke hrane, a među njima se nailazi uglavnom na domaće i lovne vrste, koje su u toku mlađe praistorije korišćene u ishrani. Budući da su ostaci domaćeg govečeta,

²⁶ Radišić 2016, Blažić 1992, 1995.

²⁷ Lyman 1994, 384–391.

²⁸ Izuzetak je faunistički skup eneolitskog horizonta na nalazištu Bujanj (Bulatović *in press*)

processing. The Early Bronze Age sample is, among other things, significant due to the finding of two horse bones, the animal whose introduction led to a revolution in transport and warfare, and whose remains are usually moderately represented²⁹ within the contemporary faunal assemblages. The presence of a large number of freshwater shells of the genus *Unio* in the Early Bronze Age settlement indicates the importance of this type of food in the supplementary diet. The meat of land snails, the shells of which were found in significant numbers in the Iron Age layers, could also have been used in the diet. Finally, it is necessary to point out that even small animal bone assemblages, as is the case with this study, with all their shortcomings, can contribute to the understanding of different aspects of life in the past, and should not be ignored.

²⁹ The exception is the site of Ljulaci, where a more significant percentage of horse remains was found (7%) (Greenfield 1986a, 2006)

svinja, ovikaprina, jelena, divljih svinja i srndaća prisutni u većini istraženih celina, može se pretpostaviti da je meso ovih životinja korišćeno u ishrani stanovnika naselja, koja su na ovom mestu egzistirala od 4. milenijuma p.n.e. do 1. veka n.e. Na osnovu udela različitih anatomskih regija, može se pretpostaviti da su ekonomski najznačajnije domaće životinje gajene i procesuirane u okviru naselja, dok se zbog malog uzorka lovnih vrsta ne može diskutovati o načinima lova i transportu trupova ulovljenih životinja. Na ostacima životinja korišćenih u ishrani, zabeleženi su tragovi procesuiranja, koji upućuju na različite stadijume kasapljenja. Zbirka iz ranog bronzanog doba je, između ostalog, značajna i zbog nalaza dve kosti konja, životinje, čijim uvođenjem je došlo do revolucije u transportu i ratovanju, a čiji ostaci čine, uglavnom, mali udeo²⁹ u faunističkim zbirkama naselja iz ranog bronzanog doba. Nalazi velikog broja ljuštura slatkovodnih školjki roda *Unio* u naselju ranog bronzanog doba ukazuju na značaj školjki u ishrani. Poput školjki, i meso kopnenih puževa, čije ljuštore su pronađene u značajnom broju u horizontima gvođenog doba, takođe je moglo biti korišćeno u ishrani. Na kraju, neophodno je istaći, da čak i male faunističke zbirke, kao što je slučaj u ovom radu, sa svim svojim nedostacima, mogu da doprinesu razumevanju različitih aspekata života u prošlosti i da ih ne treba zanemariti.

²⁹ Izuzetak je nalazište Ljuljaci, gde je pronađen veći udeo ostataka konja (7%) (Greenfield 1986a, 2006)

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