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# Archaeobotany in Croatia: An overview

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*The study of plant macro-remains from archaeological sites is an important method to study aspects of past societies such as diet, agriculture, trade/economy and the local environment. To date plant macro-remains have been identified from 70 sites within Croatia, spanning the early Neolithic (ca. 6000 cal BC) to the Middle Ages (16<sup>th</sup> century AD). Despite this number, poor recovery and a bias towards the Neolithic period have led to large gaps in our knowledge on the development of agriculture in the region, which is further hindered by the low number of excavations that include archaeobotanical recovery. This paper summarises the archaeobotanical evidence available per period in Croatia, highlighting the potential for future research, as well as providing suggestions for the recovery of carbonised plant macro-remains.*

**Keywords:** *Neolithic, Eneolithic, Bronze Age, Iron Age, Roman, Middle Age, Methodology*

## INTRODUCTION

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. Archaeobotany examines plant remains (primarily macro-fossils such as grains, seeds, nutshells, and fruit stones) recovered from archaeological excavations to reconstruct past agricultural systems, economies, environments and human activity. Common themes in European archaeobotany include the origin and spread of domestic crops, dietary breadth and variability, land use and production, as well as distribution, and social access to specific foods.<sup>1</sup>

In Croatia, archaeobotanical analysis is rarely undertaken as part of archaeological research, due in part to the lack of trained

<sup>1</sup> Van Zeist, Wasylikowska, Behre 1991; Bogaard 2004; Colledge, Conolly 2007; Van der Veen, Livarda, Hill 2008; Zohary, Hopf, Weiss 2012; Chevalier, Marinova, Peña-Chocarro 2014.

archaeobotanists and a limited awareness of the discipline and its potential contribution. During the 20<sup>th</sup> century only nine sites have published evidence of archaeobotanical remains, with the majority being part of multi-national projects.<sup>2</sup> Since then there has been a greater increase in the recovery of archaeobotanical remains, including recovery within routine rescue excavations. This provides for the first time important information about past human plant economies from a range of archaeological sites and periods across Croatia. How these new discoveries have begun to contribute to Croatian archaeology are summarised here, highlighting the importance of collecting archaeobotanical samples and the potential for future research. This paper does not aim to provide a detailed and comprehensive history of Croatian archaeology and archaeobotany. To aid future research in archaeobotany in Croatia this paper will also outline suggestions for best practice.

## PREHISTORY

### *Neolithic (ca. 6000 to 4500 cal BC)*

The Neolithic period has received a great deal of attention over the years, especially in regards to the spread of agriculture and its social and economic consequences.<sup>3</sup> The spread of a 'Neolithic package', which is seen as the introduction of a farming economy, relates to the appearance of specific items of material culture, including polished stone axes, ceramics, a new suite of domestic animals and plants, as well as specific architecture and religious activities.<sup>4</sup> How these items arrived in Europe is still highly debated, with theories ranging from colonising farmers to local hunter gatherer groups adopting farming piecemeal from their neighbours.<sup>5</sup> A key aspect of these

debates is the transmission and adoption of certain domesticated plants, which research suggests did not spread as one 'crop package' across Europe.<sup>6</sup> The 'crop package' consisted of einkorn (*Triticum monococcum*), emmer (*Triticum turgidum* ssp. *dicocum*- formerly *Triticum dicocum*), barley (*Hordeum vulgare* ssp. *vulgare*), pea (*Pisum sativum*), lentil (*Lens culinaris*), chickpea (*Cicer arietinum*), bitter vetch (*Vicia ervilia*) and flax (*Linum usitatissimum*).<sup>7</sup>

In Croatia, research suggests that farming settlements began to be established ca. 6000 cal BC;<sup>8</sup> however, only a few excavations have yielded early Neolithic archaeobotanical remains (Tab. 1, Map 1). In coastal Croatia, five early Neolithic sites have evidence of carbonised plant macro-remains: Pokrovnik, Crno vrilo, Tinj-Podlivade, Krčina and Kargadur-Ližnjan.<sup>9</sup> While in continental Croatia, only two early Neolithic sites have so far yielded archaeobotanical remains: Sopot and Tomašanci-Palača.<sup>10</sup> All seven sites show evidence of the 'crop package' in varying degrees (all except chickpea and bitter vetch) confirming the establishment of crop agriculture in the early Neolithic. This evidence along with the presence of other Neolithic material culture has been suggested by some to be confirmation of populations moving into Croatia,<sup>11</sup> although evidence of continued hunter gatherer activities suggest a more complex diffusion of farming across the region.<sup>12</sup> At present, the absence of archaeobotanical evidence from Mesolithic sites and the restricted range of early Neolithic evidence in Croatia limit our understanding of how human-plant relationships changed at this time.

<sup>2</sup> Gnirs 1925; Hopf 1964; Karg, Müller 1990; Chapman, Shiel, Batović 1996.

<sup>3</sup> Harris, Hillman 1989; Harris 1996; Whittle 1996; Perlès 2001; Bogaard 2004; Colledge, Conolly 2007; Hadjikoumis, Robinson, Viner 2011; Zohary, Hopf, Weiss 2012.

<sup>4</sup> Çilingiroğlu 2005.

<sup>5</sup> Vlachos 2003; Borić 2005; Forenbaheer, Miracle 2005.

<sup>6</sup> Conolly, Colledge, Shennan 2008.

<sup>7</sup> Zohary 1996; Zohary, Hopf, Weiss 2012.

<sup>8</sup> Chapman, Müller 1990; Bogucki 1996; Forenbaheer, Miracle 2005; Davison *et al.* 2006; Forenbaheer, Kaiser, Miracle 2013.

<sup>9</sup> Müller 1994; Huntley 1996; Komšo 2006; Legge, Moore 2011; Šoštarić 2009.

<sup>10</sup> Reed 2015.

<sup>11</sup> Legge, Moore 2011.

<sup>12</sup> Chapman, Müller 1990; Biagi 2003; Forenbaheer, Miracle 2005; Bass 2008.



Table 1. List of Croatian sites with archaeobotanical remains per period (C = carbonised, IM = impression, M = mineralised, W = waterlogged, P = Pseudo-fresh). \*Note: Identifications based on a cumulative table and may not be accurate.

SITE NAME	SITE TYPE	DATE	CEREALS	PULSES	OIL PLANTS	VEGETABLES / HERBS	FRUITS / NUTS	WILD / WEED SEEDS	REFERENCE
<b>Neolithic</b>									
Crno vrilo	Settlement	<i>(Impresso culture)</i>	C						Šoštarić 2009.
Kargadur-Ližnjan	Settlement	<i>(Impresso culture)</i>	C				C		Komšo 2006, 212–214.
Krčina cave	Cave	<i>(Impresso culture)</i>	C						Müller 1994, 64.
Sopot	Settlement	6060 – 5890 cal BC	C	C			C	C	Reed 2015.
Tinj-Podlivade	Settlement	5815 – 5185 cal BC	C					C	Huntley 1996.
Tomašanci-Palača	Settlement	5660 – 5300 cal BC	C	C			C	C	Reed 2015.
Pokrovnik	Settlement	5900 – 5100 cal BC	C	C	C		C	C	Karg, Müller 1990; Legge, Moore 2011.
Danilo	Settlement	5300 – 4800 ca BC	C	C	C		C	C	Hopf 1964; Reed 2006; Legge, Moore 2011.
Gromače-Brijuni	Settlement	<i>(Danilo culture)</i>	C				C	C	Gnirs 1925, 24–25.
Virovitica-Brekinja	Settlement	5400 – 5200 cal BC	C	C					Reed 2015.
Bapska-Gradac	Tell	4680 – 4460 cal BC	C						Burić 2007, 45–46.
Brezovljani	Settlement	4900 – 4600 cal BC	IM						Reed 2015.
Velištak	Settlement	4900 – 4700 cal BC	C	C			C	C	Reed 2015.
Grapčeva	Cave	5226 – 4167 cal BC	C				C	C	Borojević <i>et al.</i> 2008.
Ivandvor-Gaj	Settlement	5050 – 4490 cal BC	C	C					Đukić 2014; Reed 2015.
Otok	Tell	4540 – 4040 cal BC	C						Obelić, Horvatičić, Krajcar Bronić 2002.
Ravnjaš-Nova Kapela	Tell	<i>(Sopot culture)</i>	C	C			C	C	Reed 2015.
Slavča	Tell	ca. 4990 – 4200 cal BC	C	C	C		C	C	Reed 2015.
Sopot	Tell	5050 – 3940 cal BC	C	C	C		C	C	Reed 2015.

SITE NAME	SITE TYPE	DATE	CEREALS	PULSES	OIL PLANTS	VEGETABLES / HERBS	FRUITS / NUTS	WILD / WEED SEEDS	REFERENCE
Tomašanci-Palača	Settlement	4300 – 3900 cal BC					C		Reed 2015.
Turska Peć	Cave	( <i>Hvar culture</i> )	C	C			C	C	Reed 2015.
<b>Eneolithic</b>									
Grapčeva	Cave	3637 – 3097 cal BC					C	C	Borojević <i>et al.</i> 2008.
Slavča	Tell	ca. 4200 – 2800	C		C		C	C	Reed 2013; 2016
Jurjevac-Stara Vodenica	Settlement	4320 – 3960 cal BC	C				C		Reed 2013; 2016; Đukić 2014.
Pajtenica-Velike Livade	Settlement	4300 – 3900 cal BC	C					C	Reed 2013; 2016; Đukić 2014.
Potočani	Settlement	4203 – 4040 cal BC	C	C				C	Reed 2013; 2016.
Lasinja	Settlement	4040 – 3950 cal BC	C				C	C	Reed 2016.
Barbarsko	Settlement	4320 – 3360 cal BC	C						Reed 2016.
Čeminac-Vakanjac	Settlement	ca. 3750 – 3600 cal BC	C		C		C		Reed 2016.
Čepinski Martinci-Dubrava	Settlement	ca. 4200 – 2900 cal BC	C					C	Reed 2016.
Tomašanci-Palača	Settlement	4340 – 3240 cal BC	C				C	C	Reed 2013; 2016.
Virovitica-Batelije	Settlement	3510 – 3330 cal BC	C						Reed 2013; 2016.
Buković-Lastvine	Settlement	3370 – 2940 cal BC	C					C	Huntley 1996a.
Đakovo-Franjevac	Settlement	3340 – 2830 cal BC	C	C	C		C	C	Reed 2011; 2013; 2016; Đukić 2014.
Vinkovci, 14 Matije Gupca	Settlement	2880 – 2480 cal BC	C		C		C	C	Reed 2013; 2016.
Vučedol	Tell	3490 – 2790 – 2600 cal BC	C	C	C		C	C	Reed 2013; 2016.
<b>Bronze Age</b>									
Grapčeva	Cave	2565 – 2144 cal BC / 1879 – 1529 cal BC	C				C	C	Borojević <i>et al.</i> 2008.
Tomašanci-Palača	Settlement	( <i>early</i> )	C				C	C	Reed 2013.

SITE NAME	SITE TYPE	DATE	CEREALS	PULSES	OIL PLANTS	VEGETABLES / HERBS	FRUITS / NUTS	WILD / WEED SEEDS	REFERENCE
Monkodonja	Hillfort	ca. 1800 – 1200 cal BC		C			C	C	Hänsel, Mihovilić, Teržan 1997.
Čauševica	Settlement	(late)					C	C	Huntley 1996b.
Crišnjevi-Oštrov	Necropolis	(late)	C					C	Reed 2013.
Mačkovac-Crišnjevi	Settlement	ca. 14 <sup>th</sup> – 12 <sup>th</sup> century BC	C	C			C	C	Reed 2013.
Nova Bukovica-Sjenjak	Settlement	(late)		C			C		Šoštarić 2001.
Kalnik-Igrisce	Settlement	(late)	C	C			C	C	Mareković 2013; Mareković <i>et al.</i> 2015.
Orubica-Veliki Šeš	Settlement	ca. 13 <sup>th</sup> – 12 <sup>th</sup> century BC	C				C	C	Reed 2013.
Okruglo	Settlement	(late)						W	Smith <i>et al.</i> 2006.
Torčec-Gradić	Settlement	(late)						P	Šoštarić 2004.
<b>Iron Age</b>									
Kaptol-Gradci	Tumulus	820 – 410 cal BC	C				C	C	Šoštarić, Potrebica, Brigić 2008; Hršak 2009; Šoštarić <i>et al.</i> 2016.
Sisak	Settlement	ca. 6 <sup>th</sup> – 4 <sup>th</sup> century BC	C						Reed, Drnić 2016.
Nadin-Gradina	Hillfort	ca. 5 <sup>th</sup> – 1 <sup>st</sup> century BC	C		C		C	C	Nye 1996.
<b>Roman</b>									
Danilo	Villa		C						Šoštarić 2003; Šoštarić 2005.
Caska, Pag Island	Harbour structure	ca. 1 <sup>st</sup> – 2 <sup>nd</sup> century AD	C	C		W	C,W	W	Tillier <i>et al.</i> 2016.
Poreč	Town		C	C					Šoštarić 2015.
Vitrovitica Kiškoriya	Settlement	ca. 2 <sup>nd</sup> – mid 5 <sup>th</sup> century AD	C	C			C	C	Šoštarić 2015; Šoštarić <i>et al.</i> 2015.
Nadin-Gradina	Hillfort	ca. 1 <sup>st</sup> – 2 <sup>nd</sup> century AD	C		C		C	C	Nye 1996.

SITE NAME	SITE TYPE	DATE	CEREALS	PULSES	OIL PLANTS	VEGETABLES / HERBS	FRUITS / NUTS	WILD / WEED SEEDS	REFERENCE
Šćitarjevo	Cemetery	ca. 1 <sup>st</sup> / early 2 <sup>nd</sup> century AD	M	M	M		M	M	Šoštarčić <i>et al.</i> 2006.
Illok	Cemetery	ca. 1 <sup>st</sup> / early 2 <sup>nd</sup> century AD	C, M	M	M		M	M	Dizdār, Šoštarčić, Jelinić 2003; Šoštarčić <i>et al.</i> 2006.
Osijek-Silos	Villa	ca. 1 <sup>st</sup> – 5 <sup>th</sup> century AD	C					C	Starčević 2010.
Port of Aenona / Zaton	Port	ca. 1 <sup>st</sup> – 5 <sup>th</sup> century AD	W		W	W	W	W	Šoštarčić 2003; Gluščević <i>et al.</i> 2006; Krajačić 2009; Čičak 2015.
Veli Brijun	Villa	ca. 1 <sup>st</sup> – 5 <sup>th</sup> century AD	W		W	W	W	W	Šoštarčić, Küster 2001.
<b>Middle Ages</b>									
Vitrovitica Kiškorija	Settlement	ca. 8 <sup>th</sup> – 9 <sup>th</sup> century AD	C				C	C	Šoštarčić 2015.
Blaževo Pole 6*	Settlement	ca. 8 <sup>th</sup> / 9 <sup>th</sup> century AD	C					C	Šoštarčić, Šegota 2010.
Duga ulica 99, Vinkovci	Cemetery (Slav)	ca. 7 <sup>th</sup> / 8 <sup>th</sup> century AD	C						Sekeļ Ivačan, Tkalčec 2006, 200–201.
Nuštar	Cemetery (Avar)	ca. 7 <sup>th</sup> / 8 <sup>th</sup> century AD	C					C	Rapan Papeša, Kenéz, Pető 2015.
Prečno Pole I*	Settlement	ca. 7 <sup>th</sup> / 8 <sup>th</sup> – early 14 <sup>th</sup> century AD	C				C	C	Šoštarčić, Šegota 2010.
Pod Gucak*	Settlement	ca. 11 <sup>th</sup> / 12 <sup>th</sup> century AD	C					C	Šoštarčić, Šegota 2010.
Ledine*	Settlement	ca. 10 <sup>th</sup> / 11 <sup>th</sup> century AD	C					C	Šoštarčić, Šegota 2010.
Rudičevo*	Settlement	ca. 13 <sup>th</sup> – early 14 <sup>th</sup> century AD	C					C	Šoštarčić, Šegota 2010.
Torčec-Gradić	Castle	ca. 13 <sup>th</sup> – 15 <sup>th</sup> century AD	C				C	C	Šoštarčić 2004.
Vrbovec	Castle	ca. 12 <sup>th</sup> – 16 <sup>th</sup> century AD	C	C			C	C	Šoštarčić, Šegota 2010a.

The recovery of archaeobotanical remains can also provide information about activities associated with the yearly crop cycle, such as preparing the soil, sowing, harvesting and crop processing. Each activity relies on variables such as labour availability, technology, the local environment and any other constraints imposed by the community/society. Recently, these activities have begun to be explored from the analysis of archaeobotanical remains dating to the Neolithic. For example, the recovery of sufficient quantities of carbonised cereal grain, chaff and crop weeds allowed the identification of crop processing activities at six Neolithic sites (one early Neolithic and five late Neolithic): Tomašanci-Palača, Sopot, Čista Mala-Velištak, Turska Peć, Slavča, Ravnjaš.<sup>13</sup> The results suggested that the inhabitants conducted many of the early crop processing stages, such as threshing and winnowing, away from the settlements after harvest. The crops were then brought to the settlement where further crop processing occurred on a more day to day basis in preparation for human consumption. The waste from these final crop processing stages then became carbonised, whether accidentally or deliberately being burnt in the hearth or burnt outside the home, and deposited around the settlement.

During the late Neolithic (ca. 4800 to 4500 cal BC) changes in society are seen in the Carpathian region, where larger more permanent and long-lived tell settlements emerge, along with large scale cattle herding.<sup>14</sup> Whether changes in crop agriculture also occurred at this time is still unclear from the plant record, but recent archaeobotanical research has highlighted its potential to answer these questions. For example, the comparison of plant macroremains collected from late Neolithic tell, cave and flat open-air sites showed a slight increase in the range of crops recovered at the tell sites, potentially indicating differences in crop regimes.<sup>15</sup>

<sup>13</sup> Reed 2015.

<sup>14</sup> Bailey 2000; Tringham 2000; Orton 2012.

<sup>15</sup> Reed 2015.

The identification of burnt dung from plant remains collected from the late Neolithic cave site of Turska Peć has also contributed to our understanding of the possible diet of domestic herds.<sup>16</sup> For example, the large numbers of wild plant and weedy species, such as cicer milkvetch (*Astragalus cicer*), alfalfa (*Medicago sativa*), fat hen (*Chenopodium album*), crabgrass (*Digitaria sanguinalis*) and clover (*Trifolium* sp.), suggests that farmers may have been sowing fields for animals to graze and/or growing fodder crops to feed their livestock. In addition, the identification of animal herds at this site provides valuable information about land use and the seasonal movement of herds around the Croatian landscape during the late Neolithic.

#### *Eneolithic (ca. 4500 to 2400 cal BC)*

The Eneolithic (or Copper Age) is an important period of socio-economic change where economic and political complexities began to emerge. However, less research has been directed to understanding the significant changes that occurred to these societies in the Balkans. Generally, the Neolithic/Eneolithic transition in southeast Europe sees a number of communities dispersing from the large centralised Neolithic tells to form smaller settlements with an increased focus on herding and seasonal transhumance.<sup>17</sup> A greater focus on animal products is suggested, where animals were exploited not only for meat but for milk, wool or used as draft animals.<sup>18</sup> This period also sees changes in burial practice and the re-organisation of trade networks, to accommodate the demand for new metallurgical goods.<sup>19</sup> As the Eneolithic progressed, larger more permanent fortified settlements began to develop,<sup>20</sup> along with the emergence of social hierarchy and craft specialisation. The climate too changes dur-

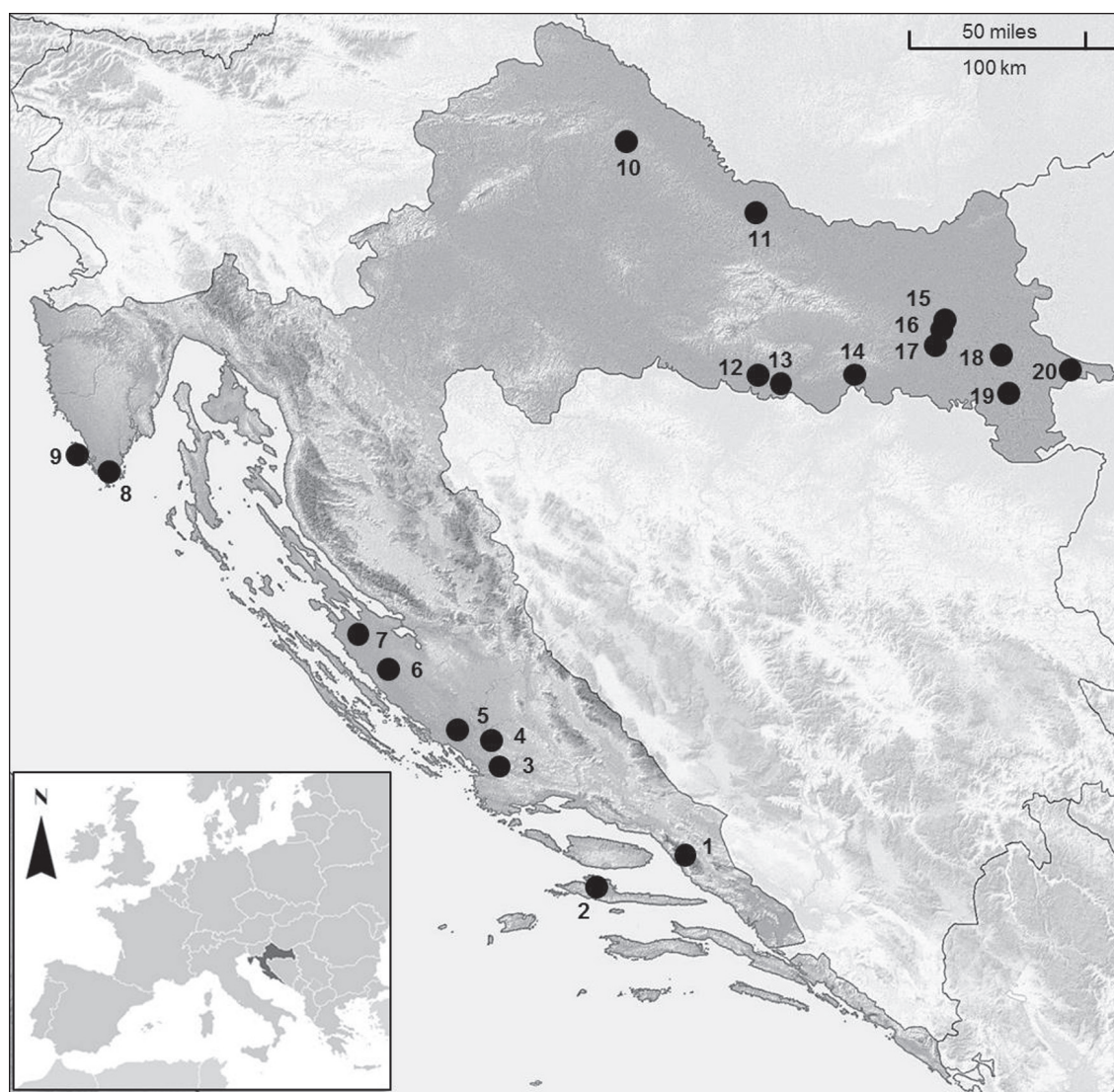
<sup>16</sup> Reed 2015.

<sup>17</sup> Bognar-Kutzian 1972; Parkinson *et al.* 2004.

<sup>18</sup> Sherratt 1981; 1983; Greenfield 2005; Trbojević-Vukičević *et al.* 2011.

<sup>19</sup> Parkinson *et al.* 2010.

<sup>20</sup> Balen 2002; Tasić 2004.



Map 1. Map of Croatia showing the location of Neolithic sites with archaeobotanical remains (1) Krčina and Turska Peć, (2) Grapčeva, (3) Danilo, (4) Pokrovnik, (5) Cista Mala- Velištak, (6) Tinj-Podlivade, (7) Crno Vrilo, (8) Kargadur-Ližnjan, (9) Gromače-Brijuni, (10) Brezovljani, (11) Virovitica-Brekinja, (12) Slavća, (13) Ravnjaš-Nova Kapela, (14) Zadubravlje-Duine, (15) Tomašanci-Palača, (16) Ivandvor-Gaj, (17) Pajtenica-Velike Livade, (18) Sopot, (19) Otok, (20) Bapska.

ing this period from the warm Atlantic period to a cooler Subboreal environment.

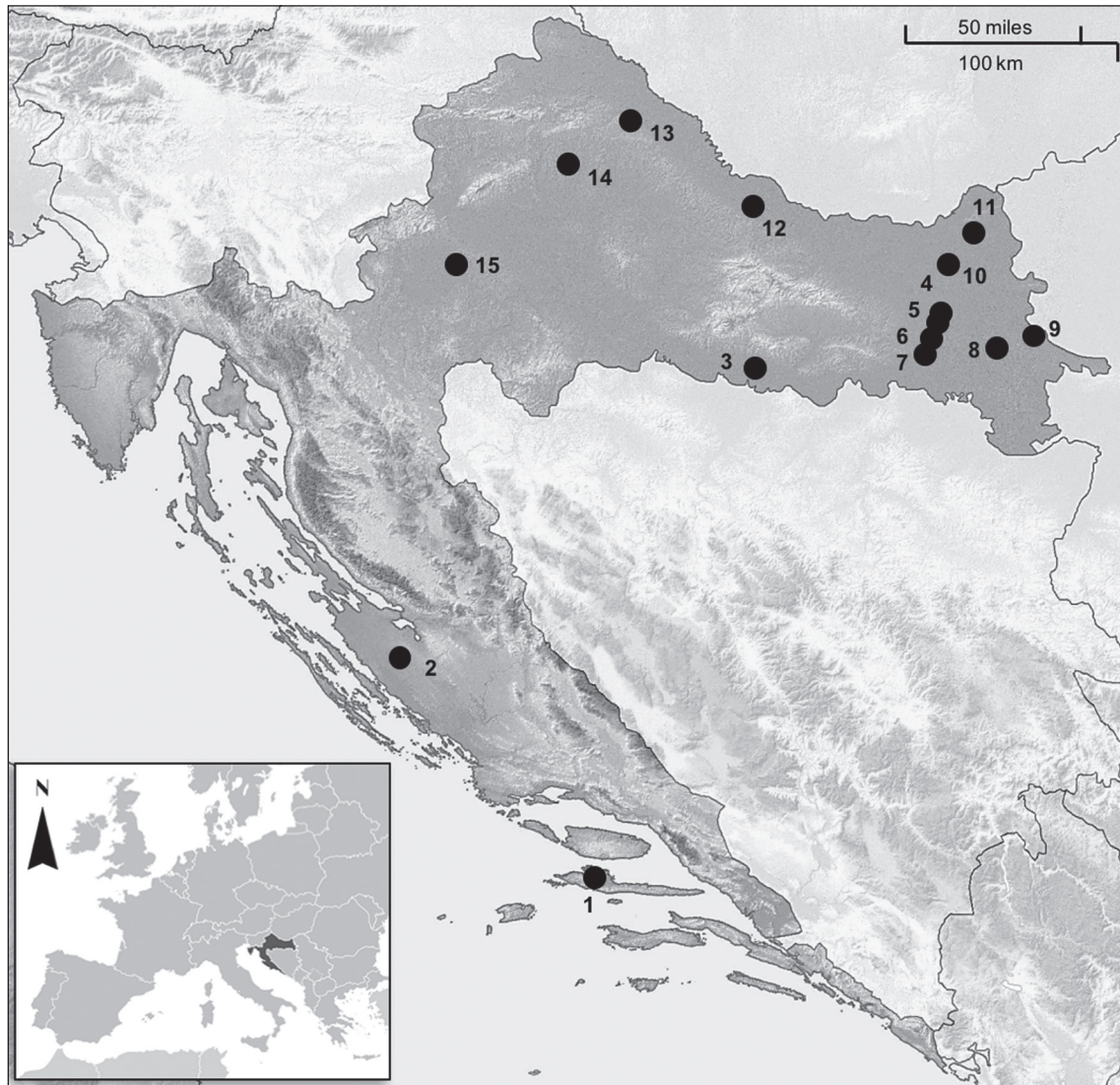
Archaeobotanical research for the Eneolithic is limited in the Carpathian Basin and current theories in the region suggest that the change in climate, as well as possible soil deterioration, may have influenced a shift in focus from crop cultivation to animal husbandry, as well as a shift towards hardier crops, such as barley.<sup>21</sup> However,

<sup>21</sup> Kosse 1979; Gyulai 2010.

recent archaeobotanical research in Croatia has begun to question this.<sup>22</sup> From the examination of thirteen Eneolithic sites (Tab. 1, Map 2) continuation from the preceding Neolithic is seen in the range of crop species recovered (i.e. the continued cultivation of emmer, einkorn and barley) suggesting crop agriculture did not change significantly during this period. Unfortunately, the limited archaeobotanical data has restricted further interpretation of possible

<sup>22</sup> Reed 2013; 2016.





Map 2. Map of Croatia showing the location of Eneolithic sites with archaeobotanical remains (1) Grapčeva, (2) Buković-Lastvine, (3) Slavča, (4) Pajtenica-Velike Livade, (5) Jurjevac-Stara Vodenica, (6) Tomašanci-Palača, (7) Đakovo-Franjevac, (8) Vinkovci, (9) Vučedol, (10) Čepinski Martinci-Dubrava, (11) Čeminac-Vakanjac, (12) Virovitica-Batelijske, (13) Potočani (14) Barbarsko, (15) Lasinja.

cultivation methods.<sup>23</sup> Therefore questions regarding the introduction of ploughs and draft animals in agriculture and the relationship between agriculture and changes in society are still unknown.

<sup>23</sup> E.g. Bogaard 2004; Kreuz, Schäfer 2011.

#### *Bronze Age (ca. 2400 to 900 cal BC)*

Once again the Bronze Age sees a re-organisation of society with episodes of population migration and transhumance from as far as the Russian steppes, the Aegean and Anatolia.<sup>24</sup> The European Bronze Age (ca. 2500 – 750 BC) is also characterised by the rise of ‘élites’ and social ranking,<sup>25</sup> which had a direct effect on settlements, resulting in the

<sup>24</sup> Kovács 1977; Todorova 1989; Gerling *et al.* 2012.

<sup>25</sup> Harding 2000; Earle 2002; Kristiansen, Larsson 2005.

appearance of larger more substantial sites located on hilltops or prominent positions which offered strategic control over an area.<sup>26</sup> In the Carpathian Basin, some suggest the emergence of these larger settlements indicate political centres that controlled manufacture, trade and production, while smaller periphery settlements focused on supplying these centres with goods including plant and animal products.<sup>27</sup>

The European Bronze Age also sees distinct changes in crop cultivation where certain species begin to be regularly cultivated as crops in their own right. These include broomcorn millet (*Panicum milliaceum*), spelt (*Triticum aestivum ssp. spelta*) and broad bean (*Vicia faba*).<sup>28</sup> New cultivated species are also seen in the Carpathian Basin, including the oil plant gold of pleasure (*Camelina sativa*) and Safflower (*Carthamus tinctorius*).<sup>29</sup> However, how agriculture developed in the face of changing social organisation is still unclear.

In Croatia, eleven Bronze Age settlements, including a hillfort, cave and necropolis, have so far yielded carbonised archaeobotanical remains (Tab. 1, Map 3). Unfortunately, the majority of these sites had low quantities of plant remains, restricting interpretation. Of particular interest is the increase in presence of broomcorn millet (*Panicum miliaceum*), which may support the theory that it began to be cultivated as a summer crop during this period.<sup>30</sup> At Čauševica the recovery of *Olea* fragments may also indicate some of the earliest evidence of wild olives in Dalmatia.<sup>31</sup> Thus, the limited data so far suggests that the choice of crops cultivated changed at this time in the Balkans, but the why and how are still unknown.

<sup>26</sup> Kovács 1977; Dimitrijević, Težak-Gregl, Majnarić-Pandžić 1998; Pavišić 2012.

<sup>27</sup> Gogáltan 2008.

<sup>28</sup> Akeret 2005; Valamoti 2016.

<sup>29</sup> Kroll 1990; Medović 2002; Gyulai 2010, 105.

<sup>30</sup> Reed 2013; Valamoti 2016.

<sup>31</sup> Huntley 1996a.

The recovery of plant remains from sites can also provide information about the past local environment, which can be particularly important when reconstructing agricultural activities. At Torčec-Gradić, for example, the archaeological recovery of *Alisma plantagoaquatica* from a Bronze Age occupation layer, suggested that the landscape once had areas of standing water, possibly areas of marsh land.<sup>32</sup> Thus, agriculture would have had to be conducted away from these waterlogged areas, or if seasonal, may have restricted the growing and grazing seasons of the crops and livestock in the vicinity of the settlement.

#### Iron Age (ca.1000 to 100 cal BC)

The Iron Age sees the continuation and emergence of large proto-urban centres, the centralisation of authority and the intensification of trade.<sup>33</sup> Rich burials containing imported luxury items also attest to the transportation of luxury goods at this time.<sup>34</sup> Hillforts persist, but very few have been extensively excavated in Croatia and as such little is known about these settlements. Evidence of archaeobotanical remains from the Iron Age are also rare with only three known sites, Kaptol-Gradci, Nadin-Gradine and Sisak, yielding carbonised plant macro-remains (Tab. 1, Map 3). At Kaptol-Gradci, evidence of cereals, wild fruits and weeds from a cremation grave suggest possible ritual activities where these plants may have been placed on the funeral pyre and later collected and deposited in the tumulus.<sup>35</sup> In Dalmatia, Nadin-Gradine hillfort provides evidence of spelt wheat (*Triticum cf. aestivum ssp. spelta*), six-row barley (*Hordeum vulgare ssp. vulgare*), broomcorn millet (*Panicum miliaceum*) and grape (*Vitis sp.*),<sup>36</sup> but due to the low quantity recovered no additional analyses have been conducted.

<sup>32</sup> Šoštarić 2004.

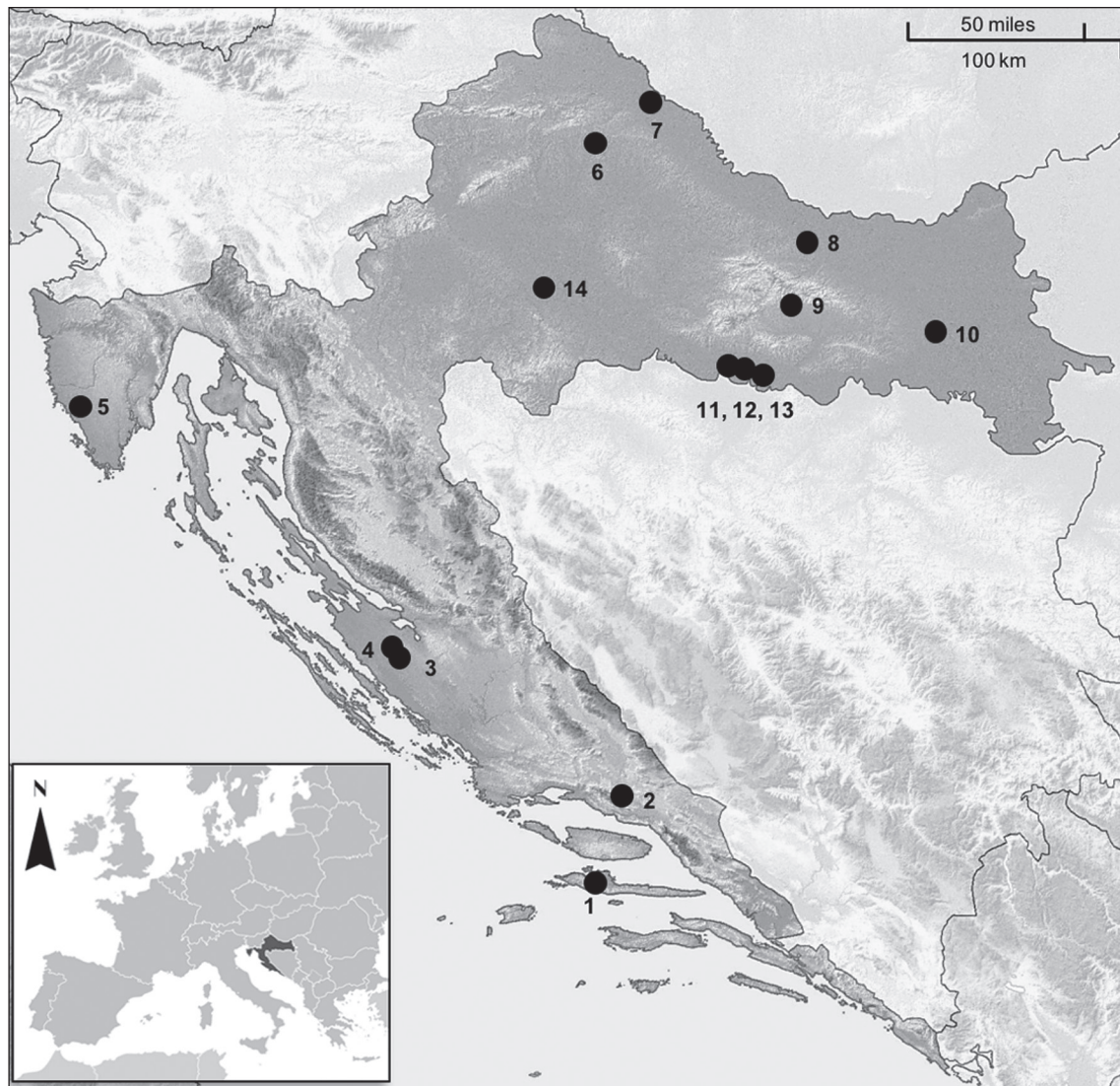
<sup>33</sup> Forenbaher 1995.

<sup>34</sup> Potrebića 2013.

<sup>35</sup> Hršak 2009.

<sup>36</sup> Nye 1996.





Map 3. Map of Croatia showing the location of Bronze and Iron Age sites with archaeobotanical remains referred (1) Grapčeva, (2) Okruglo, (3) Nadin-Gradina, (4) Čauševica, (5) Monkodonja, (6) Kalnik-Igrišće, (7) Torčec-Gradić, (8) Nova Bukovica-Sjenjak, (9) Kaptol-Gradici (10) Tomašanci-Palača, (11) Mačkovac-Crišnjevi, (12) Crišnjevi-Oštrov, (13) Orubica-Veliki Šeš, (14) Sisak.

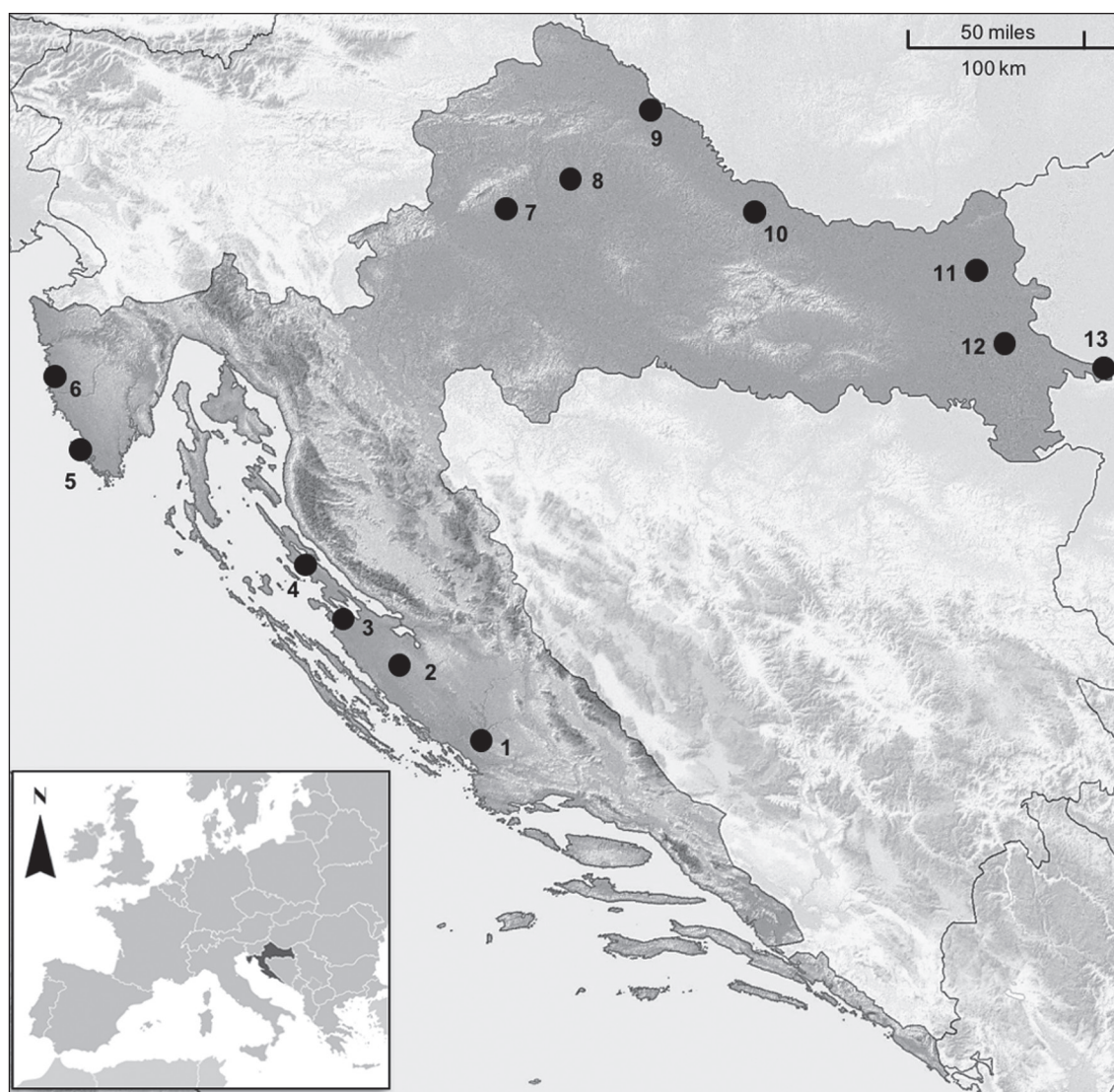
Recent excavations at Sisak, Croatia, unearthed an early Iron Age pot filled with archaeobotanical remains within the floor of a structure dating to between the 6th and 4th centuries BC.<sup>37</sup> Preliminary results found a high concentration of foxtail millet (*Setaria italica*) within the pot, providing for the first time evidence of millet cultivation in the early Iron Age. This is particularly interesting as an increase in millet consumption in continental Croatia during

the Iron Age has been suggested from carbon and nitrogen stable isotope analysis of Bronze Age and Iron Age human bones.<sup>38</sup>

The low recovery of archaeobotanical remains from Iron Age sites, however, presents a large gap in our understanding of the development of agriculture at this time and how the development of proto-urban centres may have influenced production and consumption in the region.

<sup>37</sup> Reed, Drnić 2016.

<sup>38</sup> Lightfoot *et al.* 2015.



Map 4. Map of Croatia showing the location of Roman and Middle Age sites with archaeobotanical remains (1) Danilo, (2) Nadin-Gradina, (3) Port of Aenona/Zaton, (4) Caska, (5) Veli Brijun, (6) Poreč, (7) Šćitarjevo, (8) Vrbovca, (9) Prečno Pole I, Pod Gucak, Ledine, Rudičevo, Torčec-Gradić, Blaževo Pole 6, (10) Vitrovitica Kiškoriya, (11) Osijek-Silos, (12) Nuštar, (13) Ilok.

#### ROMAN (1<sup>ST</sup> – 5<sup>TH</sup> CENTURY AD)

The initial Roman province of Illyricum (Dalmatia) was gradually enlarged during a series of wars that brought much of the Dalmatian coast and continental Croatia within their control by 9 BC.<sup>39</sup> During the 1<sup>st</sup> to 3<sup>rd</sup> centuries AD, the region was reorganised into Dalmatia and Upper (Superior) and Lower (Inferior) Pannonia. The Romans ruled the area for five centuries, making Salona (now Solin) their administrative headquarters, while trade prospered through the building of road networks, linking the

coast with the Aegean and Black Seas and with the Danube.

In Croatia, ten Roman sites have yielded plant remains, including those preserved through carbonisation, waterlogging and mineralisation (Tab. 1, Map 4). In particular plant remains preserved by waterlogging were recovered from the Roman villa of Veli Brijun and from the ancient harbor at Zaton providing the first evidence of vegetable and spice plants such as cucumber (*Cucumis sativus*), black mustard (*Brassica nigra*), carrot (*Daucus sativus*), radish

<sup>39</sup> Migotti 2012.



(*Raphanus sativus*) and chicory (*Cichorium intybus*).<sup>40</sup> The most frequently recorded plant remains from these sites were of grape (*Vitis vinifera*), olive (*Olea europaea*) fig (*Ficus carica*), walnut (*Juglans regia*) and pine nuts (*Pinus pinea*). These fruits and nuts were all likely grown in Dalmatia and their presence at the Port and at the villa show that they were transported and traded across the region. The growth of olives and grapes would have also supported the production of oil and wine in Dalmatia, seen from the archaeological remains of olive and grape pressing facilities, such as at Škicini.<sup>41</sup>

Plant macro-remains collected from two Roman cemeteries, Illok and Sčitarjevo, have also provided information about Roman ritual activities and in the case of Illok an insight into the process of early Romanization of the Limes.<sup>42</sup> For example, many of the cereal remains were recovered carbonised which suggested that these grains had been placed on the funeral pyre. On the other hand, remains of fruits and lentil (*lens culinaris*), which were not carbonised, were placed in the grave either in a fresh, dried or cooked form and may indicate activities associated with a funerary feast or a sacrifice to the gods.<sup>43</sup> Trade links with the Mediterranean are also seen from the remains of olive and fig.

Written accounts also suggest that agriculture flourished during the Roman period with a reference giving permission to grow vines in Pannonia from the Emperor Probus (276 – 282 AD) and in the 4<sup>th</sup> century a reference to Pannonia being a land rich in agricultural produce and cattle.<sup>44</sup> Unfortunately, the archaeobotanical remains so far provide little information about the main cereal crops grown during this time and whether agriculture became 'Romanized' during this period, especially in the Limes of the Croatian Danube region.

<sup>40</sup> Šoštarić, Küster 2001; Krajačić 2009.

<sup>41</sup> Buršić-Matijašić 1988.

<sup>42</sup> Dizdar, Šoštarić, Jelinčić 2003.

<sup>43</sup> Šoštarić *et al.* 2006.

<sup>44</sup> Oliva 1962, 316–318.

#### EARLY AND LATE MIDDLE AGES (7<sup>TH</sup> TO 12<sup>TH</sup> CENTURY AD AND 13<sup>TH</sup> TO 16<sup>TH</sup> CENTURY AD)

After the fall of the Roman Empire the Carpathian Basin once again filled with migrating nomadic, semi-nomadic and military groups (e.g. Avars, Byzantines, Huns). The Avars in particular began to settle in continental Croatia (ca. 6<sup>th</sup>/7<sup>th</sup> century AD) establishing more permanent settlements and cemeteries as part of the Avar Khaganate (Kingdom), which encompassed the Carpathian Basin. The only archaeobotanical evidence directly associated with the Avars is from a Late Avar cemetery near Nuštar.<sup>45</sup> The carbonised remains, although low in quantity, included cereals, such as rye and barley, and a small number of wild plant/weed species, as well as the recovery of 32 burnt fragments interpreted as food mush, possibly from cereals. Unfortunately these remains only hint at the types of ritual activities that may be associated with Avar funerary practices and the types of crops that may have been cultivated.

A series of Middle Age settlements in the region of Torčec (Tab. 1, Map 4), provide the majority of the archaeobotanical evidence for the 7<sup>th</sup> to 15<sup>th</sup> century.<sup>46</sup> Carbonised remains of cereals such as naked and spelt wheat (*Triticum aestivum* group, including *T. aestivum* ssp. *spelta*) and millet (*Panicum miliaceum*) dominated, while barley (*Hordeum vulgare* ssp. *vulgare*), oat (*Avena* sp.) and foxtail millet (*Setaria italica*) were only identified sporadically. Flax (*Linum usitatissimum*) and fruits such as peach (*Prunus persica*) and grapes (*Vitis vinifera*) were also likely cultivated in the region. However, the limited number of sites and archaeobotanical evidence has restricted our understanding of the development of agriculture at this time, with little understanding of the development of land ownership, differences in consumption between the classes, as well as the relationship between the towns and villages.

<sup>45</sup> Rapan Papeša, Kenéz, Petö 2015.

<sup>46</sup> Šoštarić 2004; Šoštarić, Šegota 2010; 2010a.

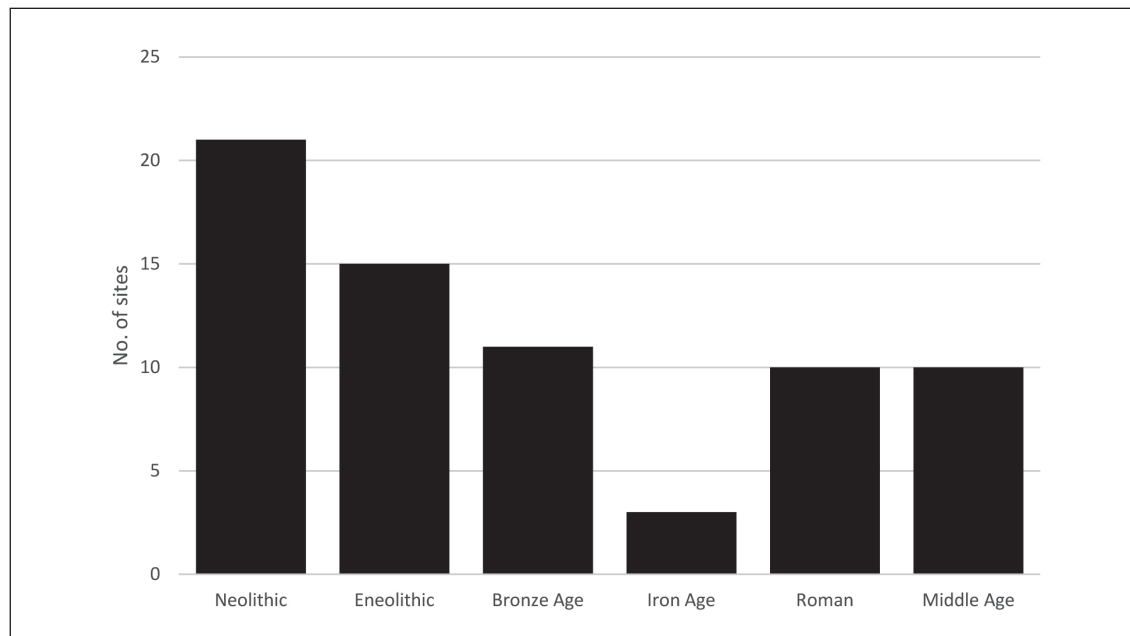


Figure 1. Number of sites with archaeobotanical remains per period.

#### SUMMARY OF THE ARCHAEOBOTANICAL EVIDENCE FROM CROATIA

A total of 70 sites have yielded plant macro-remains, whether preserved through waterlogging, mineralisation or carbonisation. Despite this the data is heavily biased towards prehistoric sites, particularly the Neolithic (Fig. 1), with periods such as the Iron Age only being represented by a small number of plant remains from three archaeological sites. Datasets are also limited, whether from poor preservation, low volumes of sediment collected or from a small number of samples taken, restricting further interpretation, such as reconstructing crop husbandry regimes (i.e. whether a field is manured, watered or weeded). The potential to explore agricultural activities have begun to be seen in Neolithic research in Croatia, as well as aspects of trade during the Roman period; however, the full potential of archaeobotanical research in Croatia is still to be realised. It is therefore important that archaeobotanical recovery be incorporated within all new excavations within Croatia. The following section highlights some of the key aspects to consider when recovering carbonised plant macro-remains from archaeological sites.

#### RECOVERING CARBONISED PLANT REMAINS FROM ARCHAEOLOGICAL SITES

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 either accidentally or deliberately, through activities such as cooking, burning rubbish or using fuel.<sup>47</sup> Therefore the recovery of carbonised remains can provide a direct link to human activities at an archaeological site.

#### *Sampling*

The recovery rate of archaeobotanical evidence is dependent on both the strategy of the excavation and the environmental conditions of the site. It is important that a sampling strategy be created prior to excavation and in consultation with an archaeobotanist, although it can always be modified as the project progresses. This ensures sufficient samples are taken for producing

<sup>47</sup> Van der Veen 2007.

statistically significant results, as well as for applying a range of relevant analytical techniques to answer the research questions of the project (e.g. how were the cereals grown and processed).

In order to reconstruct a reasonable and representative picture of agricultural and domestic activities on a site, samples need to be collected from a wide range of structures and features.<sup>48</sup> It is important to not target areas solely on the evidence of charcoal, as many of the plant remains will not be visible to the naked eye. In addition, multiple samples within structures and features should be taken, in order to identify the full range of activities associated with that area. For example, floor levels should be sampled at different places to allow spatial/depositional analyses (sampling each grid or every other grid is a good strategy). Generally, the more samples that are collected the greater the number of species recovered at a site.<sup>49</sup>

Samples also need to be large enough to sufficiently represent the deposited plant remains in that feature. Research suggests that small samples are more likely to over-represent more abundant taxa, while there is a greater probability of encountering rare taxa in larger samples.<sup>50</sup> Large samples also increase the probability that sufficient numbers of seeds are collected to allow certain statistical analyses.

In Croatia, seed density is particularly low at many sites, usually less than one seed per litre, which means that larger samples should be taken.<sup>51</sup> Where practical at least 50 litres should be taken per sample; however, where time/resources are restricted sub-samples can be taken to assess seed density before the rest of the sample is floated. This way samples with few plant remains can be abandoned, while rich samples can be fully processed.

<sup>48</sup> Hillman 1981.

<sup>49</sup> Reed 2013, Chapter 10, Fig. 10.1.

<sup>50</sup> Melzter, Leonard, Stratton 1992.

<sup>51</sup> Reed 2013.

### Recovery

One of the main methods to recover plant remains is through flotation, where 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 (light fraction or flot), while the sediment and other heavy materials sink to the bottom (heavy fraction or residue). There are a number of different ways to undertake this, which may depend on the availability of equipment, water and power, as well as, the type of soil and size of samples to be processed. A flotation machine is well suited to large samples and especially to sandy sediments with light carbonised macro-remains, but can require a large amount of water, power and a suitable location to dispose of the sediment. Machine flotation can be less suited to clay-rich soils, as the sample may not disperse easily, which can impede the release of the carbonised material.<sup>52</sup> On the other hand, bucket flotation is useful for small samples, and in some cases can shorten the processing time and decrease the amount of remains that are damaged and lost because of continued submergence and agitation. It is also a more mobile process that can be applied in the field (Fig. 2).

An important aspect of flotation, as well as in sieving, is that recovery efficiency is based heavily on the size of the sieve or mesh used to collect both the light and heavy fraction. For example, if the sieve used for the light fraction is 1mm in size any plant material smaller than this will be lost. This will have a large impact on what species are recovered and will ultimately affect interpretation. It is generally accepted that a sieve of 300 – 500  $\mu\text{m}$  is sufficient for the recovery of most archaeological plant material.<sup>53</sup>

<sup>52</sup> Wagner 1988.

<sup>53</sup> Pearsall 2000.





Figure 2. Bucket flotation to recover carbonised plant macro-remains, (a) the heavy residue and (b) the flot. Osijek, 2014 (Photo by K. Reed).

### Recording

It is essential that all samples are adequately recorded and labelled, especially if they are to be floated or analysed at a later date. Sample records should provide information on:

- Site, context number and any other location information
- Context type (e.g. pit, house floor)
- Sample number
- The volume of the sample (before flotation)
- Date or period of context

It may also be useful to identify how much of a context was sampled, e.g. top or bottom half of a pit (50%). Labelling must also be legible, consistent and permanent. It is best to use plastic or plasticised labels and permanent markers. Samples should have a label inside and outside of the flot or sample to prevent loss of information. In addition, floated samples should be dried thoroughly before storage as when wet they can encourage the growth of fungi or bacteria, which will destroy the plant remains.

### CONCLUSION

The study of archaeobotany in Croatia is still relatively young, with few excavations conducting sampling programmes. The majority of plant remains recovered at archaeological sites in Croatia are carbonised and as such provide valuable information about human activities at the sites. To go beyond questions about what plants were present when; planned sampling strategies need to be implemented for all new archaeological excavations. Already archaeobotanical research has begun to show the possible information that can be gained not only on past agricultural strategies, but also on ritual activities and trade networks. As more data is collected more complex questions can be asked and a greater understanding of the role of agriculture in social, cultural, technological and economic changes can be achieved.

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# Alatke od roga s nalazišta Jakovo – Kormadin iz zbirke Arheološkog muzeja u Zagrebu

## Antler tools from the site of Jakovo-Kormadin from the collection of the Archaeological Museum in Zagreb

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*Analiziran je materijal s nalazišta Jakovo – Kormadin, pohranjen u depou Arheološkog muzeja u Zagrebu. Nalazi o kojima je ovdje riječ potječu iz prvih, nesustavnih iskopavanja lokaliteta s početka 20. stoljeća, a u Muzej su pristizali tijekom više godina istraživanja (1902. – 1905.). Pregledom materijala ustanovljeno je 217 predmeta od roga koji su analizirani s tehnološkog aspekta, a udio tih predmeta u sveukupnome materijalu (gotovo 40%) ukazuje na značajnu upotrebu ove sirovine za izradu artefakata. Potrebno je istaknuti kako su prisutni i nalazi sirovine, otpadaka od proizvodnje i poluproizvoda koji idu u prilog postojanju radioničkog mjesta na ovome nalazištu, na što su ukazali rezultati analize koštane industrije iz istraživanja lokaliteta 2008. godine.*

**Ključne riječi:** *Jakovo – Kormadin, vinčanska kultura, neolitik, alatke od roga, tipologija, tehnike izrade*

*This analysis includes material from the site of Jakovo-Kormadin which is kept at the Archaeological museum in Zagreb. The finds discussed here were discovered in the first, non-systematic excavations carried out at the site at the beginning of the 20<sup>th</sup> century, and were obtained by the Museum during several years of research (1902-1905). A review of the material revealed 217 finds made out of antler, which have been analyzed from a technological and typological aspect. The sheer amount of these finds in the material as a whole (almost 40%) points to significant use of this raw material for tool production. We should emphasize the presence of raw material, production waste, and half-products in the studied material, which speak in favor of the existence of a workshop at the site, as indicated by the results of bone industry analysis from the 2008 excavations of the site.*

**Key words:** *Jakovo-Kormadin, the Vinča culture, Neolithic, antler tools, typology, production techniques*



## UVOD

U zbirki Arheološkog muzeja u Zagrebu pohranjen je velik broj nalaza koštane industrije s Jakovo – Kormadina. U ovom radu izloženi su rezultati analize<sup>1</sup> predmeta od roga koji čine gotovo polovicu nalaza ove industrije. Provedena je tipološka analiza, pri čemu su predmeti prema namjeni radnog dijela razvrstani u veće grupe, a analizirane su i tehnike izrade. Velika količina predmeta od roga ukazuje na važnost ove sirovine za izradu alatki uz koje su ustanovljeni i poluproizvodi te nalazi sirovine, odnosno otpadaka od proizvodnje što pretpostavlja da su artefakti bili izrađivani na samome nalazištu.

Nalazište je poznato još s početka 20. stoljeća, kada su ondje izvršena prva, nesustavna iskopavanja koja su provodili tamošnji lokalni učitelj i muzejski povjerenik A. Poturičić i J. Brunšmid, tadašnji ravnatelj Arheološkog muzeja u Zagrebu. Jedini podaci o tim istraživanjima odnose se na zemljišne čestice na kojima su pronađeni pojedini predmeti i Brunšmidove skice i bilješke iz kojih nije moguće zaključiti ništa o stratigrafiji ni o kontekstu nalaza.<sup>2</sup> Ipak, Brunšmidove bilješke upućuju na činjenicu kako nalazište nakon neolitika nije bilo trajno naseljavano, zaključujući prema nalazima kasnijih razdoblja, uglavnom iz grobova čije je ukapanje djelomično poremetilo neolitički sloj.<sup>3</sup>

Tu su pretpostavku opravdala prva sustavna istraživanja lokaliteta sredinom 20. stoljeća, kada su tijekom zaštitnih iskopavanja (1956. – 1958.), osim nekropole iz 5. – 6. stoljeća, ustanovljena i 3 stambena horizonta koja pripadaju vinčanskoj kulturi, što je potvrđeno i istraživanjem lokaliteta 2008. godine.<sup>4</sup> U obje istraživačke kampanje otkriveni su nalazi vinčanske košta-

<sup>1</sup> Zahvaljujem dr. sc. Jacqueline Balen iz Arheološkog muzeja u Zagrebu, koja mi je povjerila materijal na obradu, i dr. sc. Seleni Vitezović iz Arheološkog instituta u Beogradu na stručnom savjetu pri analizi predmeta.

<sup>2</sup> Šeper 1952, 25-28.

<sup>3</sup> Šeper 1952, 30.

<sup>4</sup> Јовановић, Глишнћ 1960, 113; Булатовић, Капуран, Стругар 2010, 3.

## INTRODUCTION

The collection of the Archaeological museum in Zagreb includes a large number of bone industry artifacts from the site of Jakovo-Kormadin. This paper brings the results of antler find analysis,<sup>1</sup> finds which make up almost half of the finds of this industry. A typological analysis was conducted, along with a study of production techniques, resulting in a division of the finds into larger groups based on the purpose of their working surface. The large number of antler finds stresses the importance of this raw material for tool production, as do the half-products, i.e. production waste, which also indicates that the artifacts were manufactured at the site.

The site has been known since the beginning of the 20<sup>th</sup> century, when the first non-systematic research was conducted there by local teacher and museum commissioner A. Poturičić, and the then director of the Archaeological museum in Zagreb J. Brunšmid. The only available data about their research refers to plots of land where individual finds were discovered, and includes Brunšmid's sketches and notes, which do not allow for conclusions about stratigraphy or context of the finds.<sup>2</sup> However, Brunšmid's notes, based on finds from later periods, point to the fact that the site was not permanently settled after the Neolithic. These finds mostly originated from graves that partially disturbed the Neolithic layer.<sup>3</sup>

That the site was not settled in later periods was supported by the first systematic research of the site in the mid-20<sup>th</sup> century when rescue excavations (1956-1958) yielded, apart from the 5<sup>th</sup>-6<sup>th</sup> century necropolis, three habitation phases of the Vinča culture, a situation confirmed by research conducted at the site in 2008.<sup>4</sup> Both research campaigns yielded finds of bone industry ascribed to the Vinča culture, and one pit discovered in the last excavations (2008) yielded a lot

<sup>1</sup> I would like to thank Jacqueline Balen, PhD, from the Archaeological museum in Zagreb for allowing me to analyze the material, and Selena Vitezović, PhD, from the Institute of Archaeology in Belgrade for her expert advice about find analysis.

<sup>2</sup> Šeper 1952, 25-28.

<sup>3</sup> Šeper 1952, 30.

<sup>4</sup> Јовановић, Глишнћ 1960, 113; Булатовић, Капуран, Стругар 2010, 3.

ne industrije, a iz posljednjeg istraživanja (2008.) u jednoj od jama otkriven je i velik broj otpadaka od proizvodnje predmeta od roga, što upućuje na postojanje radioničkog mjesta na lokalitetu.<sup>5</sup>

Uzimajući u obzir činjenicu kako je jedina ustanovljena prapovijesna kultura na ovom nalazištu vinčanska, i uz usporedbu materijala koštane industrije iz navedenih sustavnih istraživanja i s ostalih nalazišta vinčanske kulture, analizirani predmeti pripisani su ovoj kulturi premda njihov kontekst nije poznat.

#### TEHNOLOŠKO-TIPOLOŠKA ANALIZA

Tipološko razvrstavanje predmeta okvirno se temelji na sistemu A. Bačkalova,<sup>6</sup> primijenom za klasifikaciju koštanog materijala s prostora Srbije iz razdoblja mezolitika i neolitika. Navedena klasifikacija dodatno je razrađena i nadopunjena tako što su predmeti razvrstani na temelju morfologije i namjene radnog vrha u nekoliko osnovnih grupa, podijeljenih na tipove, podtipove i varijante izdvojene na temelju varijacija u tehnici izrade i upotrijebljene sirovine.<sup>7</sup> Nalazi su prema spomenutim kriterijima razvrstani u pet grupa (tab. 1): na zašiljene predmete (I), predmete za glačanje (II), sječenje (III) i udaranje (IV) te predmete posebne namjene (V) i necjelovite predmete (VIII), dok neutilitarni i ukrasni predmeti izrađeni od roga nisu ustanovljeni unutar ove zbirke. U slučaju ovdje analiziranog materijala, osim prema tehnici izrade, varijacije unutar pojedinog tipa odnose se i na različite dijelove roga od kojih su izrađeni artefakti.

Za izradu alatki upotrebljavani su svi dijelovi roga – baza, stablo roga i parošci, pri čemu se određeni tip alatke izrađuje od segmenta čiji prirodni oblik najbolje odgovara funkciji predmeta. Primjerice, udarači su izrađivani isključivo od parožaka, dok se čekići, odno-

of waste from antler tool production, indicating that there was a workshop at the site.<sup>5</sup>

Considering the fact that the only established prehistoric culture at the site is the Vinča culture, and by comparing bone industry material from the mentioned excavations, the finds analyzed here have been ascribed to the same culture even though their context is unknown.

#### TECHNOLOGICAL AND TYPOLOGICAL ANALYSIS

The typological sorting was mostly done based on A. Bačkalov's system,<sup>6</sup> applied on the classification of bone material from Serbia dated to the Mesolithic and the Neolithic. The said classification was additionally expanded and adapted, and the finds were sorted, based on morphology and the purpose of the working surface, into several basic groups that include types, subtypes, and variants defined by production technique and the raw material used.<sup>7</sup> According to the aforementioned criteria, the finds were divided into five groups (Tab. 1): pointed tools (I), polishing tools (II), cutting tools (III), and striking tools (IV), as well as objects of special use (V) and incomplete objects (VIII). Non-utilitarian and decorative objects were not present in this collection. In the case of the material analyzed here, apart from production technique, variations within certain types refer to different parts of antlers used for tool production.

All parts of the antler were used for tool production – the base, beam, and tine, and certain types of tools were made on the part which best matches the function of the tool by its natural shape. For example, strikers were made exclusively from tines, while hammers, that is, larger tools, were mostly made from the beam because

<sup>5</sup> Булатовић, Капуран, Стругар 2010, 10; Витезовић 2010, 57.

<sup>6</sup> Bačkalov 1979, 31 i dalje.

<sup>7</sup> Vitezović 2007, 61-64; 2011, 67-68, 274.

<sup>5</sup> Булатовић, Капуран, Стругар 2010, 10; Витезовић 2010, 57.

<sup>6</sup> Bačkalov 1979, 31 and on.

<sup>7</sup> Vitezović 2007, 61-64; 2011, 67-68, 274.

GRUPA ZAŠILJENIH PREDMETA/POINTED TOOLS	5
<i>Probojci/Points</i>	12
<i>Harpuni/Harpoons</i>	4
<b>UKUPNO/TOTAL</b>	<b>21</b>
GRUPA PREDMETA ZA SJEČENJE/CUTTING TOOLS	
<i>Dlijeta/Chisels</i>	15
<i>Klinovi/Wedges</i>	10
<i>Sjekire/Axes</i>	29
<b>UKUPNO/TOTAL</b>	<b>54</b>
GRUPA PREDMETA ZA GLAČANJE/POLISHING TOOLS	
<i>Spatule/Polishers</i>	5
<b>UKUPNO/TOTAL</b>	<b>5</b>
GRUPA PREDMETA ZA UDARANJE/STRIKING TOOLS	
<i>Udarač/Strikers</i>	63
<i>Čekić/Hammers</i>	2
<i>Čekići-sjekire/Hammer-axes</i>	10
<i>Pijuci/Picks</i>	15
<b>UKUPNO/TOTAL</b>	<b>90</b>
GRUPA PREDMETA POSEBNE NAMJENE/OBJECTS OF SPECIAL USE	
<i>Drške/Hafts</i>	2
<i>Radne površine/Working surfaces</i>	1
<b>UKUPNO/TOTAL</b>	<b>3</b>
GRUPA NECJELOVITIH PREDMETA/INCOMPLETE OBJECTS	
<i>Fragmentirane alatke/Fragmented tools</i>	13
<i>Poluproizvodi/Half-products</i>	11
<i>Sirovina-otpaci od proizvodnje/Raw material-production waste</i>	20
<b>UKUPNO/TOTAL</b>	<b>44</b>
<b>SVEUKUPNO/GRAND TOTAL</b>	<b>217</b>

Tablica 1: Zastupljenost pojedinih grupa i pripadajućih tipova predmeta iz analizirane zbirke s Jakovo Kormadina / Table 1. The representation of certain groups and corresponding types of objects from the analyzed collection from Jakovo Kormadin



sno veće alatke za udaranje, uglavnom izrađuju od segmenta stabla roga s bazom, čiji je prirodan oblik idealan za radnu površinu ovoga tipa predmeta.

Izrada alatki počinje dijeljenjem roga na komade, primjenjujući jednu ili kombinaciju više tehnika koje uključuju cijepanje, sječenje i lomljenje, pogotovo kada je posrijedi obrada, odnosno dijeljenje većeg komada sirovine.<sup>8</sup> Rad na otpornijem materijalu, poput roga, mogao je biti olakšan tako što je rog ostavljen u vodi nekoliko dana, nakon čega postaje pogodniji za dijeljenje i daljnju obradu.<sup>9</sup>

Pri dijeljenju sirovine na manje segmente, prvo se odstranjuju parošci. Od stabla roga odvajaju se formiranjem žlijeba, što se može izvesti pomoću užeta i nekog abrazivnog sredstva,<sup>10</sup> usijecanjem žlijeba kremenom alatkom ili odbijanjem manjih komada korteksa direktnim udarcem sjekirom,<sup>11</sup> a potom se na mjestu spongioznog tkiva parožak odsječe kamenom sjekirom ili odlomi savijanjem.

Ipak, najčešće primijenjena tehnika odvajanja parožaka primijećena na analiziranome materijalu formiranje je žlijeba ljuštenjem tanjih traka materijala, koja se može smatrati karakterističnom za vinčansku kulturu, ili barem za nalazišta šire okolice Beograda.<sup>12</sup> Tehnike izrade inače predstavljaju vrlo učinkovit kriterij za razlikovanje pojedinih kultura i odnose među njima, pogotovo kad su posrijedi neolitičke koštane industrije, morfološki vrlo homogene, s često kronološki neosjetljivim tipovima alatki.<sup>13</sup> Na taj je način prisutnost spomenute vinčanske tehnike, na većem broju dobro očuvanih primjeraka različitih tipova alatki izrađenih od parožaka, bila važan kriterij za odredbu ove industrije kao vinčanske.

<sup>8</sup> Vitezović 2011, 269.

<sup>9</sup> Schibler 2013, 346.

<sup>10</sup> Schibler 2013, 346.

<sup>11</sup> Billamboz 1977, 100-101; Maigrot 2005, 122.

<sup>12</sup> Витезовић 2010, 54.

<sup>13</sup> Legrand, Sidéra 2007, 67.

its natural shape is ideal for the working surface of this type of tool.

Tool production starts by dividing the antler into pieces by applying one or a combination of several techniques including chopping, cutting, and breaking, especially when it comes to processing a larger piece of raw material.<sup>8</sup> Working with a more resistant material like antler could have been made easier by leaving the antler to soak in water for several days, after which it is easier to split and process.<sup>9</sup>

When the raw material is split into smaller segments, the tine is the first part that is removed. It is removed from the beam by forming gauges with the help of a rope and some abrasive compound,<sup>10</sup> cutting a gauge by using a stone tool, or by chopping off smaller pieces of cortex by direct hits with an axe,<sup>11</sup> after which the tine is cut off with a stone axe or broken off by bending at the point where spongy tissue appears.

However, the most frequently applied technique for separating tines when it comes to the studied material is the forming of gauges by peeling off thin strips of material, a technique characteristic of the Vinča culture, or at least for the sites in the wider Belgrade area.<sup>12</sup> Generally, production techniques are a very efficient criterion for differentiating between individual cultures and their inter-relations, especially when it comes to Neolithic bone industries, which are morphologically very homogenous and often display tool types that do not change over time.<sup>13</sup> Along these lines, the presence of the aforementioned Vinča technique on a large number of well-preserved finds of different types of tools was an important criterion for attributing this industry to the Vinča culture.

Apart from tines, tools could have been shaped from segments of antler beams obtained by longitudinal splitting<sup>14</sup> of raw material by applying an indirect hit using a wedge. Objects made out of antler cortex fragments were obtained by in-

<sup>8</sup> Vitezović 2011, 269.

<sup>9</sup> Schibler 2013, 346.

<sup>10</sup> Schibler 2013, 346.

<sup>11</sup> Billamboz 1977, 100-101; Maigrot 2005, 122.

<sup>12</sup> Витезовић 2010, 54.

<sup>13</sup> Legrand, Sidéra 2007, 67.

<sup>14</sup> Vitezović 2011, 296.

Osim od parožaka, alatke su mogle biti oblikovane i od segmenata stabla roga dobivenih uzdužnim cijepanjem<sup>14</sup> komada sirovine indirektnim udarcem klina na obrađivani komad. Predmeti izrađeni od fragmenata korteksa roga dobiveni su usijecanjem dvaju paralelnih žljebova, nakon čega se klinom (*groove-and-splinter-technique*) izdvoje pločice materijala koje se dalje obrađuju.<sup>15</sup> Pojedini su nalazi mogli biti izrađeni i od otpadaka proizvodnje ili popravka alatke, što je ustanovljeno za neke primjerke iz analizirane zbirke predmeta. U ovome slučaju riječ je o jednoj varijanti dlijeta malih dimenzija, izrađenih od korteksa jelenjeg roga. Drugi takav primjer odnosi se na jedan nalaz spatule izrađene od vrha paroška jelenjeg roga koji vjerojatno potječe od popravka alatke.

Tako dobiveni poluproizvodi daljnjom se obradom, odnosno formiranjem radne površine, oblikuju u željeni tip alatke. Distalni je kraj oblikovan kosim zasijecanjem ili ljuštenjem traka materijala kod alatki izrađenih od parožaka, odnosno tako što se koso odsječe veći komad stabla roga. U oba slučaja, kao i kod segmenata dobivenih uzdužnim cijepanjem, radna površina i rubovi alatke mogli su biti dodatno obrađeni sječenjem manjih komada materijala i struganjem.<sup>16</sup> Struganje se ponekad primjenjuje i kako bi se odstranile prirodne neravnine roga na površini predmeta ili kako bi se uklonila manja oštećenja.<sup>17</sup>

Izrada perforacija predstavlja završnu obradu predmeta. Perforacije, relativno pravilnog kružnog oblika, obično su izvedene zasijecanjem korteksa kremenom alatkom kako bi se došlo do spongioznog tkiva koje se potom izdubljuje.<sup>18</sup> Pri bazi jednog nalaza udarača vidljiv je početak izrade perforacije zasijecanjem korteksa (T. 2: P-16857.63; sl. 1), dok je na drugoj strani započeto i dubljenje, a identičan postupak prisutan je i na jednom nalazu pijuka koji potječe iz istraživanja Jakovo – Kormadina 2008. godine.<sup>19</sup>

<sup>14</sup> Vitezović 2011, 296.

<sup>15</sup> Billamboz 1977, 102.

<sup>16</sup> Beldiman 2005, 38-39.

<sup>17</sup> Billamboz 1977, 102-103.

<sup>18</sup> Beldiman 2005, 40.

<sup>19</sup> Витезовић 2010, 55, sl. 12 a, b.

cising two parallel gauges, after which a wedge (*groove-and-splinter-technique*) was used to separate plates of material, which were additionally processed.<sup>15</sup> Individual finds could have been made from production waste, or by fixing other tools, as was determined for some specimens from the analyzed collection. In this case, we are dealing with a chisel variant made out of red deer antler cortex, and a polisher made out of the tip of red deer tine which could possibly be a by-product of fixing another tool.

Half-products obtained in this way were shaped into desired tool types by further processing, i.e. by forming the working surface. The distal end was shaped by slanted incisions or by peeling off strips of material on tools made from tine, that is, by diagonal cutting from larger pieces of antler beams. In both cases, as well as with segments obtained by longitudinal splitting, the working surface and edges of tools could be additionally processed by cutting off small pieces of material and by scraping.<sup>16</sup> Scraping is sometimes applied to remove antler unevenness on the surface of the object, or to remove smaller defects.<sup>17</sup>

Perforations are the final part of processing an object. Perforations that have a relatively regular circular shape are usually made by cutting the cortex with a stone tool in order to reach the spongy tissue which is then hollowed out.<sup>18</sup> The base of one striker displays the beginning of making a perforation by cutting the cortex (Pl. 2: P-16857.63; Fig. 1), while its other side displays some hollowing. An identical process is also visible on a pick from the 2008 excavations conducted at Jakovo-Kormadin.<sup>19</sup>

<sup>15</sup> Billamboz 1977, 102.

<sup>16</sup> Beldiman 2005, 38-39.

<sup>17</sup> Billamboz 1977, 102-103.

<sup>18</sup> Beldiman 2005, 40.

<sup>19</sup> Витезовић 2010, 55, Fig. 12 a, b.



Slika / Figure 1: Detalj udarača sa započetom perforacijom / Detailed view of a striker with the beginning of a perforation P-16857.63 (snimio/ photo by I. Krajcar).

### Grupa zašiljenih predmeta (I)

U grupu zašiljenih predmeta svrstane su alatke sa šiljastim radnim vrhom, čija je osnovna namjena bušenje, odnosno probijanje materijala.<sup>20</sup> Pojedini tipovi ove grupe, poput harpuna, služili su kao oružje za lov i ribolov.

*Probojci (I 2).* Probojci su alatke s jačim, masivnim šiljkom na distalnom dijelu, upotrebljavane za rad na otpornijim materijalima, poput drva ili roga.<sup>21</sup> Iz zbirke potječe dvanaest nalaza koji su određeni kao ovaj tip alatke. Svi su primjerci izrađeni od parožaka od kojih su tri od roga srndaća, a ostali od parožaka jelenjih rogova (T. 3: P-16857.8) većih dimenzija (dužine 18 do 24 cm). Na bazi bolje očuvanih primjeraka jasno je vidljiva primjena karakteristične vinčanske tehnike – odstranjivanje parožaka od ostatka roga uzdužnim ljuštenjem traka materijala. Kao tragovi upotrebe prisutna su manja oštećenja na radnom vrhu, ali i uglačanost, izraženija pri distalnom kraju alatke.

<sup>20</sup> Vitezović 2007, 65.

<sup>21</sup> Vitezović 2011, 284.

### Pointed tools (I)

The group of pointed tools includes tools with a pointed working edge, which were primarily used for drilling, that is, puncturing material.<sup>20</sup> Specific types in this group, like harpoons, were used as hunting and fishing tools.

*Points (I 2).* Points are tools with a stronger, massive point at the distal end, used to work on more resilient materials like wood or antler.<sup>21</sup> The collection includes twelve finds which were shaped into this type of tool. All finds are made of tines, three of them from roe deer, and the rest from larger pieces (18 to 24 cm in length) of red deer tines (Pl. 3: P-16857.8). The base of better-preserved specimens clearly displays the application of typical Vinča technique – removing the tine from the rest of the antler by longitudinally peeling strips of material. Traces of use include small damage on the working edge, as well as smoothness which is more visible on the distal part of tools.

*Harpoons (I 7).* The collection includes four finds of this type which appear in two variants – conical and single-row harpoons. Single-row harpoons (Fig. 2) are made out of segments of antler beams. Triangular teeth are made on one side by cutting and scraping, and their purpose is to keep the harpoon in the body of the prey.<sup>22</sup> The entire surface of these finds is intensively polished, especially at the distal end of the tool, which, on one find, also displays densely spaced transverse wedges.

Conical harpoons are made of tines, and their pointed tip is additionally shaped by scraping and polishing, while a perforation is present on both sides so that the tool could be tied to a haft using rope.<sup>23</sup> The base of these objects can be serrated (Pl. 1: P-16877) or diagonally cut in order to form a protrusion that has the same function as the teeth on single-row harpoons.

<sup>20</sup> Vitezović 2007, 65.

<sup>21</sup> Vitezović 2011, 284.

<sup>22</sup> Bačkalov 1979, 35.

<sup>23</sup> Vitezović 2011, 294.

*Harpuni (I 7).* U zbirci su prisutna četiri nalaza ovog tipa koji se pojavljuju u dvije varijante – konusni i jednoredni harpuni. Jednoredni harpuni (sl. 2) izrađuju se od segmenta stabla roga. Na jednoj se strani zasijecanjem i struganjem oblikuju trokutasti zupci čija je svrha zadržati harpun u tijelu lovine.<sup>22</sup> Cijela je površina ovih predmeta intenzivno uglačana, najizraženije pri distalnom kraju alatke, gdje su na jednom primjerku uočene i gusto raspoređene poprečne linije.

Konusni harpuni izrađeni su od parožaka, a struganjem i glačanjem dodatno se oblikuje zašiljeni vrh, dok je perforacija izvedena s obje strane alatke služila kako bi se užetom mogli privezati za dršku.<sup>23</sup> Baza je kod ovih predmeta mogla biti nazubljena (T. 1: P-16877) ili koso odsječena kako bi se formirao jezičac, a ima istu funkciju kao i zupci jednorednih harpuna.

Oba su primjerka ove varijante iz zbirke gotovo identična onima pronađenima na Vinči.<sup>24</sup> Iako se ovaj tip nalaza najčešće određuje kao alatka za ribolov, konusni harpuni također su mogli biti upotrebljavani i za lov na veće, kopnene životinje.<sup>25</sup> Navedeni su primjerci zasad jedini nalazi ovog tipa alatke s lokaliteta Jakovo – Kormadin.

U ovu su grupu uvršteni i nalazi određeni samo kao zašiljeni predmeti, bez bližeg svrstavanja u određeni tip. Riječ je o *ad hoc* predmetima, izrađenima od čitavih rogova srndaća, čiji su vrhovi parožaka obrađeni odstranjivanjem manjih komada materijala kako bi se dobila veća oštrina šiljka. Tragovi upotrebe na ovim predmetima prisutni su na distalnom kraju alatke u vidu uglačanosti i manjih oštećenja na samome radnom vrhu.

<sup>22</sup> Bačkalov 1979, 35.

<sup>23</sup> Vitezović 2011, 294.

<sup>24</sup> Срејовић, Јовановић 1958-59, 185; sl. 12: 1, 4.

<sup>25</sup> Bačkalov 1979, 29.



Slika / Figure 2: Jednoredni harpun / Single-row harpoon (P-16812.1) (snimio / photo by: I. Krajcar).

Both specimens of this variant from the collection are almost identical to those found at Vinča.<sup>24</sup> Although this type of find is most often defined as a fishing tool, conical harpoons could also have been used for hunting larger land animals.<sup>25</sup> The described specimens are the only finds of this type from Jakovo-Kormadin to date.

This group also includes finds defined only as pointed tools, and which could not be definitively ascribed to certain types. These are *ad hoc* objects made out of entire roe deer antler, on which the tines were processed by removing smaller pieces of material in order to get a more pointed tip. Traces of use in these finds are visible on the distal ends of tools in the sense of smoothing and smaller damage on the tip of the working point.

<sup>24</sup> Срејовић, Јовановић 1958-59, 185; Fig. 12: 1, 4.

<sup>25</sup> Bačkalov 1979, 29.





Slika/ Figure 4: Detalj klina / Detailed view of wedge P-16858.28 (snimio / photo by I. Krajcar).

Slika/ Figure 3: Detalj radnog vrha dlijeta / Detailed view of the working point of chisel P-16858.38 (snimio / photo by I. Krajcar).

## Grupa predmeta za sječenje (II)

Zajednička je karakteristika predmeta ove grupe oštar radni rub na distalnom kraju koji služi rascjepljivanju ili sječenju sirovine. Grupi pripadaju alatke koje su se uglavnom koristile u obradi drva, ali i drugih materijala, poput kosti i roga.<sup>26</sup>

*Dlijeta (II 1).* Ovisno o tome pod kojim kutem se zadaje udarac, dlijeta su kao alatka-posrednik služila za rascjepljivanje ili ljuštenje tanjih traka materijala.<sup>27</sup> Zbirka broji petnaest nalaza ovog tipa, a razlikuju se tri varijante. Dlijeta izrađena od fragmenta korteksa roga (T. 1: P-16878.3) oblikom i dimenzijama podsjećaju na primjerke ovog tipa od glačanog kamena, a mogla su biti oblikovana iz pločica izdvojenih žlijebljenjem ili od manjih otpadaka proizvodnje. Baza je kod ovih primjeraka zaobljena, a kako na tom dijelu nisu primijećeni tragovi istrošenosti od udaranja, moguće je da su ovi predmeti bili uglavljeni u dršku.

<sup>26</sup> Vitezović 2011, 295-299.

<sup>27</sup> Vitezović 2011, 295.

## Cutting tools (II)

The common characteristic of this group of tools is a sharp working edge on the distal part which was used for splitting or cutting raw material. The group includes tools which were primarily used to process wood, but also other materials like bone and antler.<sup>26</sup>

*Chisels (II 1).* Depending on the angle of striking, chisels were used as mediator-tools for splitting or peeling thin strips of material.<sup>27</sup> The collection includes fifteen finds of this type, which appear in three variants. Chisels made from antler cortex fragments (Pl. 1: P-16878.3) have dimensions and shape reminiscent of this type made out of polished stone, and could have been formed on plates obtained by gauging, or on smaller pieces of production waste. These finds have a rounded base, and, since no traces of wear from hitting are visible, it is possible that these objects were hafted.

<sup>26</sup> Vitezović 2011, 295-299.

<sup>27</sup> Vitezović 2011, 295.

Na jednome nalazu (T. 1: P-16858.38), izrađenom od paroška, distalni je kraj stanjen ljuštenjem traka materijala (sl. 3), dužine 2 – 3 cm, kako bi se formirala radna površina dlijeta, dok je na ostalim primjercima oštrica dobivena kosim zasijecanjem vrha paroška kako bi se dobio ravan radni rub. Za izradu ove varijante korišteni su parošci manjih dimenzija.

Varijanta izrađena od segmenta stabla roga dobivena je uzdužnim cijepanjem ili kosim zasijecanjem distalnog kraja manjeg stabla. Na distalnom dijelu nalazi se blago ovalna oštrica s jasnim tragovima obrade i upotrebe, dok je spongiozno tkivo pri radnoj površini izdubljeno, kao što je slučaj s jednim nalazom dlijeta koje je primarno vjerojatno služilo kao sjekira (T. 2: P-16867.10).

*Klinovi (II 2).* Svih deset nalaza ovog tipa izrađeno je od parožaka na čijem je distalnom kraju s obje strane ukoso odstranjen manji komad materijala kako bi se dobio oštar radni rub. Glavna je funkcija ovog tipa bila rascjepljivanje materijala, i to slično dlijetu, kao alatka-posrednik između komada sirovine koji se obrađuje i alata kojim se preko klina zadaje udarac.<sup>28</sup> Na jednome su nalazu (T. 1: P-16858.28) jasno vidljivi tragovi upotrebe u vidu naglašene uglačanosti distalnog kraja i gusto raspoređenih tankih linija na radnom rubu alatke (sl. 4), a jedan takav primjerak ustanovljen je prilikom istraživanja lokaliteta Jakovo – Kormadin 2008. godine.<sup>29</sup>

*Sjekire (II 3).* Sjekire su masivne alatke, većih dimenzija, izrađene od segmenta stabla roga najčešće tako što se na jednom dijelu stablo koso zasječe kako bi se dobila radna površina, dok se bliže bazi alatke formira perforacija za nasad drške.<sup>30</sup> Ovaj je tip prvenstveno upotrebljavan za obradu drva, no mogao je služiti i kao poljoprivredna alatka.<sup>31</sup> Nalazi sjekira poznati su i iz sustavnih istraživanja ovog nalazišta,<sup>32</sup> a u zbirci se nalazi dvadeset i devet predmeta ovog tipa. Ustanovljeno je više varijanti, ovisno o na-

<sup>28</sup> Vitezović 2011, 296.

<sup>29</sup> Витезовић 2010, 48.

<sup>30</sup> Vitezović 2007, 72.

<sup>31</sup> Vitezović 2011, 299.

<sup>32</sup> Perišić 1984, 46, T.24: 167; Витезовић 2010, 47-48.

One find (Pl. 1: P-16858.38) made on a tine has a distal end thinned by peeling off strips of material (Fig. 3), measuring 2-3 cm, which was done in order to form the working surface of the chisel. On other finds, the blade was made by diagonal cutting of the tine tip in order to obtain a straight working edge. Smaller tine pieces were used to make this variant.

The variant made of antler beam segments was obtained by longitudinal splitting or diagonal cutting of the distal end of smaller beams. The distal end has a slightly oval blade with clearly visible traces of processing and use, and the spongy tissue near the working surface was hollowed out, as is the case with one chisel that was probably primarily used as an axe (Pl. 2: P-16867.10).

*Wedges (II 2).* All ten finds of this type are made out of tines where smaller pieces of material were diagonally cut off at the distal end in order to obtain a sharp working edge. The main function of this type was to split material, similarly as chisels, as a mediator-tool between the raw material being processed and the tool used to strike the wedge.<sup>28</sup> One find (Pl. 1: P-16858.28) has clearly visible traces of use in the form of highlighted smoothing on the distal end and densely spaced thin lines on the working edge of the tool (Fig. 4), and one such find was unearthed in the 2008 excavations conducted at Jakovo-Kormadin.<sup>29</sup>

*Axes (II 3).* Axes are massive tools of larger dimensions made out of antler beam segments, most often by slanted cuts on one part of the beam made in order to obtain a working surface, and by forming a perforation for hafting closer to the base of the tool.<sup>30</sup> This type of tool was primarily used to process wood, but could also have been used as an agricultural tool.<sup>31</sup> Axes were found in systematic excavations at the site as well,<sup>32</sup> and this collection includes twenty-nine objects of this type. Several variants were defined based on the mode of production and the shape of the working surface, although the

<sup>28</sup> Vitezović 2011, 296.

<sup>29</sup> Витезовић 2010, 48.

<sup>30</sup> Vitezović 2007, 72.

<sup>31</sup> Vitezović 2011, 299.

<sup>32</sup> Perišić 1984, 46, T.24: 167; Витезовић 2010, 47-48.



Slika / Figure 5: Sjekira (P-16859.17) s dodatnom, započetom perforacijom / An axe (P-16859.17) with the beginning of an additional perforation (sninio/ photo by: I. Krajcar).

činu izrade i obliku radne površine, iako je oblik distalnog kraja djelomično mogao biti i rezultat upotrebe alatke.<sup>33</sup>

Jedna od varijanti izrađena je od uzdužno rascijepljenog stabla roga, s ravnom (T. 2: P-16881.1) ili zaobljenom oštricom na distalnom kraju, koja je kod nekih primjeraka veće širine i nepravilnijeg oblika (T. 4: P-16815.1). Spongiozno je tkivo kod ove varijante često u potpunosti izdubljeno pa su predmeti konkavnog presjeka.

Sjekire izrađene od koso zasječnog stabla roga imaju blago zaobljen (T. 4: P-16859.6) ili ovalan distalni kraj. Na bazi predmeta očuvani su tragovi odvajanja od ostatka roga, odnosno odstranjivanja paroška kod varijante s bazom od račvastog dijela stabla (T. 5: P-16859.18). Nalazi ove varijante, određeni kao motike, poznati su i s Vinče.<sup>34</sup>

Kod gotovo svih primjeraka perforacije se nalaze na proksimalnom dijelu alatke, promjera su 2,5 – 3 cm, izvedene kremenom alatkom. Samo na jednom nalazu veća rupa za nasad drške smještena je na središnjem dijelu alatke, kraj koje je započeta jedna manjeg promjera (sl. 5), a takve su dodatne perforacije bile izvedene kako bi se drška mogla bolje učvrstiti užetom.<sup>35</sup>

<sup>33</sup> Van Gijn 2007, 85: Eksperimenti su pokazali da obrada drva, osim što ostavlja izražene tragove uglačanosti, dodatno zaobljuje distalni kraj kod ovog tipa alatke.

<sup>34</sup> Bačkalov 1979, 29, T.XXXI: 8.

<sup>35</sup> Beldiman 2005, 40.

shape of the distal end could partially be the result of using the tool.<sup>33</sup>

One of the variants is made from a longitudinally split antler beam with a straight (Pl. 2: P-16881.1) or a rounded blade on the distal end, which is wider and more irregular in shape on some finds (Pl. 4: P-16815.1). The spongy tissue in this variant is often completely hollowed out so the finds have a concave cross-section.

Axes made out of diagonally cut antler beam have a slightly curved (Pl. 4: P-16859.6) or oval distal end. The bases of these finds display traces of separation from the rest of the antler, that is, traces of removing tines in the variant with a base made on the forked part of the beam (Pl. 5: P-16859.18). Finds of this variant, defined as hoes, were also found at Vinča.<sup>34</sup>

Almost all specimens have perforations, measuring 2.5-3 cm in diameter, made with stone tools on the proximal part of the tool. Only one find has a larger hole for hafting on the central part, with the beginning of a smaller hole next to it (Fig. 5). Such additional perforations could have been made to better secure the haft with rope.<sup>35</sup>

<sup>33</sup> van Gijn 2007, 85. Experiments have shown that wood processing, apart from leaving behind notable polishing marks, also additionally curves the distal end of this type of tool.

<sup>34</sup> Bačkalov 1979, 29, T. XXXI: 8.

<sup>35</sup> Beldiman 2005, 40.





Slika / Figure 6: Spatula / Polisher (P-16874.13) izrađena od vrha paroška jelenjeg roga/ made out of the tip of red deer antler (snimio / photo by: I. Krajcar).



Slika / Figure 7: Varijanta spatule / Polisher variant (P-16867.7) od uzdužno rascijepljenog stabla jelenjeg roga / on a longitudinally split beam of red deer antler (snimio / photo by: I. Krajcar).

### Grupa predmeta za glačanje (III)

Ukupno pet predmeta određenih kao spatule pripada ovoj grupi koja je prema broju nalaza jedna je od manje zastupljenih unutar zbirke. Ovaj je tip predmeta uglavnom upotrebljavan za obradu organskih materijala, ali i gline, odnosno korišten je i u izradi keramičkih predmeta.<sup>36</sup>

*Spatule (III 1 C).* Jedan je nalaz ovog tipa izrađen od koso odsječnog vrha paroška (sl. 6), manjih je dimenzija (dužine 5,6 cm), izduženo ovalnog oblika. Vrh paroška, koji čini bazu alatke, dosta je istrošen, a prisutna su i oštećenja poput dubljih usjeka, pa je moguće da je vrh bio odstranjen radi popravka alatke te je potom poslužio kao spatula. Na radnom rubu uočena su sitna oštećenja, a spongiozno je tkivo na unutrašnjoj površini većim dijelom istrošeno, što upućuje na intenzivnu upotrebu ovog predmeta. Na gornjoj površini, bliže bazi alatke, sljuštena je jedna tanja traka materijala, možda kako bi se lakše rukovalo predmetom.

Druga je varijanta spatula izrađena od uzdužno rascijepljenog stabla roga (sl. 7), konkavnog je presjeka, s ovalnim ili ravnim radnim rubom na distalnom kraju. Proksimalni je kraj ravno odsječen, dodatno obra-

<sup>36</sup> Vitezović 2007, 73.

### Polishing tools (III)

This group has a total of five finds defined as polishers, making it one of the groups with the least specimens in the studied collection. This type of object was mostly used to process organic material, but also clay, i.e. it was used in pottery production as well.<sup>36</sup>

*Polishers (III 1 C).* One of the finds of this type is made on a diagonally cut tip of a tine (Fig. 6), is smaller in size (5.6 cm in length), and has an oval shape. The tip of the tine which is the base of the tool is quite worn, and there is damage in the sense of deeper cuts, so it is possible that the tip was removed in order to fix the tool and was subsequently used as a polisher. Small-scale damage is also present on the working edge, and the spongy tissue on the inner surface is mostly worn away, which points to the intensive use of this object. One thinner strip of material was peeled off on the upper surface, closer to the base of the tool, possibly to make handling the tool easier.

The second variant of polishers is made out of longitudinally split antler beams (Fig. 7), and has a concave shape with an oval or straight working edge on the distal end. The proximal end is cut off straight, and is additionally processed by scraping and polishing, which is also visible on the lateral edges of the tool. Apart from the dis-

<sup>36</sup> Vitezović 2007, 73.



đen struganjem i glačanjem, što je primijećeno i na lateralnim rubovima alatke. Osim distalnog kraja, radna površina kod ovog tipa predmeta uključuje veći dio unutrašnje površine alatke, gdje je spongiozno tkivo gotovo u potpunosti istrošeno od upotrebe. Tragovi upotrebe prisutni na radnoj površini i rubovima presjeka, u vidu uglačanosti i okomitih linija, ukazuju na obradu organskog materijala, i to vjerojatno kože.<sup>37</sup> Na jednom je primjerku vidljivo kako je baza predmeta oblikovana na mjestu nekadašnje perforacije pa je moguće da je alatka primarno služila kao sjekira, a nakon oštećenja prenamijenjena je u spatulu.

Slični su nalazi ovog tipa pronađeni i na Vinči, a za pojedine nalaze s izduženim i oštrijim distalnim krajem napominje se kako su mogli služiti i kao dlijeta,<sup>38</sup> što je slučaj i s jednim primjerkom iz zbirke.

#### Grupa predmeta za udaranje (IV)

Predmeti ove grupe upotrebljavani su za obradu sirovine udarcem. U zbirci su, prema funkcionalnoj podjeli unutar ove grupe, ustanovljene manje (udarači) i jače (čekići) alatke za udaranje te pijuci i kombinirane alatke (čekići-sjekire), često s otvorom za uglavljivanje alatke od nekog drugog materijala.<sup>39</sup>

*Udarači (IV 1).* Udarači su najbrojniji tip ove grupe, a sva šezdeset i tri primjerka izrađena su od parožaka jelenjeg roga. Dimenzije variraju od 5 cm kod udarača izrađenih od vrhova parožaka (T. 1: P-16858.22) do 17 cm kod većih primjeraka (T. 1: P-16858.47). Na distalnom kraju alatke nalazi se manja kružna ili ovalna radna površina, ali radni vrh alatke može biti i dodatno obrađen, što je slučaj i s dijelom nalaza iz zbirke (T. 2: P-16857.63). Iako se možda radi o oštećenim predmetima ili o odstranjivanju materijala radi popravka alatke, distalni kraj mogao je biti i namjerno odsječen kako bi

tal end, the working surface of this type of object includes a larger portion of the inside surface of the tool, where the spongy tissue is almost completely worn from use. Traces of use are visible on the working surface and on the edges of the cross-section, appear as smoothing and perpendicular wedges, and point to organic material processing, probably leather.<sup>37</sup> The base of one specimen was formed in the place of a former perforation, so it is possible that the tool was primarily used as an axe and was turned into a polisher after it was damaged.

Similar finds of this type were found at Vinča, and it is suggested certain finds with an elongated and sharper distal end could have been used as chisels,<sup>38</sup> which is also the case with one find from the collection.

#### Striking tools (IV)

Objects in this group were used to process raw material by striking. Based on a functional division within this group, the collection includes smaller (strikers) and stronger (hammers) striking tools, as well as picks and combined tools (hammer-axes), often with an opening for a haft made out of other materials.<sup>39</sup>

*Strikers (IV 1).* Strikers are the most numerous type in this group, and all sixty three finds are made out of red deer tines. Their dimensions vary from 5 cm in strikers made out of tine tips (Pl. 1: P-16858.22) to 17 cm in larger specimens (Pl. 1: P-16858.47). The distal end of these tools has a smaller circular or oval working surface, but the working tip of the tool can be additionally processed, as is the case with some finds from the collection (Pl. 2: P-16857.63). Although these are damaged finds or finds from which material was removed to fix the tool, the distal end could have been purposefully cut off to expose the spongy tissue.<sup>40</sup> Strikers processed in this way could have been used as some type of

<sup>37</sup> Van Gijn 2005, 56.

<sup>38</sup> Срејовић, Јовановић 1958-59, 185; sl. 6: 1, 2.

<sup>39</sup> Vitezović 2011, 308.

<sup>37</sup> van Gijn 2005, 56.

<sup>38</sup> Срејовић, Јовановић 1958-59, 185, Fig. 6: 1, 2.

<sup>39</sup> Vitezović 2011, 308.

<sup>40</sup> Vitezović 2011, 309.

spongiozno tkivo postalo izloženo.<sup>40</sup> Tako su obrađeni udarači mogli služiti kao neka vrsta tučka, za mljevenje pigmenta ili pripremu hrane, premda je ovaj tip predmeta upotrebljavan i za obradu otpornijih materijala, poput drva.<sup>41</sup>

Na distalnom kraju kod ovog tipa alatke vidljiva su sitna oštećenja i usjeci, a prisutna je i uglacanost koja se često proteže gotovo cijelom površinom predmeta. Osim uzdužnog ljuštenja traka materijala, druga najčešće primijenjena tehnika za odvajanje paroška od ostatka roga je cijepanje manjih, nepravilnih komada korteksa (T. 1: P-16857.59), a parožak je zatim odsječen ili prelomljen na mjestu spongioznog tkiva.

Čekići (IV 3). U ovu su grupu uvrštena dva fragmentirana primjerka, izrađena od stabla roga, slomljena na mjestu perforacije. Na očuvanom dijelu nalazi se radna površina čekića, no nije moguće zaključiti je li se i na dijelu koji nedostaje mogla nalaziti aktivna radna površina.

Unutar ovog tipa izdvojen je podtip kombiniranih alatki – čekića-sjekira, kojem pripada deset nalaza ove zbirke. Čekići-sjekire (T. 2: P-16860.3) izgledom podsjećaju na alatke ovog tipa od glačanog kamena, a sličnost nije samo u formi predmeta već i u načinu obrade materijala. Prirodne su neravnine roga uklonjene struganjem, a čitava je površina predmeta dodatno obrađena intenzivnim glačanjem do visokog sjaja. Izrađeni su od segmenta stabla bliže bazi roga, a na mjestu odstranjenog paroška izvedena je perforacija okomito na os alatke, promjera 2,5 – 3 cm, fino uglacane unutrašnjosti. Na jednom kraju alatke nalazi se ravna ili zaobljena radna površina čekića, konkavna i s dubljim usjecima od upotrebe (sl. 8). Stablo roga na suprotnom je kraju koso zasječeno, no kod pojedinih nalaza nije formirana oštrica kakva se nalazi kod sjekira, već je oblikovan usjek, a spongiozno je tkivo izdubljeno vjerojatno kako bi se uglavila manja kamena sjekira ili dljeteto. Slični nalazi ovog tipa poznati su i s Vinča.<sup>42</sup>

<sup>40</sup> Vitezović 2011, 309.

<sup>41</sup> Vitezović 2010, 49.

<sup>42</sup> Срејовић, Јовановић 1958-59, 186-187; sl. 14: 2.

pestle for grinding pigment or food preparation, but this type of tool was also used to process more resilient materials like wood.<sup>41</sup>

The distal end of this type of tool displays tiny damage and cuts as well as smoothness, which often spreads across the entire surface of the object. Apart from longitudinal peeling of strips of material, the second most frequently used technique for separating the tine from the rest of the antler is splitting off smaller irregular pieces of cortex (Pl. 1: P-16857.59), after which the tine gets cut or broken off where the spongy tissue appears.

*Hammers (IV 3).* This group includes two fragmented finds made out of antler beams, broken at the perforation. The preserved part includes the working surface of the hammer, but it is impossible to conclude if such an active working surface was present on the missing part of the tool.

A sub-type of combined tools was defined within this type - hammer-axes, which includes ten finds from this collection. Hammer-axes (Pl. 2: P-16860.3) visually resemble tools of this type made out of polished stone, and the similarities are not reflected only in form, but also in the way the material was processed. The natural imperfections were removed from the antler by scraping, and the entire surface of the find was additionally worked by intensive polishing until it obtained a glossy shine. These finds were made from segments of antler closer to the base, and the place where the tine was cut contains a perforation perpendicular to the axis of the tool, measuring 2.5-3 cm in diameter with a highly polished inner surface. One end of the hammer has a straight or curved working surface which became concave with deeper incisions from use (Fig. 8). The opposite side of the antler beam was diagonally cut, but some of the finds do not have a formed blade which can be seen on axes, and the cut forms a notch instead. The spongy tissue was then taken out, probably in order to insert a smaller stone axe or chisel. Similar finds of this type were defined at Vinča.<sup>42</sup>

<sup>41</sup> Витезовић 2010, 49.

<sup>42</sup> Срејовић, Јовановић 1958-59, 186-187, Fig. 14: 2.



Slika / Figure 8: Detalj radne površine čekića-sjekire / Detailed view of the working surface of hammer-axe P-16860.3 (snimio / photo by: I. Krajcar).

Tri nalaza izrađena su od većeg stabla roga s bazom (T. 3: P-16859.1, P-16859.15), blizu koje je smještena i perforacija za nasad drške. Na jednom kraju alatke kosim je zasjećanjem stabla oblikovana oštrica sjekire, dok je na suprotnom kraju prirodan oblik baze roga poslužio kao radna površina za čekić.<sup>43</sup> Tragovi obrade i upotrebe, na dijelu predmeta koji je korišten kao sjekira, isti su kao i kod primjeraka koji pripadaju tom tipu alatke. Na bazi predmeta, koja je služila kao čekić, uočeni su različiti tragovi upotrebe, poput sitnih oštećenja i usjeka, te mjestimična udubljenja od istrošenosti površine.<sup>44</sup> Jedan ovakav primjerak poznat je i s Banjice iako se ne napominje upotreba kao alatke za udaranje, već je određen samo kao sjekira.<sup>45</sup>

*Pijuci (IV 4).* Iako bi se pijuci prema obliku radnog vrha, koji čini jak šiljak, mogli svrstati u grupu zašiljenih predmeta, zbog načina na koji su upotrebljavani, smješteni su u ovu grupu.<sup>46</sup> Ovaj tip mogao se koristiti kao zemljoradnička ili rudarska alatka. Izrađuju se od većih, čeonih parožaka jelenjih rogova koji imaju prirodnu zakrivljenost (T. 5: P-16857.45), a koja služi kako bi se dobio veći zamah prilikom udarca.<sup>47</sup>

<sup>43</sup> Averbough, Bodu 2002, 119.

<sup>44</sup> Averbough, Bodu 2002, 121.

<sup>45</sup> Perišić 1984, 46, T.24: 169.

<sup>46</sup> Vitezović 2011, 314.

<sup>47</sup> Vitezović 2011, 314.

Three finds are made out of larger antler beams with a base (Pl. 3: P-16859.1, P-16859.15) which is close to the perforation made for hafting. The axe blade was formed on one end of the tool by diagonal cutting, and, on the opposite side, the natural shape of the base was used as the working surface of a hammer.<sup>43</sup> Traces of processing and use on the part of the find which was used as an axe are the same as those on the finds ascribed to that type of tool. The base of the object which was used as a hammer displays different traces of use like tiny damage and notches, as well as some indentations from surface wear.<sup>44</sup> One such find was recovered at Banjica, although there is no mention of it being used as a striking tool, but rather only as an axe.<sup>45</sup>

*Picks (IV 4).* Although the shape of the working point, a strong point, could be the basis for defining these finds as pointed tools, the way they were used made us define them as part of this group of objects.<sup>46</sup> This type could have been used as an agricultural or mining tool. Picks are made from larger, frontal tines of red deer antlers which have a natural curvature (Pl. 5: P-16857.45), which is used to obtain a stronger swing while striking.<sup>47</sup>

Traces of use include high polishing on the distal end of the tool, and the presence of wear on the working point which clearly exposes the spongy tissue. The collection includes fifteen picks, and finds of this type were recovered in the systematic excavation carried out at Jakovo-Kormadin and other Vinča culture sites – Banjica and Crkvina in Stubline.<sup>48</sup> The base of said finds displays clearly visible traces of techniques ascribed to the Vinča culture, which were used to remove them from the rest of the antler, and the same technique was noted on the well-preserved picks from this collection.

<sup>43</sup> Averbough, Bodu 2002, 119.

<sup>44</sup> Averbough, Bodu 2002, 121.

<sup>45</sup> Perišić 1984, 46, T. 24: 169.

<sup>46</sup> Vitezović 2011, 314.

<sup>47</sup> Vitezović 2011.

<sup>48</sup> Perišić 1984, 45, T. 20; Витезовић 2010, 50.





Slika / Figure 9: Drška / Haft P-16868.24 (snimio / photo by: I. Krajcar).

Od tragova upotrebe uočena je izrazita uglačanost distalnog kraja alatke, zatupljenost i istrošenost radnog vrha, na kojem je vidljivo spongiozno tkivo. Iz zbirke potječe petnaest nalaza pijuka, a predmeti ovog tipa poznati su iz sustavnih istraživanja lokaliteta Jakovo – Kormadin i drugih vinčanskih lokaliteta – Banjice i Crkvina u Stublinama.<sup>48</sup> Na bazi navedenih primjeraka jasno je vidljiva karakteristična vinčanska tehnika, kojom su odstranjeni od ostatka roga, a koja je ustanovljena i na bolje očuvanim nalazima pijuka ove zbirke.

#### Grupa predmeta posebne namjene (V)

Ovoj grupi pripadaju različiti pomoćni predmeti poput drški, radnih površina i recipijenata, odnosno upotrebnih predmeta bez aktivnog radnog dijela.<sup>49</sup> U zbirci su ustanovljena dva predmeta određena kao drške i jedan nalaz koji možda predstavlja radnu površinu.

*Drške (V 1).* Dva su nalaza određena kao drške. Jedna od njih izrađena je od paroška, čija je cijela vanjska površina obrađena struganjem i glačanjem (T. 2: P-16858.46).

<sup>48</sup> Perišić 1984, 45, T. 20; Витезовић 2010, 50.

<sup>49</sup> Vitezović 2011, 316.

#### Objects of special use (V)

This group includes different auxiliary objects like hafts, working surfaces, and recipients, that is, objects without an active working part.<sup>49</sup> The collection includes two finds shaped into hafts and one which might be a working surface.

*Hafts (V 1).* Two finds were defined as hafts. One of them is made out of a tine which has been processed by scraping and polishing (Pl. 2: P-16858.46). The spongy tissue was completely removed from the inside of the tine (Fig. 9), probably with the help of some abrasive medium.<sup>50</sup> The hole, measuring 3.5 cm in diameter, is suitable for inserting a smaller stone tool or blade. Such a haft, used on its own or additionally inserted into a wooden haft, was used to absorb the shock of striking, thereby protecting the wooden haft from damage.<sup>51</sup>

The second haft was made out of the base of an antler, where the part closer to the beam was cut and the spongy tissue removed. The frontal tine was probably used as a haft (Fig. 10). It resembles a find from Vinča, made out of the same segment of antler, and which was interpreted as a weapon (mace or hammer).<sup>52</sup> However, in this case, there is no mention of a hole for inserting

<sup>49</sup> Vitezović 2011, 316.

<sup>50</sup> Vitezović 2011, 271.

<sup>51</sup> Schibler 2013, 348, 351, Fig. 20a.

<sup>52</sup> Срејовић, Јовановић 1958-59, 186-187, Fig. 13: 4.

Spongiozno je tkivo u potpunosti izdubljeno iz unutrašnjosti paroška (sl. 9), vjerojatno uz pomoć nekog abrazivnoga sredstva.<sup>50</sup> Otvor promjera 3,5 cm prigodan je za uglavljivanje manje kamene alatke ili sjekiva. Takva drška, korištena samostalno ili dodatno uglavljena u drvenu dršku, služila je kako bi apsorbirala šok od udarca te tako štitila drvenu dršku od oštećenja.<sup>51</sup>

Drugi je primjerak izrađen od baze roga, a dio prema stablu ravno je odsječen te je spongiozno tkivo na tome dijelu odstranjeno, dok je čeonu parožak vjerojatno služio kao drška (sl. 10). Izgledom je vrlo sličan nalazu s Vinče, izrađenom od istog segmenta roga koji je interpretiran kao oružje (buzdovan ili malj),<sup>52</sup> no u ovome slučaju ne navodi se postojanje otvora za uglavljivanje alatke od nekoga drugog materijala. Osim kao drška, ovaj je predmet možda služio i kao čekić, na što ukazuje istrošenost površine baze roga.

*Radne površine (V II).* Jedan je predmet određen kao moguća radna površina (sl. 11). Riječ je o masivnijem komadu roga, s relativno ravnom, širom površinom na račvastom segmentu stabla s naglašenim tragovima upotrebe – nepravilno raspoređene sitne, kraće linije i veći, dublji usjeci, koji se često međusobno preklapaju. Ovakvi predmeti uglavnom nemaju tragove obrade, a služili su kao neka vrsta podmetača ili nakovnja na kojem su se mogle obrađivati različite sirovine.<sup>53</sup>

#### Grupa necjelovitih predmeta (VIII)

U ovu su grupu uvršteni nalazi poluproizvoda i otpadaka od proizvodnje te oštećeni predmeti koje nije moguće svrstati u neku drugu grupu.<sup>54</sup>

Zbog nedovoljne očuvanosti, dio nalaza nije bilo moguće pobliže odrediti. Uglavnom, riječ je o oštećenim predmetima, najčešće



Slika / Figure 10: Detalj drške od jelenjeg paroška / Detailed view of a haft made out of red deer tine (P-16858.46) (snimio / photo by: I. Krajcar).

tools made of some other material. Apart from as a haft, this find might have been used as a hammer, as indicated by wear seen on the surface of the antler base.

*Working surfaces (V II).* One find was determined as a possible working surface (Fig. 11). It is a massive piece of red deer antler with a relatively straight wider surface on the forked segment of the antler beam which also displays traces of use – irregularly placed shorter wedges and larger deeper notches which often overlap. Such segments do not display traces of processing, and were used as some sort of pad or anvil on which other raw materials were processed.<sup>53</sup>

#### Incomplete objects (VIII)

This group includes half-products and production waste which could not be otherwise defined.<sup>54</sup>

Some of the finds could not be more precisely defined due to poor preservation. These are mostly damaged objects, most often tines with missing working tips which were defined as fragmented tools. Their proximal ends clearly display traces of processing, even use on the

<sup>50</sup> Vitezović 2011, 271.

<sup>51</sup> Schibler 2013, 348, 351, sl. 20a.

<sup>52</sup> Срејовић, Јовановић 1958-59, 186-187, sl. 13: 4.

<sup>53</sup> Maigrot 2005, 124-125, sl. 9: 2.; Vitezović 2007, 77.

<sup>54</sup> Vitezović 2011, 341.

<sup>53</sup> Maigrot 2005, 124-125, Fig. 9: 2; Vitezović 2007, 77.

<sup>54</sup> Vitezović 2011, 341.



Slika / Figure 11: Radna površina / Working surface P-16868.20 (snimio / photo by: I. Krajcar).

paroščima čiji radni vrh nedostaje i koji su određeni kao fragmentirane alatke. Na njihovoj proksimalnom kraju jasno su vidljivi tragovi obrade, pa čak i upotrebe pri distalnom dijelu, no nije bila moguća preciznija odredba tipa alatke iako se prema obliku i dimenzijama nekih parožaka može pretpostaviti da se radi o udaračima ili pijucima.

Nalazi s tragovima obrade predstavljaju sirovinu (sl. 12) za izradu alatki, odnosno otpatke od proizvodnje, iz kojih je izdvojen materijal za daljnju obradu. Osim toga, ustanovljeni su i nalazi koji predstavljaju poluproizvode – predmete prema čijoj se obradi i formi nazire buduća alatka. Najčešće su očuvani tragovi obrade poput formiranja žlijeba stanjivanjem korteksa roga, primijenjeni za odvajanje parožaka, ali i većih komada roga (T. 5: P-16881.6) ili grubog zasijecanja kamenom sjekirom, primjerice na nalazu P-16868.2, na kojem se nalazi i polovično formirana perforacija (T. 3: P-16868.2). Postupak izrade perforacije na već gotovom proizvodu uočen je i na jednom nalazu udarača (T. 1: P-16857.63).

Objekte navedene skupine predmeta, osim što pružaju dragocjene podatke o tehnikama obrade sirovine i izrade alatki, također idu u prilog postojanju radioničkog mjesta na lokalitetu Jakovo – Kormadin.

distal parts, but it was impossible to precisely determine the type regardless of the fact that their shape and dimensions suggest that they were strikers or picks.

Finds with traces of processing are raw materials (Fig. 12) used to make tools, or production waste which was discarded when material for further processing was selected. Apart from that, we determined some half-products – finds which show processing and the form of which hints at the future tool shape. Most commonly preserved traces of processing include wedges formed by thinning down the antler cortex in order to separate tines and larger pieces of antler (Pl. 5: P-16881.6), or coarse cutting done by a stone axe, as on find P-16868.2 which also has a partially formed perforation (Pl. 3: P-16868.2). The process of making a perforation was also noted on one striker (Pl. 1: P-16857.63).

Both listed groups of objects provide valuable data on the techniques used to process raw material and make tools, and also speak in favor of Jakovo-Kormadin as a site that included a workshop.





Slika / Figure 12: Nalazi sirovine (otpaci od proizvodnje) za izradu alatki od roga / Raw material (production waste) for antler tool production (snimio / photo by: I. Krajcar).

## RASPRAVA I ZAKLJUČNO

Rezultati analize predmeta od roga s lokaliteta Jakovo – Kormadin potvrdili su dosadašnja saznanja o koštanoj industriji ovog nalazišta i ukazuju na određene sličnosti s ostalim lokalitetima vinčanske kulture, u smislu izbora i načina pribavljanja sirovine, primijenjenih tehnika izrade i zastupljenosti pojedinih tipova predmeta.

Najveći broj alatki pripada grupi predmeta za udaranje, nakon kojih po brojnosti slijede predmeti za sječenje. Grupa zašiljenih predmeta relativno je slabo zastupljena, dok su spatule i predmeti posebne namjene prisutni u vrlo malom broju. Neutilitarni predmeti, kao ni nakit izrađen od roga nisu ustanovljeni. Iako se izostanak predmeta ove grupe djelomično može objasniti stanjem istraživanja nekog nalazišta, ona je također odraz tehnološkog ili kulturološkog

## DISCUSSION AND CONCLUDING REMARKS

The results of the analysis done on antler finds from Jakovo-Kormadin confirm our knowledge about the bone industry of this site, and point to certain similarities with other sites of the Vinča culture regarding the selection and manner of obtaining raw material, the techniques applied in processing, and the presence of certain types of objects.

The largest number of tools is in the group of objects used for striking, followed by objects used for cutting. The group of pointed objects is relatively sparse, while polishers and objects of special use appear in very small numbers. The lack of this type of object can partially be explained by the state of research of a certain site, but it is also a reflection of technological and cultural choices,<sup>55</sup> although decorative objects made out of antler have been found at some sites of the

<sup>55</sup> Vitezović 2011, 275.

kog izbora<sup>55</sup> premda su ukrasni predmeti izrađeni od roga poznati s nekih vinčanskih nalazišta.<sup>56</sup> Manji broj spatula i predmeta sa zašiljenim radnim vrhom može se objasniti izborom sirovine, za čiju se izradu češće koriste rebra ili fragmenti dugih kostiju. Ovakva tipološka slika podudara se s uobičajenom upotrebom alatki od roga, odnosno najveći broj odnosi se na tipove koji pripadaju grupi predmeta za udaranje ili sječenje, najčešće korištenih za obradu otpornijih materijala, poput drva. Samo dio nalaza mogao je biti korišten u domaćinstvu, poput udarača s dodatno obrađenim distalnim krajem, primjerice, za pripremu hrane. Spomenute grupe predmeta (za sječenje i udaranje), osim za sječu drva i izradu građevinskih elemenata za izgradnju objekata, vjerojatno su korištene i kao poljoprivredne alatke, odnosno namijenjene su za obavljanje organiziranih aktivnosti koje su se odvijale podalje od naselja ili u njegovoj neposrednoj blizini.<sup>57</sup>

Alatke su u najvećem broju izrađene od odbačenih rogova jelena, dok se rjeđe pojavljuju primjerci koji potječu od ulovljene životinje. Pribavljanje sirovine sakupljanjem odbačenih rogova zahtijeva određeni stupanj organizacije i znanja, odnosno vremena i mjesta na kojem oni mogu biti sakupljeni.<sup>58</sup> Za razliku od jelenjih rogova, rog srndaća se rijetko koristi za izradu alatki i u tome se slučaju radi o *ad hoc* alatkama, s minimalnom obradom. Od ukupno 217 nalaza artefakata od roga, njih je samo deset izrađeno od roga srndaća. Riječ je o tri probojca i pet nalaza određenih samo kao zašiljeni predmeti.

Predmeti izrađeni od roga srndaća nalaze se na jednom kraju proizvodnog kontinuuma<sup>59</sup> i predstavljaju oportunističke proizvode, jednostavne izrade i kraćeg vijeka upotrebe, dok su na suprotnome kraju pažljivo izrađene alatke od roga. Nalazi takve izrade

<sup>55</sup> Vitezović 2011, 275.

<sup>56</sup> Vitezović 2013a, 12, 14.

<sup>57</sup> Maigrot 2005, 122-123, 125.

<sup>58</sup> Maigrot 2005, 122.

<sup>59</sup> Choyke 1997, 66.

Vinča culture.<sup>56</sup> The smaller number of polishers and objects with a pointed working tip can be explained by raw material selection, where ribs or fragments of longer bones are more often used. Such a typological image coincides with the usual use of antler tools, that is, the largest number refers to those types which fall into the group of striking and cutting tools most often used for processing more resilient materials like wood. Only a part of the finds could have been used in households, like the striker with an additionally processed distal end, which could have been used in food preparation. The mentioned group of finds (used for cutting and striking), apart from cutting wood and making architectural elements for building, were probably also used as agricultural tools used for organized activities away from the settlement or in its close vicinity.<sup>57</sup>

Most tools were made out of shed red deer antlers. Finds which were made out of hunted game rarely appear. Obtaining raw material by collecting shed antlers requires a certain degree of organization and knowledge, meaning time and the knowledge of places where such antlers could be collected.<sup>58</sup> Unlike red deer antler, roe deer antlers are seldom used to make tools and if they are, they are used for *ad hoc* tools with minimal processing. Out of the total 217 finds of antler artifacts, only ten were made out of roe deer antler – three points and five finds which were defined only as pointed objects.

Finds made out of roe deer antler are at the one end of the production continuum<sup>59</sup> and are opportunistic products with simple processing which get used for a short period of time. Red deer antler tools are on the opposite end of the production continuum. Such finds represent the production tradition characteristic of a certain period or site in a certain area, and are always made from the same skeletal remains or species, reflecting the importance of the economic activity they were used for.<sup>60</sup>

<sup>56</sup> Vitezović 2013a, 12, 14.

<sup>57</sup> Maigrot 2005, 122-123, 125.

<sup>58</sup> Maigrot 2005, 122.

<sup>59</sup> Choyke 1997, 66.

<sup>60</sup> Choyke 1997, 65-66.



predstavljaju proizvodnu tradiciju, karakterističnu za određeno vrijeme ili nalazišta na nekome prostoru, za čiju se izradu biraju uvijek isti skeletni elementi ili vrste, te se na taj način odražava i ekonomska važnost djelatnosti za koju su bili upotrebljavani.<sup>60</sup>

Na sličnu situaciju nailazimo i na Divostinu, na kojem je, kao i na lokalitetu Jakovo – Kormadin, ustanovljen visok udio alatki od jelenjeg roga,<sup>61</sup> dok se rijetko pojavljuju predmeti od roga srndaća. Mali broj predmeta izrađenih od roga srndaća vjerojatno je posljedica njihove lošije kvalitete kao sirovine i manjih dimenzija, što ih ne čini prikladnima za izradu alatki.<sup>62</sup>

Velik broj alatki od roga jelena ukazuje na važnost roga kao sirovine za izradu artefakata, a činjenica da je materijal prikupljen u toliko velikom broju u vrijeme kada nalazi koštane industrije nisu predstavljali zanimljive artefakte, pa nisu ni sustavno sakupljeni, govori u prilog bogatstvu koštane industrije na ovome nalazištu, što se može iščitati na više mjesta iz izvještaja A. Poturičića koji spominje velike količine alatki od kostiju i roga.<sup>63</sup>

Ipak, na nalazištima vinčanske kulture predmeti od roga zastupljeni su u različitim omjerima u odnosu na ostale koštane sirovine.<sup>64</sup> Takva situacija djelomično može biti posljedica stanja istraživanja, ali može biti i objašnjena razlikom u ekonomiji između pojedinih nalazišta, od kojih su neka vjerojatno bila specijalizirana za pribavljanje sirovine i izradu alatki od roga, kao i za poslove vezane uz upotrebu takvih alatki.<sup>65</sup> Visok udio roga, osim na Divostinu, ustanovljen je i na Jakovo – Kormadinu.

Osim toga, tijekom istraživanja lokaliteta 2008. godine pronađeno je više otpadaka od proizvodnje artefakata od roga, koji su pružili vrijedne podatke o tehnikama izra-

A similar situation can be seen at Divostin where, just like at Jakovo-Kormadin, a large number of antler tools were found.<sup>61</sup> The small number of roe deer objects is probably a consequence of the fact that they, as a raw material, are of poor quality and are generally smaller, making them less suitable for tool making.<sup>62</sup>

The large number of red deer antler tools points to the importance of antler as a raw material for producing artifacts, and the fact that the material was collected in such large quantities at a time when finds of bone industry were not considered interesting and were, hence, not systematically collected, speaks in favor of the rich bone industry at this site, which was also attested to by A. Poturičić in his reports, where he often mentions large quantities of bone and antler tools.<sup>63</sup>

However, at sites ascribed to the Vinča culture, antler tools are present in different ratios in comparison with other bone raw materials.<sup>64</sup> This can partially be explained as a result of the state of research, but can also be explained through the difference in economy between specific sites, some of which probably specialized in collecting raw material and producing antler tools, as well as in activities connected to the use of those tools.<sup>65</sup> A large percentage of antler tools, apart from the finds at Divostin, was also noted at Jakovo-Kormadin.

Additionally, the 2008 excavations of the site yielded more waste from antler artifact production, which provided valuable data on production techniques and, more importantly, pointed to the existence of a workshop for making antler tools at the site,<sup>66</sup> which is also supported by finds of raw material and half-products from the here analyzed collection from Jakovo-Kormadin. In this regard, we should also mention the interesting note from the correspondence between commissioner A. Poturičić and the then Museum director in which the author makes an as-

<sup>60</sup> Choyke 1997, 65-66.

<sup>61</sup> Витезовић 2013, 111, 121.

<sup>62</sup> Vitezović 2013b, 69.

<sup>63</sup> Šeper 1952, 29; Brunšmid 1902, 234-238.

<sup>64</sup> Vitezović 2013b, 67, sl. 7.6.

<sup>65</sup> Vitezović 2013b, 68-69.

<sup>61</sup> Витезовић 2013, 111, 121.

<sup>62</sup> Vitezović 2013b, 69.

<sup>63</sup> Brunšmid 1902, 234-238; Šeper 1952, 29.

<sup>64</sup> Vitezović 2013b, 67, Fig. 7. 6.

<sup>65</sup> Vitezović 2013b, 68-69.

<sup>66</sup> Витезовић 2010, 57.

de, i još važnije, ukazali na postojanje radionice za izradu predmeta od roga na ovome nalazištu,<sup>66</sup> što ujedno podupiru i nalazi sirovine i poluproizvoda iz analizirane zbirke predmeta s lokaliteta Jakovo – Kormadin. U tom je pogledu zanimljiva i crtica iz korespondencije muzejskog povjerenika A. Poturičića s ravnateljstvom Muzeja, u kojoj zbog brojnosti pronađenih alatki od kosti i roga, iznosi pretpostavku o postojanju radioničkog mjesta na ovome nalazištu.<sup>67</sup>

Brojnost tipova alatki i njihovih varijanti govori o dobrom poznavanju svojstva sirovine od koje su izrađene, a tehnološka ujednačenost kod izrade predmeta ukazuje da su artefakte izrađivali visokospecijalizirani pojedinci. Sve to pruža sliku o Jakovo – Kormadinu kao o nalazištu s bogatom i razvijenom koštanom industrijom, a unatoč tomu što kontekst nalaza nedostaje, njihova dobra očuvanost, brojnost i raznolikost svakako doprinose boljem razumijevanju koštane industrije, ne samo na ovome nalazištu već i u okvirima vinčanske kulture općenito.

<sup>66</sup> Витезовић 2010, 57.

<sup>67</sup> Brunšmid 1902, 235; "U Hauchovom vinogradu...izrovano je za jedna kola crijepova od starih lonaca, jelenjih i drugih rogova i silesija kostiju, i nađene su alatjike od kamena, kremenena i kostiju, a jedan čovjek pripovijeda, da od toga nalazišta malko dalje prema jugu u zemlji imade vrlo mnogo kostiju, te izgleda, da su ovdje baš stanovali neki majstori, koji su od kostiju i drugog materijala oruđe pravili."

sumption about the existence of a workshop at the site because of the numerous finds of bone and antler tools.<sup>67</sup>

The number of types and their respected variants reflects knowledge about the properties of the raw material used for tool production, while the technological uniformity points to the fact that artifacts were made by highly specialized individuals. Everything listed creates an image of Jakovo-Kormadin as a site with a rich and developed bone industry and, despite the fact that the context is unknown, the fact that they are well-preserved and appear in large number and different types certainly contributes to a better understanding of bone industry not only at this site, but also in terms of the Vinča culture in general.

<sup>67</sup> Brunšmid 1902, 235; "Hauch's vineyard...yielded a wagon of old pot fragments, red deer and other antlers and a bunch of bones, and we also found tools made of stone, flint and bones, and a man tells us that, a bit further from this site towards the south, the ground contains many bones, and it seems that this exact spot was where some artisans lived who made tools out of bone and other materials."

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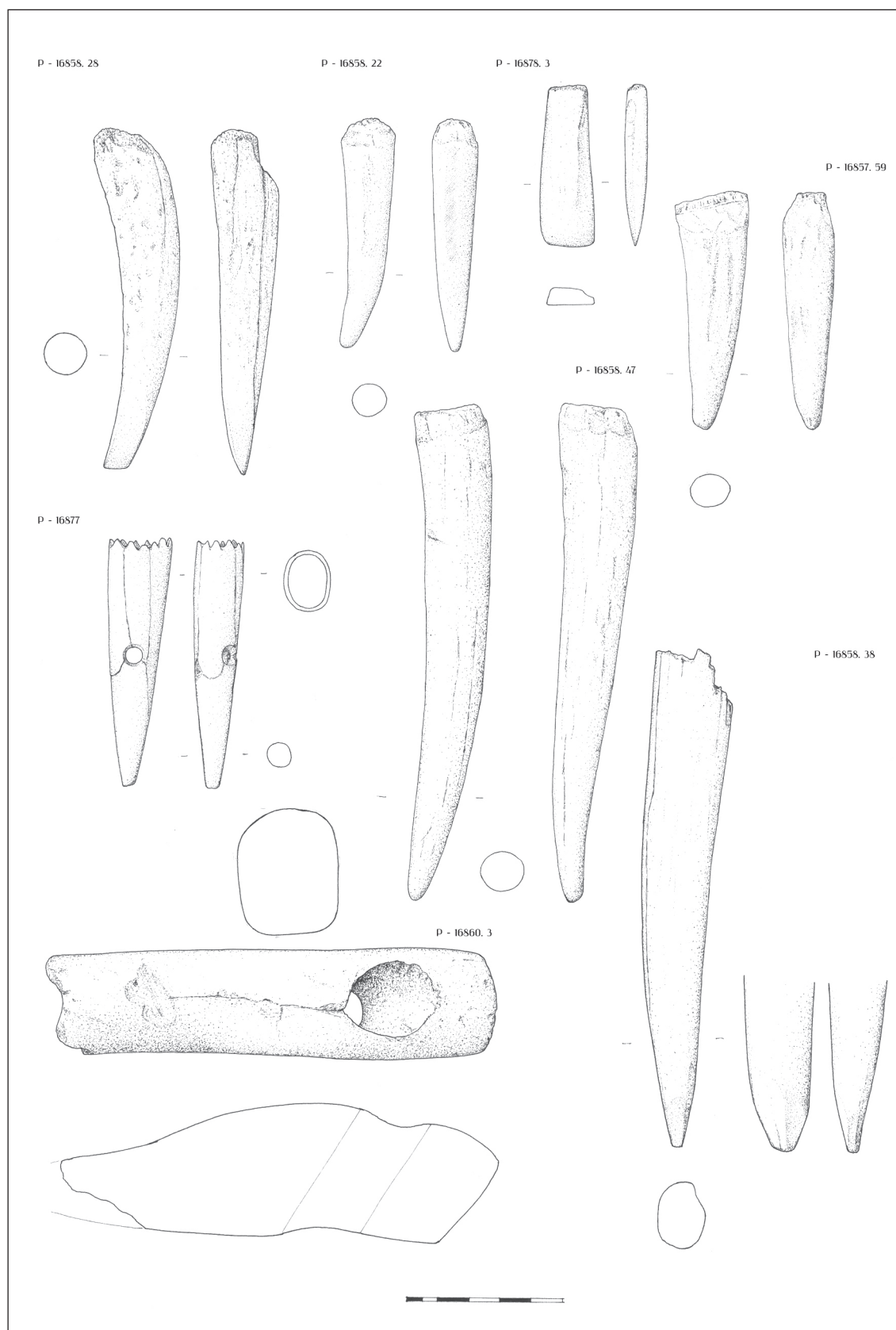


Tabla I: harpun (P-16877); dlijeta (P-16858.38, P-16878.3); klin (P-16858.28); udarači (P-16857.59, P-16858.22, P-16858.47); čekić-sjekira (P-16860.3). / Plate I: harpoon (P-16877); chisels (P-16858.38, P-16878.3); wedge (P-16858.28); strikers (P-16857.59, P-16858.22, P-16858.47); hammer-axe (P-16860.3). Autorica / Author: Miljenka Galić, računalna obrada / computer processing: Jelena Boras.



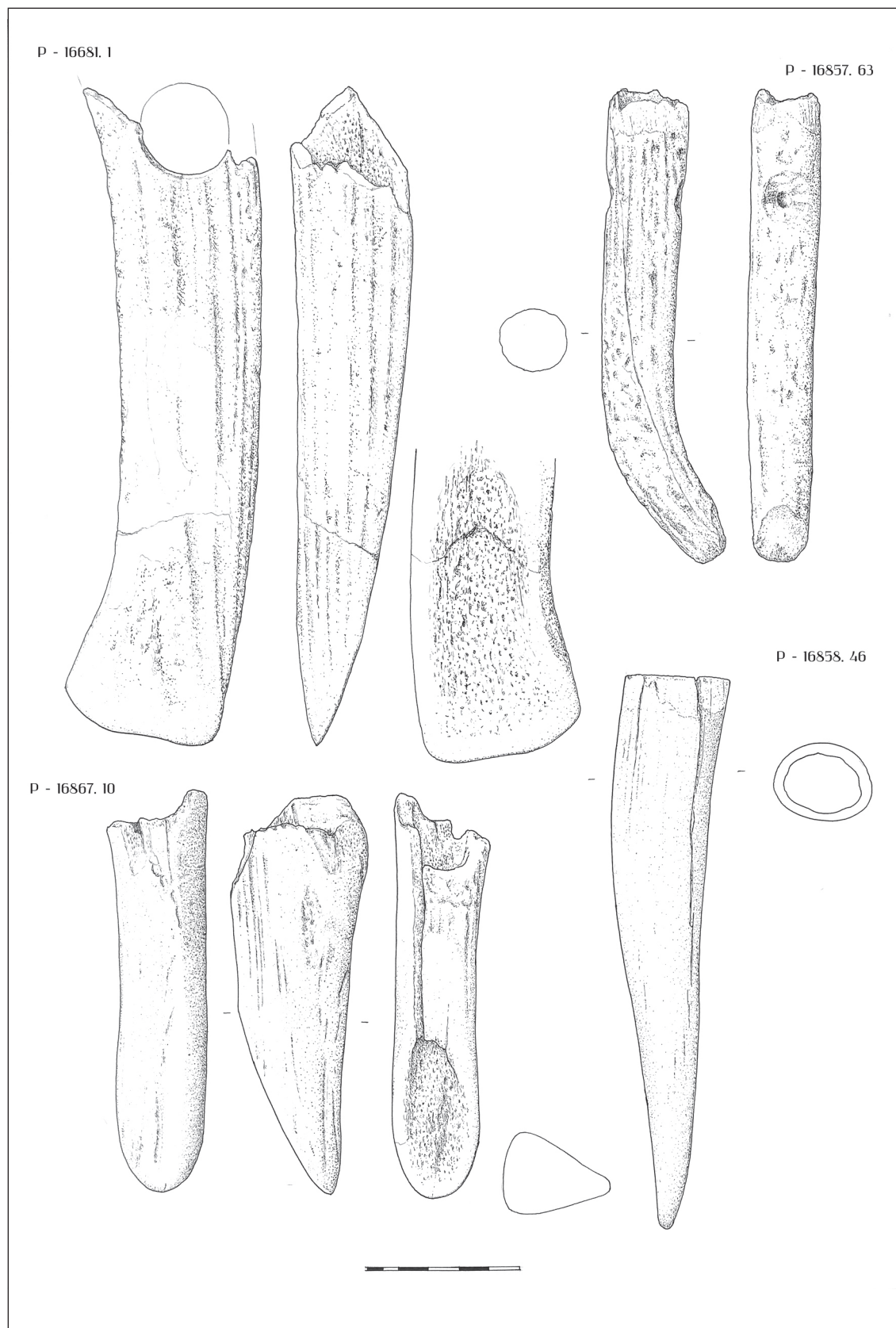


Tabla II: dlijeto (P-16867.10); sjekira (P-16881.1); udarač (P-16857.63); drška (P-16858.46). / Plate II: chisel (P-16867.10); axe (P-16881.1); striker (P-16857.63); haft (P-16858.46). Autorica / Author: Miljenka Galić, računalna obrada / computer processing: Jelena Boras.



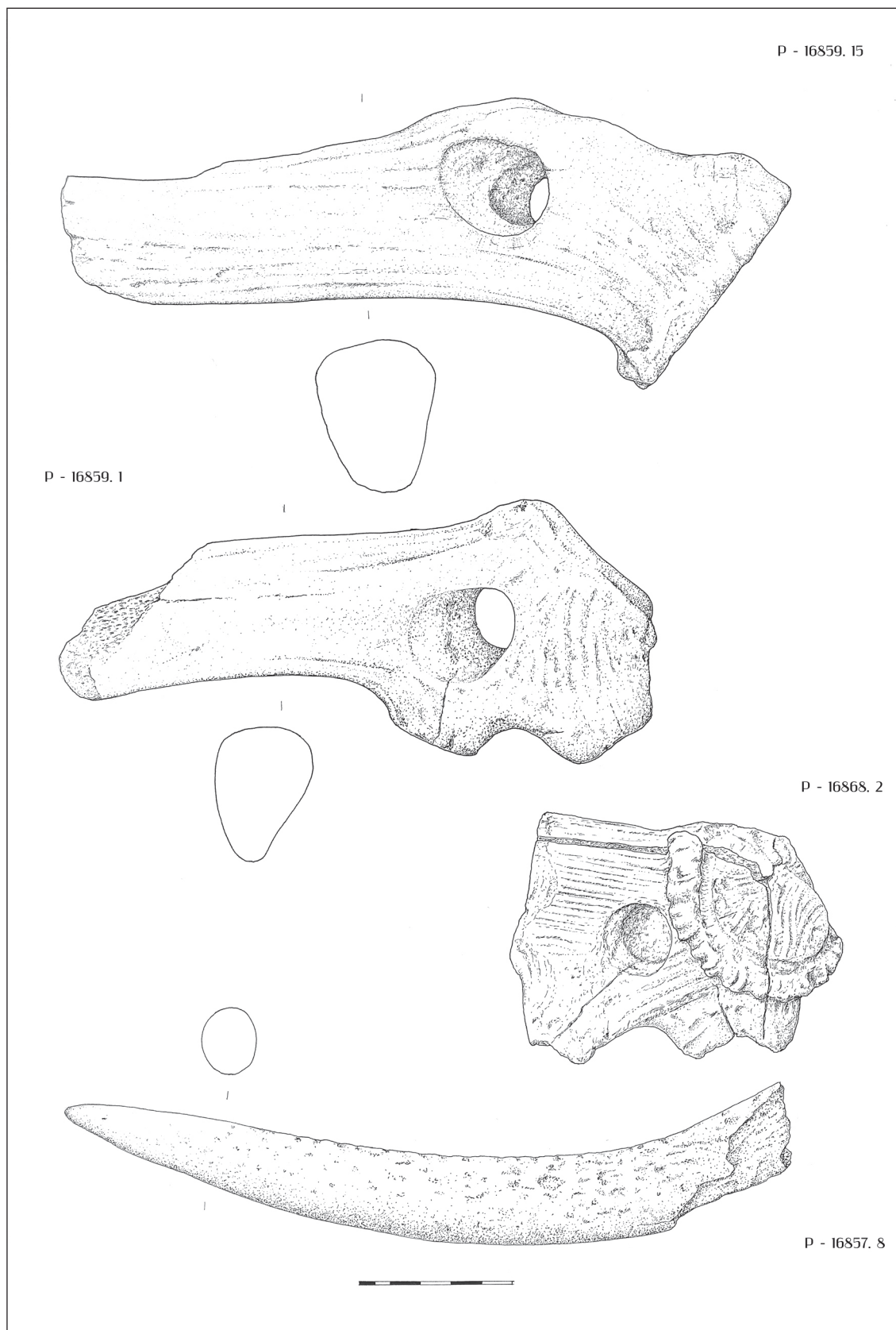


Tabla III: probojac (P-16857.8); čekići-sjekire (P-16859.1, P-16859.15); poluproizvod (P-16868.2). / Plate III: point (P-16857.8); hammer-axes (P-16859.1, P-16859.15); half-product (P-16868.2). Autorica / Author: Miljenka Galić, računalna obrada / computer processing: Jelena Boras.

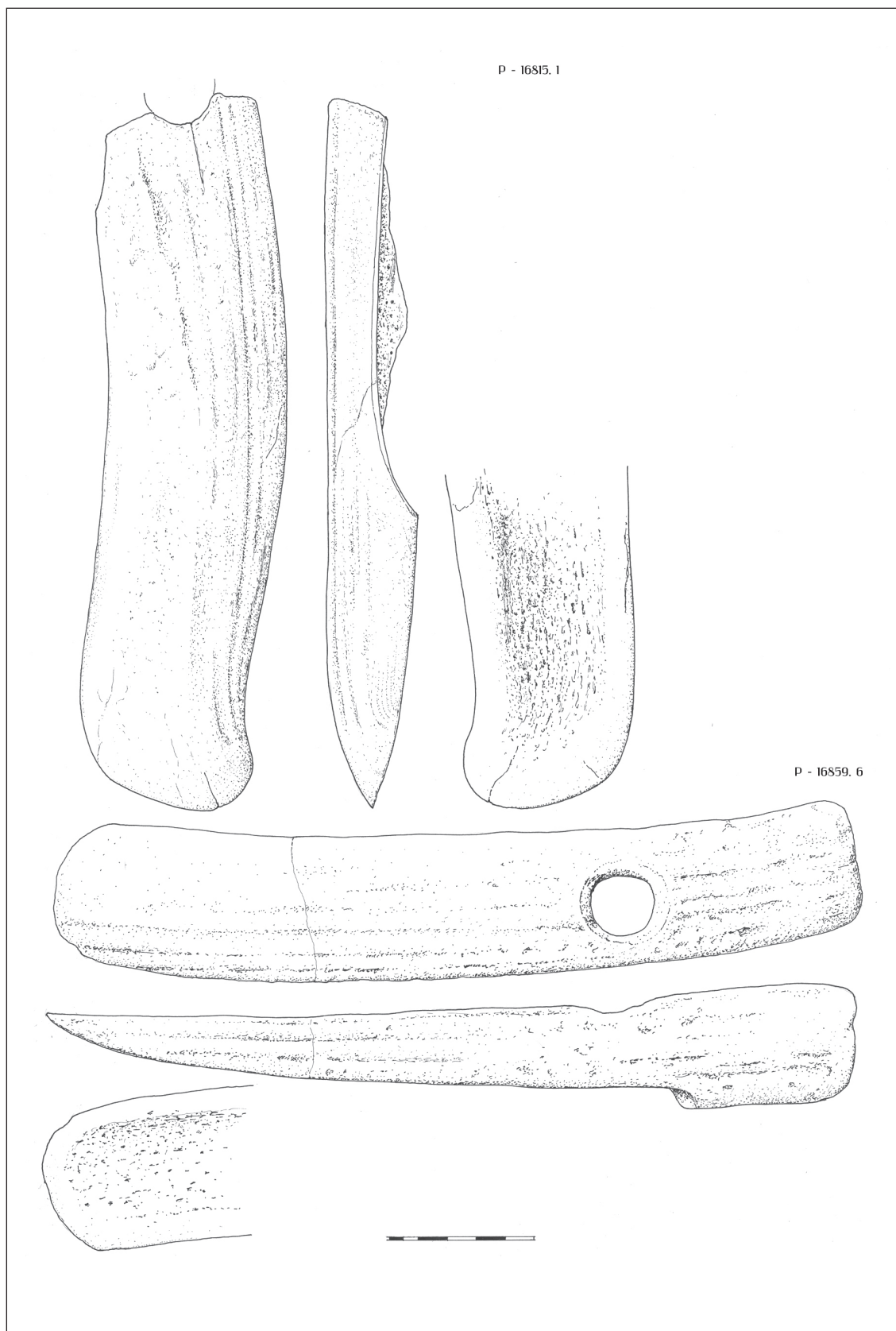


Tabla IV: sjekire (P-16815.1, P-16859.6). / Plate IV: axes (P-16815.1, P-16859.6). Autorica / Author: Miljenka Galić, računalna obrada / computer processing: Jelena Boras.

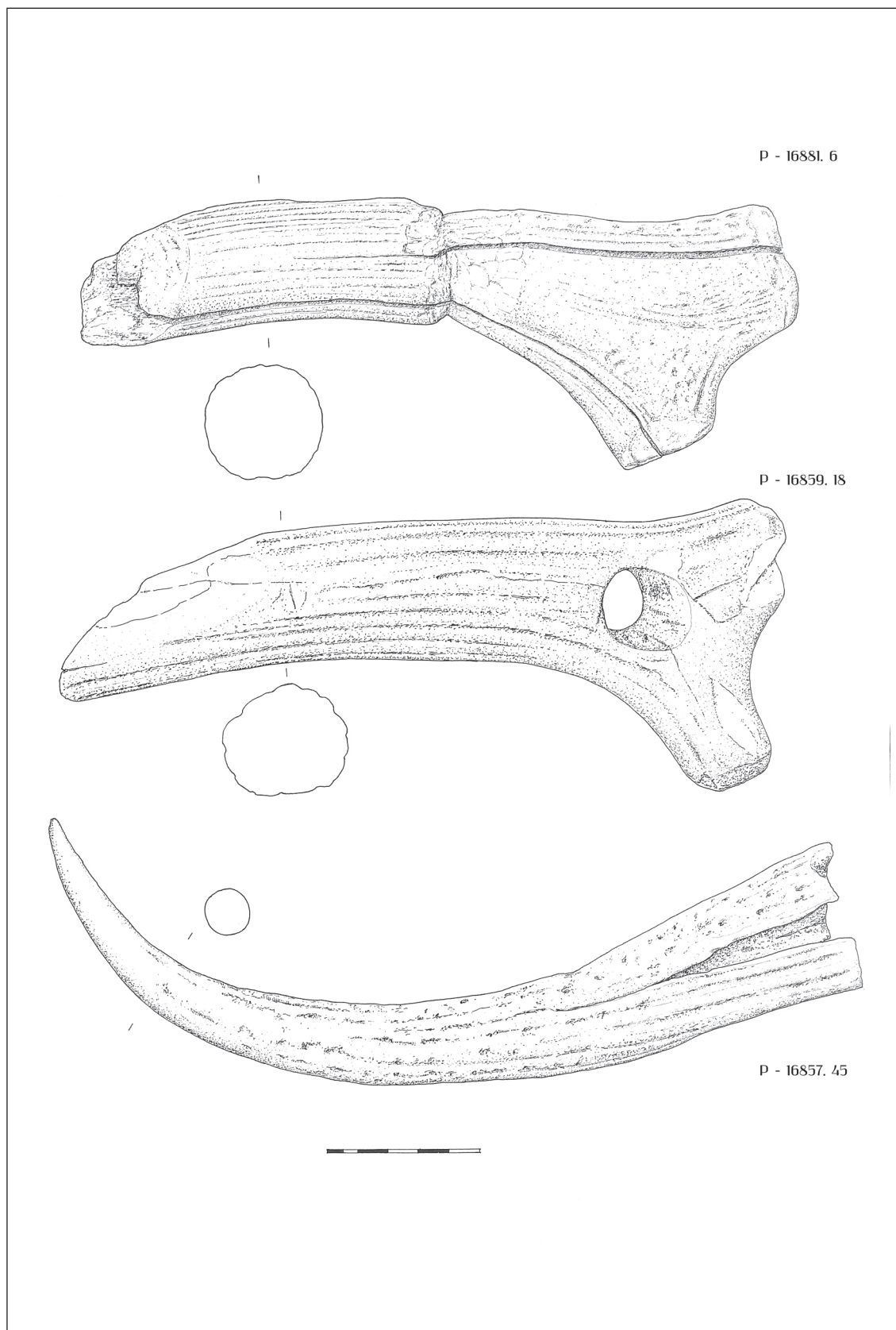


Tabla V: sjekira (P-16859.18); pijuk (P-16857.45); sirovina / poluproizvod (P-16881.6). / Plate V: axe (P-16859.18); pick (P-16857.45); raw material/half-product (P-16881.6). Autorica / Author: Miljenka Galić, računalna obrada / computer processing: Jelena Boras.





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# Grobovi iz kasnoga bakrenog i ranoga brončanog doba s nalazišta Osijek – Ciglana i Zeleno polje

## Late Eneolithic and Early Bronze Age graves at the site Osijek–Ciglana and Zeleno polje

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*Tijekom zaštitnih arheoloških istraživanja na nalazištu Osijek – Ciglana i Zeleno polje 2015. godine pronađeni su ostaci višeslojnog naselja. Izdvaja se nalaz četiriju kosturnih grobova, od kojih se jedan nalazio izdvojeno na sjevernome dijelu istražene površine, a preostala su tri grupirana 260 m južnije. Svi su pokojnici bili pokopani u zgrčenom položaju na boku. S obzirom na činjenicu da u grobovima nisu nađeni prilozi ni dijelovi nošnje pokojnika, kao ni arheološki nalazi u njihovim zapunama, grobovi su datirani na osnovi rezultata radiokarbonskih analiza kostiju pokojnika. Grob smješten na sjevernom dijelu nalazišta (grob 1) datiran je u razdoblje kasnoga bakrenog doba i pripisan kasnoklasičnoj fazi vučedolske kulture. Tri groba evidentirana na južnome dijelu nalazišta (grobovi 2, 3 i 4) datirana su u rano brončano*

*During the archaeological excavations at the site Osijek–Ciglana and Zeleno polje in 2015, the remains of a multi-layered settlement were found. Finds of four skeletal graves stand out, with one grave found isolated on the northern part of the excavated area, while the other three were grouped some 260 m to the south. All the bodies were laid in a crouched position on their side. Since no grave goods or parts of garment were registered in the graves and there were no archaeological finds in the grave fill, the graves are dated based on the results of the radiocarbon analysis of the inhumed bones. The grave situated on the northern part of the site (grave 1) is ascribed to the Late Eneolithic and attributed to the late classical phase of the Vučedol Culture. The three graves recorded on the southern part of the site (graves 2, 3, and 4) were dated to the Early Bronze Age. On the basis*



*doba. Na temelju radiokarbonskog datuma i elemenata pogrebnog rituala, grobovi su pripisani Kisapostag kulturi. Spomenuti grobovi predstavljaju jedine kasnoeneolitičke i rano-brončanodobne nalaze s lokaliteta, a može se pretpostaviti postojanje istovremenih naselja u blizini. Analiza je ljudskih kosturnih ostataka pokazala da je u grobu 1 pokopana žena starija od 50 godina, u grobovima 2 i 4 muškarci u dobi od 35 do 50 godina, a u grobu 3 dijete u dobi od 10 do 15 godina.*

**Ključne riječi:** *Kasno bakreno doba, rano brončano doba, kosturni grobovi, Osijek*

*of radiocarbon dates and elements of the burial practice, they are attributed to the Kisapostag Culture. The mentioned graves represent the only Late Eneolithic and Early Bronze Age finds from the site, and the existence of concurrent settlements nearby can be assumed. An analysis of human skeletal remains revealed the presence of a female over 50 years of age in grave 1, males 35 to 50 years of age in graves 2 and 4, as well as a juvenile aged 10 to 15 in grave 3.*

**Key words:** *Late Eneolithic, Early Bronze Age, skeletal graves, Osijek*

## 1. UVOD

U razdoblju od travnja do lipnja 2015. godine provedena su zaštitna arheološka istraživanja na lokalitetu Osijek – Ciglana i Zeleno polje, na trasi cjevovoda za transport rashladne vode za KKE Osijek 500.<sup>1</sup> Tom je prigodom potvrđeno postojanje višeslojnoga arheološkog nalazišta na ovome položaju, smještenog na povišenoj gredi uz obalu rijeke Drave, na istočnoj periferiji grada Osijeka. Uz ostatke naselja iz brončanog i željeznog doba te nekolicine objekata iz razdoblja antike, pronađena su i četiri kosturna groba. Kako u grobovima nije bilo priloga, a njihove su zapune bile sterilne, grobovi su datirani radiokarbonskom analizom uzoraka kosti pokojnika. Jedan je grob datiran u razdoblje kasnoga bakrenog doba, a preostala tri u rano brončano doba. Drugi objekti, koji bi pripadali spomenutim razdobljima, nisu zabilježeni na lokalitetu.

Istraživanjima je obuhvaćen koridor širine 10 m i dužine 710 m, koji se protezao od Vukovarske ulice na jugu, preko Vinogradske ulice i pruge za Luku Osijek, do naplavne zone rijeke Drave na sjeveru. Kosturni grob 1 nalazio se u sjevernom dijelu istražene površine, na vrhu grede uz Dravu. Kosturni grobovi 2, 3 i 4 bili su smješteni oko 260 m jugozapadno od groba 1, na ravnici koja se

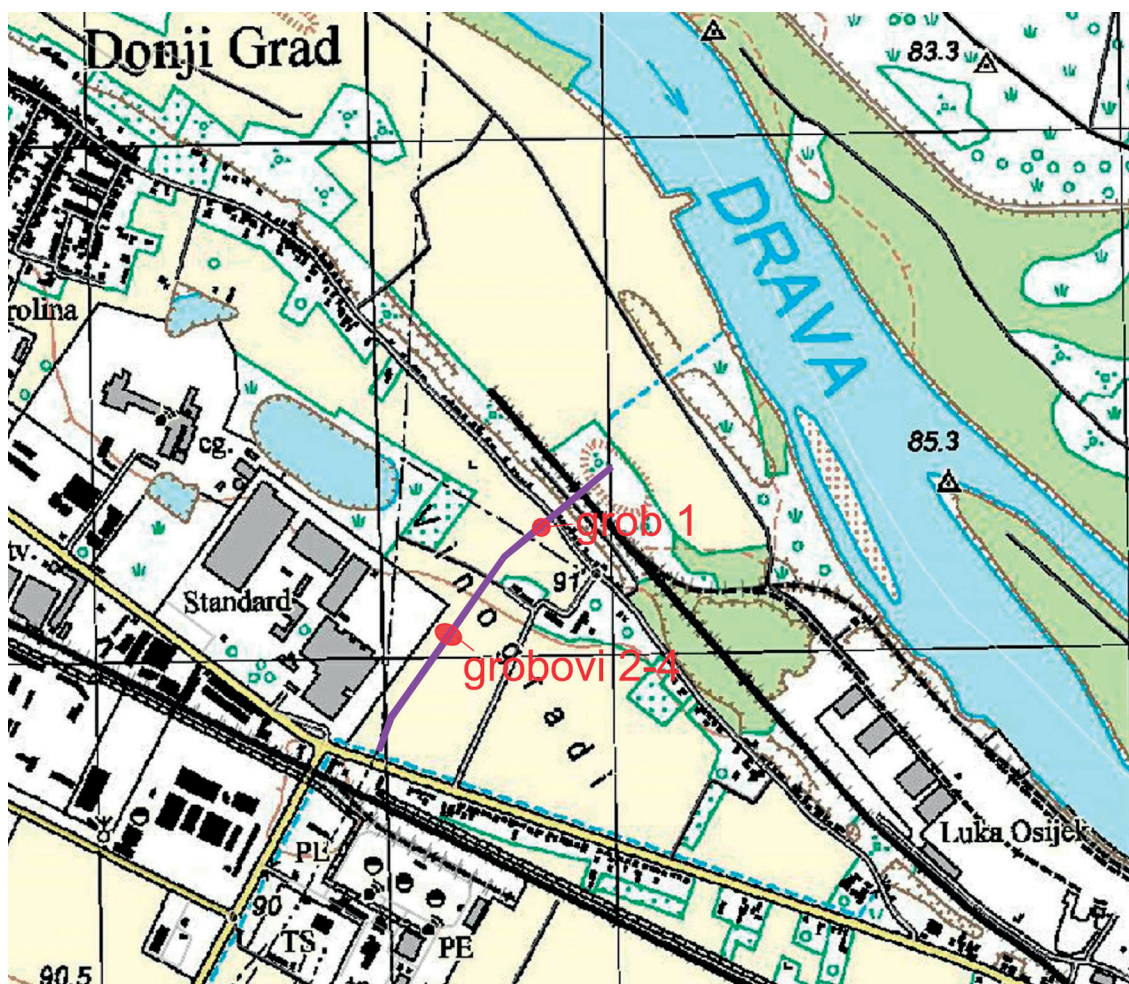
<sup>1</sup> Zaštitna arheološka istraživanja proveo je Hrvatski restoratorski zavod, Služba za arheološku baštinu, Odjel za kopnenu arheologiju. Voditelj je istraživanja bio A. Janeš.

## 1. INTRODUCTION

In the period between April and June 2015, archaeological rescue excavations were carried out at the site Osijek–Ciglana and Zeleno polje, at the pipeline route for the transportation of cooling water for KKE Osijek 500.<sup>1</sup> On that occasion, the existence of a multi-layered archaeological site was confirmed. The site is situated on an elevated plateau along the Drava River, in the eastern suburb of Osijek. In addition to the remains of the Bronze and Iron Age settlements, and few buildings from the Roman period, four skeletal graves were found. Since there were no grave goods in the burials, and their fills were sterile, the graves were dated based on the results of radiocarbon analysis of the inhumed bones. One grave was dated to the Late Eneolithic period, and the other three to the Early Bronze Age. Other features of these periods were not found at the site.

The excavations included a 10 m wide and 710 m long corridor, from Vukovarska Street to the south, across Vinogradska Street and the railway tracks to Luka Osijek, to a flood zone of the Drava River to the north. Skeletal grave 1 was situated on the northern part of the excavated area, on the very top of the plateau. Skeletal graves 2, 3, and 4 were located some 260 m to the southwest from grave 1, on the plain

<sup>1</sup> Archaeological rescue excavations were carried out by the Croatian Conservation Institute, Division for Archaeological Heritage, Department for Archaeology. The head of the excavations was A. Janeš.



Karta / Map 1. Trasa cjevovoda za KKE Osijek istražena 2015. godine, s položajem kosturnih grobova / Pipeline route for the KKE Osijek excavated in 2015 with the position of the skeletal graves (uredila / edited by M. Krmpotić).

proteže južno od povišene grede koja prati tok rijeke Drave (karta 1). Zapune su se grobova ocrtale nakon uklanjanja površinskog sloja oranja, debljine do 0,5 m na sjevernom dijelu nalazišta, odnosno sloja naplavine debljine oko 1 m na južnom dijelu. Ukopi su evidentirani na nivou zdravice.

## 2. OPIS GROBOVA

### Kosturni grob 1

Grob se nalazio u sjevernom dijelu nalazišta, na vrhu povišene grede uz rijeku Dravu, na 92,00 mnv. Lubanja je pokojnika uočena pri uklanjanju površinskog sloja humusa debljine 0,4 do 0,5 m, uz jugoistočni rub iskopa, i manjim je dijelom uništena. Kako se ostatak kostura nalazio izvan trase istra-

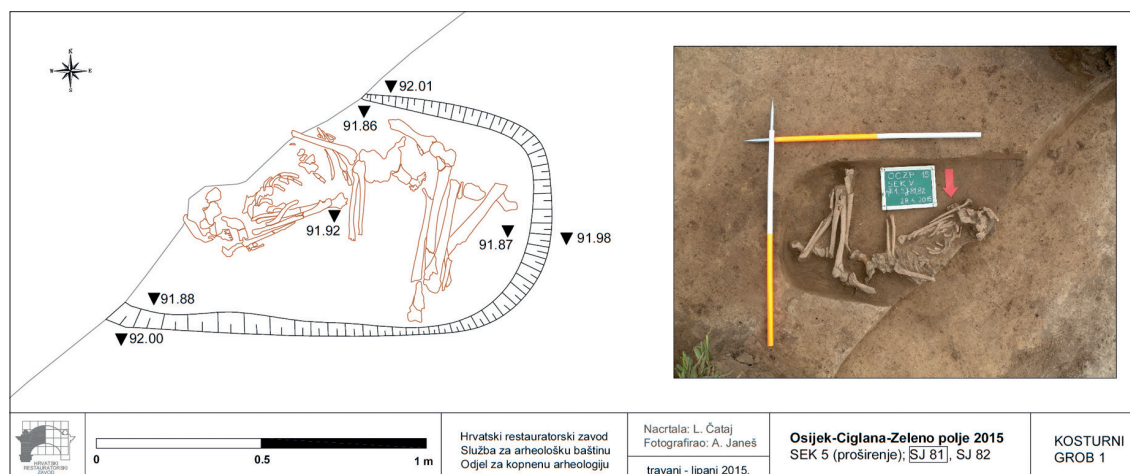
south of the plateau which follows the flow of the Drava River (Map 1). The grave fills were outlined after removing the uppermost, 0.5 m thick, ploughed layer on the northern part of the site, and the about 1 m thick alluvial layer on the southern part. The burials were registered at sterile soil level.

## 2. DESCRIPTION OF THE GRAVES

### Skeletal grave 1

The grave was situated in the northern part of the site, on the top of the plateau by the Drava River, at an altitude of 92 m. The skull of the buried individual was discovered while removing the 0.4–0.5 m thick layer of humus along the south-eastern edge of the excavated area, and was partially destroyed. Since the rest of





Slika / Fig. 1. Kosturni grob 1 / Skeletal grave 1 (izradila / drafted by L. Čataj).

živanja, iskop je proširen u dužini od 2 m i širini od 2,2 m. Grobna je raka u zapadnom dijelu uništena, a otkrivena je u dužini od 1,3 m i širini od 0,75 m, dok joj relativna dubina iznosi 0,12 do 0,15 m. Ukopana je u zdravicu, a pronađena je ispod humusnog sloja. Ukop je bio zapunjen svijetlosmeđom zemljom u kojoj nisu utvrđeni grobni prilozi niti bilo kakvi tragovi nošnje. Pokojnik je ležao na desnom boku, u zgrčenom položaju, orijentiran u smjeru zapad – istok. Donja, desna ruka bila je skvrčena u laktu, sa šakom položenom u visini brade, dok je gornja, lijeva ruka na području trbuha bila svinuta u laktu pod gotovo pravim kutom (sl. 1).

Analiza kosturnih ostataka pokojnika iz groba 1 pokazala je da ostaci pripadaju odrasloj ženskoj osobi starijoj od 50 godina. Spol je osobe određen na temelju morfoloških karakteristika lubanje i zdjelice, dok je dob procijenjena na temelju morfoloških promjena na zglobojnoj ploštini bočne kosti.<sup>2</sup> Na ostacima je uočena osteopenija (sl. 2). Osteopenija često prethodi osteoporozu koja je sistemska bolest. Osteopenija označava smanjenu gustoću kostiju koja se očituje promjenama u masi i količini trabekularne i kortikalne kosti.<sup>3</sup> Smatra se da su glavni uzroci njezina nastanka starija dob,

<sup>2</sup> Buikstra, Ubelaker 1994.

<sup>3</sup> Ortner 2003, 411.

the skeleton was outside of the excavated area, excavation was expended to the length of 2 m and width of 2.2 m. The western part of the burial pit was destroyed, and it was explored in the length of 1.3 m and a width of 0.75 m, while its relative depth was 0.12–0.15 m. It was dug through the sterile soil, and discovered under the layer of humus. The grave was filled with light brown soil in which no grave goods or any traces of garment were found. The buried individual was laid on the right side in a crouched position, oriented west to east. The lower, right arm was bent at the elbow with a fist laid near the chin, while the upper, laid over the abdominal area, was bent at the elbow almost at a right angle (Fig. 1).

The skeletal remains of the individual from grave 1 belong to an adult female older than 50 years of age. The sex was estimated based on morphological characteristics of the skull and pelvis, while age was estimated based on morphological changes of the auricular surface of the ilium.<sup>2</sup> The presence of osteopenia was observed on the remains (Fig. 2). Osteopenia can often lead to osteoporosis, which is a systemic disease. Osteopenia refers to low bone density evidenced by changes in the mass and quantity of trabecular and cortical bone.<sup>3</sup> Advanced age, diet low in calcium or rich in protein, lack of physical activity, and hormones are consid-

<sup>2</sup> Buikstra, Ubelaker 1994.

<sup>3</sup> Ortner 2003, 411.

prehrana siromašna kalcijem ili bogata proteinima, nedostatak fizičke aktivnosti i hormoni. Pri radiokarbonskom datiranju ulomka kosti dobiveni su podaci o stabilnim izotopima, točnije o odnosu ugljika i dušika. Preliminarni rezultati pokazuju da se prehrana pokojnice bazirala na C3 biljkama, kao što su primjerice pšenica, ječam, riža i mahunarke. Uz to, moguće je da je mali dio prehrane činila slatkovodna riba.<sup>4</sup>

AMS radiokarbonska analiza, napravljena na ulomku kosti, dala je kalibrirani datum 4056+/-39 prije sadašnjosti, odnosno jednostruku standardnu devijaciju između 2832. i 2492. pr. Kr., s većom vjerojatnošću između 2632. i 2561. pr. Kr.<sup>5</sup> S obzirom na nedostatak grobnih priloga, prema radiokarbonskim datumima, ukop kosturnoga groba 1 može se datirati u kraj bakrenog doba, odnosno u vučedolsku kulturu. Kako pri istraživanju nije pronađen ni jedan objekt iz ovog razdoblja, može se zaključiti da se grob nalazio izvan naselja, ili na njegovu rubu, i da postoji velika vjerojatnost kako se naselje vučedolske kulture nalazilo u blizini iskopa.

#### Kosturni grob 2

Kosturni grobovi 2, 3 i 4 evidentirani su na ravnici, južno od povišene grede koja prati tok rijeke Drave, na oko 87,7 mnv. Međusobno su smješteni u blago lučnoj liniji smjera sjeverozapad – jugoistok.

Najsjevernije je bio smješten kosturni grob 2. Pokojnik je bio ukopan u raku, izduženu u smjeru jugoistok – sjeverozapad, sačuvanih dimenzija 1,4 x 0,8 m te najveće relativne dubine 0,13 m. Zapunu je činila sivosmeđa zemlja bez arheoloških nalaza. Pokojnik je

<sup>4</sup> Zahvaljujemo dr. sc. Emmi Lightfoot, sa Sveučilišta Cambridge u Velikoj Britaniji na interpretaciji podataka dobivenih analizom stabilnih izotopa.

<sup>5</sup> Uzorak kosti pod laboratorijskim brojem UBA-29843, analiziran na Sveučilištu u Belfastu, dao je sljedeće vrijednosti za jednostruku standardnu devijaciju (68,3% vjerojatnosti): 2632.–2561. pr. Kr. (0,591), 2535.–2492. pr. Kr. (0,337), 2832.–2820. pr. Kr. (0,063), 2657.–2655. pr. Kr. (0,010) i za dvostruku standardnu devijaciju (95,4% vjerojatnosti): 2681.–2475. pr. Kr. (0,884), 2850.–2813. pr. Kr. (0,092), 2742.–2729. pr. Kr. (0,013), 2694.–2684. pr. Kr. (0,012).



Slika 2. Smanjena gustoća nadlaktične kosti žene iz kosturnog groba / Low bone density of the humerus of the female from grave 1 (snimila / photographed by P. Rajić Šikanjić).

ered to be the main factors in its appearance. During radiocarbon dating of a bone sample, data on stable isotopes was obtained, specifically on the C:N ratio. Preliminary results are indicative of a C3 diet, based on plants such as wheat, barley, rice, and legumes. In addition, this individual's diet possibly consisted of a small amount of freshwater fish.<sup>4</sup>

AMS radiocarbon analysis conducted on a bone fragment gave the calibrated date 4056+/-39 BP, i.e. 1 Sigma range between 2832–2492 BC, with greater probability between 2632–2561 BC.<sup>5</sup> Considering the lack of grave goods, the burial of the skeletal grave 1 can be dated according to radiocarbon dates at the end of the Eneolithic, i.e. to the Vučedol Culture. Since no other features from this period were found during the excavations, it can be concluded that the grave was situated outside the settlement, or on its edge, and that there is a high probability that the settlement of the Vučedol Culture is located near the excavated area.

<sup>4</sup> We wish to thank Emma Lightfoot, PhD, University of Cambridge, UK, for the interpretation of the preliminary results of the stable isotope analysis.

<sup>5</sup> Bone sample under the laboratory code UBA-29843, analysed at the Belfast University, gave the following 1 Sigma dates (68,3 % probability): 2632–2561 BC (0,591), 2535–2492 BC (0,337), 2832–2820 BC (0,063), 2657–2655 BC (0,010), and 2 Sigma dates (95,4 % probability): 2681–2475 BC (0,884), 2850–2813 BC (0,092), 2742–2729 BC (0,013), 2694–2684 BC (0,012).

položen u zgrčenom položaju na lijevom boku, pri čemu mu je glava orijentirana prema jugu – jugoistoku, a lijeva ruka položena preko donjeg dijela trbuha (sl. 3). U grobu nisu utvrđeni prilozi, niti ikakvi dijelovi nošnje pokojnika. Desna je strana groba devastirana kasnijim ukopom kanala, tako da kosti desne strane trupa pokojnika nisu pronađene *in situ*. Pri ukopu kanala također su presječene natkoljениčne i potkoljениčne kosti lijeve i desne noge pokojnika, a dislocirana je i njegova zdjelica. Dataciju je navedenog kanala teško precizno odrediti s obzirom na to kako je u njemu pronađeno samo nekoliko nekarakterističnih i kulturno neopredjeljivih ulomaka grube prapovijesne keramike. S obzirom na kvalitetu keramike i utvrđene ostatke srednjo- i kasnobrončanodobnog naselja na gredi, može se pretpostaviti kako je ranobrončanodobni grob bio devastiran u kasnijoj fazi brončanoga doba.

Analiza kosturnih ostataka pokojnika iz groba 2 pokazala je da ostaci pripadaju odrasloj muškoj osobi u dobi od 35 do 50 godina. Spol je osobe određen na temelju morfoloških karakteristika lubanje, a dob je procijenjena na temelju stupnja srašćavanja lubanjskih šavova.<sup>6</sup> Na kosturnim je ostacima uočeno nekoliko patoloških promjena i nemetričkih osobina. Na dva su prsna kralješka uočene blage degenerativne promjene. Degenerativne su promjene na kralježnici najčešća prisutna bolest zglobova. Na njihovu pojavu utječu dob, genetska predispozicija, mehanički stres i fizička aktivnost.<sup>7</sup> Na donjem je desnom prvom kutnjaku uočen apsces, koji najčešće nastaje kada se pulpa zuba izloži bakteriji, pri čemu dolazi do infekcije i stvaranja gnoja. Gnoj izlazi kroz sinus ili otvor vidljiv na kosturnim ostacima.<sup>8</sup> Nekoliko je zubi u donjoj čeljusti ispalo tijekom života, za što može biti odgovorno nekoliko uzroka, kao što su karijes, kamenac, apsces, velika istrošenost zubne plohe, periodontalne bolesti i trau-

<sup>6</sup> Buikstra, Ubelaker 1994.

<sup>7</sup> Waldron 2009, 28.

<sup>8</sup> Freeth 2000, 231.

#### Skeletal grave 2

Skeletal graves 2, 3, and 4 were registered on the plain south of the plateau which follows the flow of the Drava River, at an altitude of around 87.7 m. They were positioned in a slightly curved line in a northwest-southeast direction.

The northernmost was skeletal grave 2. The individual was buried in a burial pit elongated in southeast-northwest direction, with preserved dimensions 1.4 x 0.8 m and the relative depth of 0.13 m. The burial pit was filled with grey-brown soil without archaeological finds. The body was laid in a crouched position on the left side, with its head oriented to the south-southeast, and its left arm placed over the lower abdomen (Fig. 3). There were no grave goods or parts of garment found in the grave. The right side of the grave was destroyed by a later trench, so the bones of the right part were not found *in situ*. Thigh and shin bones of the right and left leg were cut during the digging of the trench, and the pelvic bones of the person were dislocated. It is difficult to determine the dating of the mentioned trench precisely, since there were only a few fragments of uncharacteristic coarse prehistoric ceramics, which cannot be culturally determined, found in its fill. On the basis of the quality of the pottery and the remains of the Middle and Late Bronze Age settlement on the plateau, it can be assumed that this Early Bronze Age grave was disturbed during the younger phase of the Bronze Age.

The skeletal remains of the individual from grave 2 belong to an adult male aged between 35 and 50 years. The sex was estimated based on morphological characteristics of the skull, while age was estimated based on the degree of cranial suture closure.<sup>6</sup> Several pathological changes and nonmetric traits were observed on the remains. Slight degenerative changes are present on two thoracic vertebrae. Degenerative changes on the spine are one of the most common joint diseases. Their appearance is influenced by age, genetic predisposition, mechanical stress, and physical activity.<sup>7</sup> An

<sup>6</sup> Buikstra, Ubelaker 1994.

<sup>7</sup> Waldron 2009, 28.



me. No i slaba higijena, prehrambene navike i fiziološki stres dovode do ispadanja zuba i zatvaranja prazne alveole.<sup>9</sup> Uočene su nemetričke osobine dodatne koštane pločice u lambdoidnom šavu. Riječ je o manjim ili većim ulomcima kosti nepravilnog oblika koje se mogu pronaći u svim lubanj-skim šavovima.<sup>10</sup>

Pri radiokarbonskom datiranju ulomka kosti dobiveni su podaci o stabilnim izotopima, točnije o odnosu ugljika i dušika. Preliminarni rezultati pokazuju da se prehrana pokojnika bazirala na C3 biljkama, kao što su, primjerice, pšenica, ječam, riža i mahunarke. Uz to, moguće je da je mali dio prehrane činila slatkovodna riba.<sup>11</sup>

AMS radiokarbonska analiza napravljena na ulomku kosti dala je kalibrirani datum 3741+/-36 prije sadašnjosti, odnosno jednostruku standardnu devijaciju između 2202. i 2050. pr. Kr., s većom vjerojatnosti između 2202. i 2130. pr. Kr.<sup>12</sup>

### Kosturni grob 3

Grob se nalazio 3,6 m jugoistočno od groba 2. Pokojnik je bio položen u raku nepravilnog ovalnog tlocrta, izduženu u smjeru jugoistok – sjeverozapad, dimenzija 1,0 x 0,7 m i relativne dubine do 0,15 m. Zapunu je činila, kao i u prethodnom grobu, sterilna sivosmeđa zemlja. Pokojnik je također položen na lijevi bok u zgrčenom položaju, s glavom orijentiranom prema jugu – jugoistoku. U grobu nisu utvrđeni prilozi ni dijelovi nošnje pokojnika. Kostu su loše očuvane, a nedostaju kosti lijevog dijela trupa i lijeve ruke, kao i kosti zdjelice. Desna je ruka pokojnika položena na donji dio trbuha (sl. 4).

<sup>9</sup> Freeth 2000, 231.

<sup>10</sup> Barnes 2012, 10.

<sup>11</sup> Zahvaljujemo dr. sc. Emmi Lightfoot, sa Sveučilišta Cambridge u Velikoj Britaniji na interpretaciji podataka dobivenih analizom stabilnih izotopa.

<sup>12</sup> Uzorak kosti pod laboratorijskim brojem UBA-29844, analiziran na Sveučilištu u Belfastu, dao je sljedeće vrijednosti za jednostruku standardnu devijaciju (68,3% vjerojatnosti): 2202.–2130. pr. Kr. (0,703), 2086.–2050. pr. Kr. (0,297) i za dvostruku standardnu devijaciju (95,4% vjerojatnosti): 2279.–2250. pr. Kr. (0,064), 2230.–2220. pr. Kr. (0,015), 2212.–2033. pr. Kr. (0,921).

abscess was observed on the mandibular first molar. Abscess most often forms when tooth pulp is exposed to bacteria, causing an infection and the accumulation of pus. The pus is drained through a sinus or an opening visible on the skeletal remains.<sup>8</sup> Several mandibular teeth were lost during the lifetime of this individual. Ante mortem tooth loss can be caused by various factors. These include dental caries, calculus, abscess, significant occlusal surface wear, periodontal diseases and trauma, but also low hygiene, dietary habits and physiological stress. All of them can lead to tooth loss and alveolar remodelling.<sup>9</sup> The observed nonmetric traits are sutural ossicles situated in the lambdoid suture. These are smaller or larger bone fragments of irregular shape that can be found in all cranial sutures.<sup>10</sup> During the radiocarbon dating of a bone sample, data on stable isotopes was obtained, specifically on the C:N ratio. Preliminary results are indicative of a C3 diet, based on plants such as wheat, barley, rice and legumes. Additionally, this individual's diet possibly consisted of a small amount of freshwater fish.<sup>11</sup>

AMS radiocarbon analysis conducted on a bone fragment gave the calibrated date 3741+/-36 BP, i.e. 1 Sigma range between 2202–2050 BC, with greater probability between 2202–2130 BC.<sup>12</sup>

### Skeletal grave 3

The grave was located 3.6 m southeast of grave 2. The body was placed in an oval burial pit, elongated in the southeast–northwest direction. The dimensions of the burial pit were 1.0 x 0.7 m, its relative depth up to 0.15 m, and it was filled with sterile grey–brown soil. The buried individual was also laid on its left side in a crouched position, with its head oriented

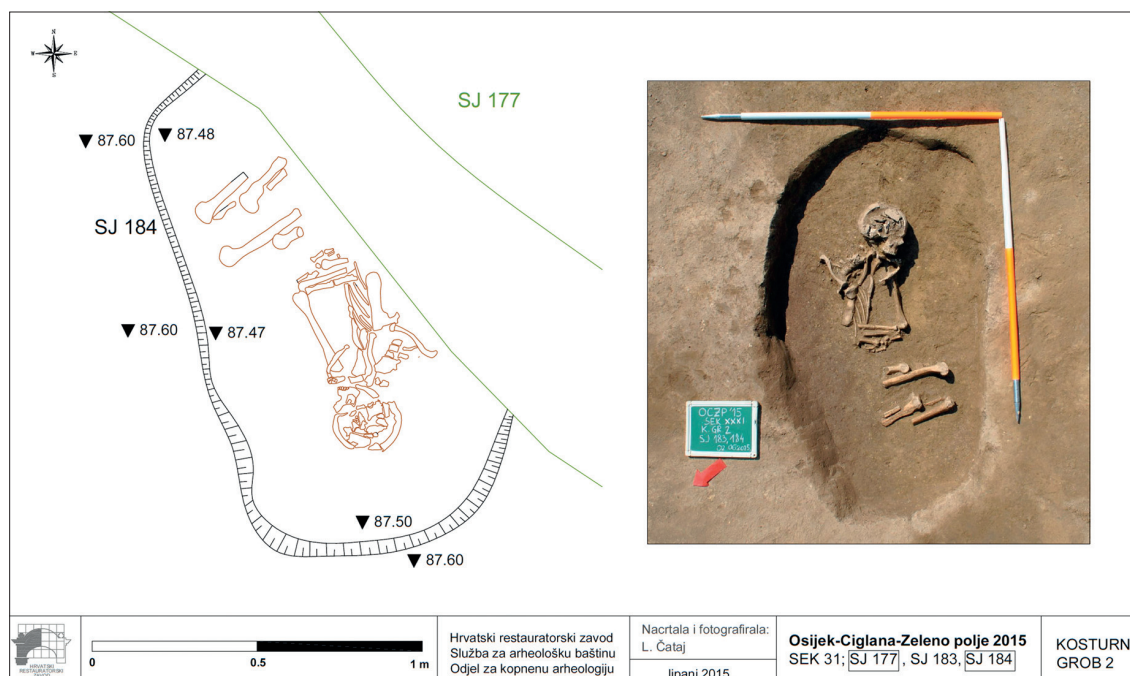
<sup>8</sup> Freeth 2000, 231.

<sup>9</sup> Freeth 2000, 231.

<sup>10</sup> Barnes 2012, 10.

<sup>11</sup> We wish to thank Emma Lightfoot, PhD, University of Cambridge, UK, for the interpretation of the preliminary results of the stable isotope analysis.

<sup>12</sup> Bone sample under the laboratory code UBA-29844, analysed at the Belfast University, gave the following 1 Sigma dates (68,3 % probability): 2202–2130 BC (0,703), 2086–2050 BC (0,297) and 2 Sigma dates (95,4 % probability): 2279–2250 BC (0,064), 2230–2220 BC (0,015), 2212–2033 BC (0,921).



Slika / Fig. 3. Kosturni grob 2 / Skeletal grave 2 (izradila / drafted by L. Čataj).

Analiza kosturnih ostataka pokojnika iz groba 3 pokazala je da ostaci pripadaju djetetu u dobi od 10 do 15 godina. Spol nije određen budući da se radi o djetetu, dok je dob procijenjena na temelju stupnja sraštavanja epifiza dugih kostiju i kronologije razvoja trajnih zubi.<sup>13</sup> Na vanjskoj je površini ulomaka lubanje uočena umjerena ektokranijalna poroznost. Njezina etiologija nije u potpunosti razjašnjena, ali se povezuje s deficitarnim bolestima, kao što su anemija prouzročena nedostatkom željeza, rahitis i skorbut.<sup>14</sup> Endokranijalne su lezije prisutne na zatiljnoj kosti (sl. 5). Lezije su rezultat upale i / ili krvarenja meningealnih krvnih žila, koje se pojavljuju kod različitih oboljenja, kao što su kronični meningitis, trauma, anemija, neoplazmi, skorbut, rahitis i tuberkuloza.<sup>15</sup>

<sup>13</sup> Scheuer, Black 2004.

<sup>14</sup> Roberts, Manchester 2005, 230.

<sup>15</sup> Lewis 2007, 141.

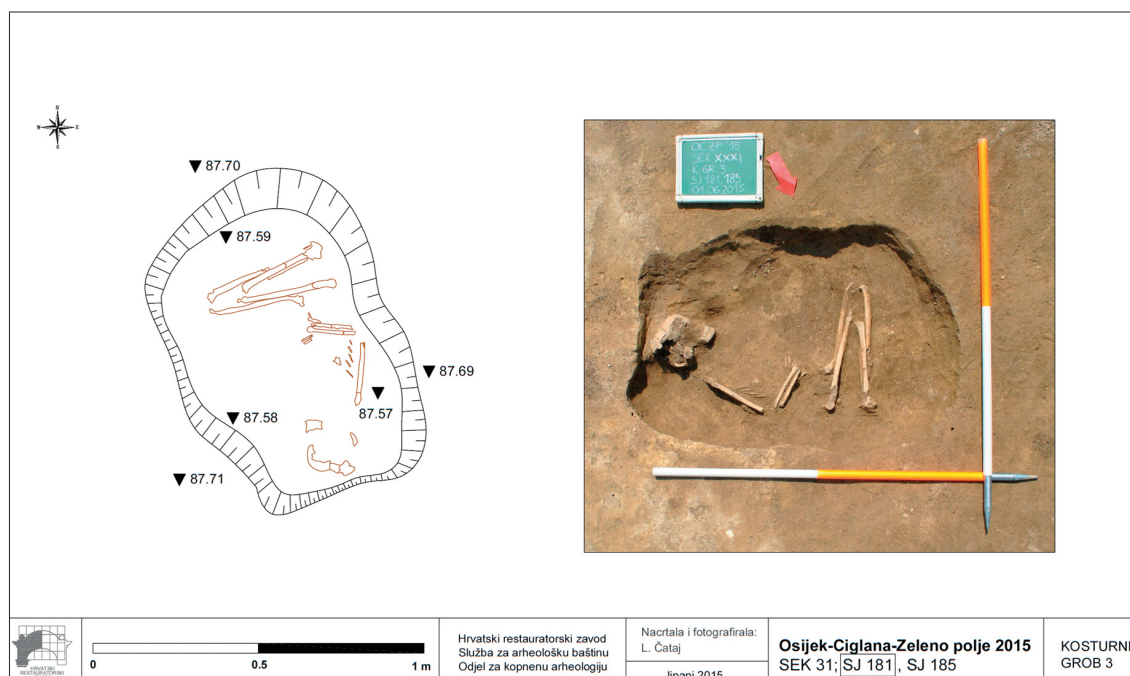
to the south-southeast. There were no grave goods or parts of garment found in the grave. The bones are poorly preserved, so those of the left part of the torso, left hand, and pelvis are missing. The right arm of the buried individual was placed over its lower abdomen (Fig. 4).

The skeletal remains of the individual from grave 3 belong to a juvenile aged between 10 and 15. The sex was not estimated since the individual is a child, while the age was estimated based on the degree of epiphyseal closure on long bones and the chronology of permanent teeth development.<sup>13</sup> Moderate ectocranial porosity was observed on the outer surface of the skull fragments. Its aetiology is unclear, even though it can be associated with deficiency-related diseases such as iron deficiency anaemia, rickets, and scurvy.<sup>14</sup> Endocranial lesions were observed on the occipital bone (Fig. 5). These lesions are caused by inflammation and/or haemorrhage of the meningeal blood vessels, occurring in chronic meningitis, trauma, anaemia, neoplasms, scurvy, rickets, and tuberculosis.<sup>15</sup>

<sup>13</sup> Scheuer, Black 2004.

<sup>14</sup> Roberts, Manchester 2005, 230.

<sup>15</sup> Lewis 2007, 141.



Slika / Fig. 4. Kosturni grob 3 / Skeletal grave 3 (izradila / drafted by L. Čataj).



Slika / Fig. 5. Endokranijalne lezije na zatiljnoj kosti djeteta iz kosturnog groba 3 / Endocranial lesions on the occipital bone of the child from grave 3 (snimila / photographed by P. Rajić Šikanjić).

#### Kosturni grob 4

Grob je bio smješten oko 2,6 m jugoistočno od groba 3. Grobna je raka bila ovalnog tlocrta, izdužena otprilike u smjeru jug – sjever, s vrlo blagim otklonom prema jugoistoku, odnosno sjeverozapadu. Dimenzije joj iznose 1,4 x 1,2 m, a najveća relativna dubina 0,19 m. Zapuna je groba bila ista kao u grobovima 2 i 3. Pokojnik je položen u zgrčenom, gotovo čučućem položaju, na lijevom boku, glave orijentirane prema jugu i ruku položenih na koljena (sl. 6). Ni u ovo-

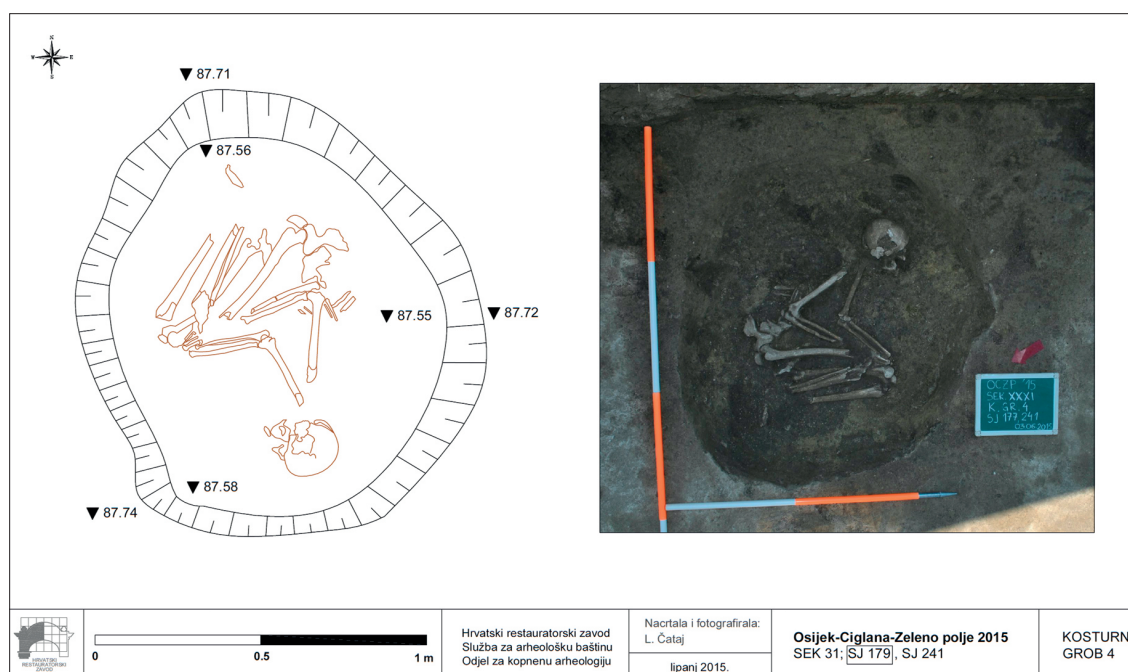
#### Skeletal grave 4

The grave was situated about 2.6 m southeast of grave 3. The burial pit was oval, elongated in almost south-north direction, with a very slight deviation to the southeast and northwest. Its dimensions were 1.4 x 1.2 m, and the maximum relative depth up to 0.19 m. The fill was the same as that in graves 2 and 3. The body was placed in a crouched, almost squatting position, on its left side, with its head oriented to the south and arms laid on its knees (Fig. 6). Grave goods or preserved parts of garment were not found in this grave as well.

The skeletal remains of the individual from grave 4 belong to an adult male aged between 35 and 50. The sex was determined based on morphological characteristics of the skull and pelvis, while the age was estimated based on morphological changes of the auricular surface of the ilium.<sup>16</sup> Several pathological conditions and nonmetric traits were observed on the remains. Severe degenerative changes were present on one hand bone as well as the first and second cervical vertebrae, whereas moderate changes were present on the remaining cervical and two thoracic vertebrae (Fig. 7). The

<sup>16</sup> Buikstra, Ubelaker 1994.





Slika / Fig. 6. Kosturni grob 4 / Skeletal grave 4 (izradila / drafted by L. Čataj).

me grobu nisu utvrđeni grobni prilozi, niti sačuvani dijelovi opreme, odnosno nošnje pokojnika.

Analiza je kosturnih ostataka pokojnika iz groba 4 pokazala da ostaci pripadaju odraslom muškarcu u dobi od 35 do 50 godina. Spol je osobe određen na temelju morfoloških karakteristika lubanje i zdjelice, dok je dob procijenjena na temelju morfoloških promjena na zglobnoj ploštini bočne kosti.<sup>16</sup> Na ostacima je uočeno nekoliko patoloških stanja i nemetričkih osobina. Jake su degenerativne promjene prisutne na jednoj kosti šake i prvom te drugom vratnom kralješku, dok su umjerene promjene prisutne na ostalim vratnim i dvama prsnim kralješcima (sl. 7). Glavno je obilježje degenerativne bolesti ili osteoartritisa upala i destrukcija kosti i pripadajuće hrskavice. Smatra se da su glavni uzroci nastanka povećana dob i genetska predispozicija te mehanički stres i pojačana fizička aktivnost.<sup>17</sup> Duž tijela obiju goljeničnih kostiju prisutna je blaga strijacija, nastala uslijed periostitisa,

<sup>16</sup> Buikstra, Ubelaker 1994.

<sup>17</sup> Roberts, Manchester 2005, 138.

characteristic features of degenerative disease or osteoarthritis are the inflammation and destruction of bone and cartilage. Advanced age and genetic predisposition, as well as mechanical stress and strenuous physical activity, are considered to be main factors in its development.<sup>17</sup> Slight striation is present on the diaphyses of both tibiae. It is the result of periostitis, inflammation of the periosteum, the outer membrane covering the bone. Periostitis can appear as a response of the skeletal system to a systemic, bacterial infection or as a response of the tissue to a fracture, cut, or blow.<sup>18</sup> Abscesses are present on maxillar canines, while several teeth in both jaws were lost ante mortem (Fig. 8). An abscess can form when tooth pulp is exposed to bacteria, causing an infection and the accumulation of pus, while ante mortem tooth loss can be a result of various individual factors, but also their interaction. Some of the factors are caries, calculus, abscess, heavy occlusal surface wear, periodontal disease and trauma, as well as a low level of hygiene, dietary habits, and physiological stress. Once the tooth falls out of its socket, soft tissue heals,

<sup>17</sup> Roberts, Manchester 2005, 138.

<sup>18</sup> Ortner 2003, 53.



Slika / Fig. 7. Jake degenerativne promjene na drugom vratnom kralješku muškarca iz kosturnog groba 4 / Severe degenerative changes on the second cervical vertebra of the male from grave 4 (snimila / photographed by P. Rajić Šikanjić).



Slika / Fig. 8. Apsces na gornjoj čeljusti muškarca iz kosturnog groba 4 / Maxillary abscess of the male from grave 4 (snimila / photographed by P. Rajić Šikanjić).

upale periosta, vanjskog sloja kosti. Periostritis može nastati kao odgovor koštanog sustava na sistemsku, bakterijsku infekciju ili kao odgovor tkiva na lom, posjekotinu ili udarac.<sup>18</sup> U gornjoj su čeljusti uočeni apscesi na očnjacima, dok je nekoliko zuba u obje čeljusti ispalo za života (sl. 8). Apsces može nastati kada se pulpa zuba izloži bakteriji, pri čemu dolazi do infekcije i stvaranja gnoja, dok gubitak zubi tijekom života može biti rezultat nekoliko pojedinačnih čimbenika, ali i njihova međudjelovanja. Neki od njih su karijes, kamenac, apsces, velika istrošenost zubne plohe, periodontalne bolesti i traume, ali i slaba higijena, prehrambene navike te fiziološki stres. Jednom kad zub ispadne iz svoje alveole, meko tkivo se zalječi, a potom se počinje zatvarati i prazna alveola.<sup>19</sup> U sagitalnom i lambdoidnom šavu prisutne su dodatne koštane pločice, manje ili veće kosti nepravilnog oblika, koje se mogu pronaći u svim lubanjskim šavovima.<sup>20</sup>

<sup>18</sup> Ortner 2003, 53.

<sup>19</sup> Freeth 2000, 231.

<sup>20</sup> Barnes 2012, 10.

and afterwards the empty socket begins to remodel.<sup>19</sup> Sutural ossicles are present in the sagittal and lambdoid suture. Ossicles are smaller or bigger irregularly shaped bones that can be found in all cranial sutures.<sup>20</sup>

#### Burial practice of the Early Bronze Age graves

A standardized burial practice can be noticed in the case of the three recorded Early Bronze Age graves. These are skeletal burials in which bodies were placed in the burial pit in a crouched position on their left side, with the head oriented to the south or southeast, and arms placed over the lower abdomen or on the knees. There were no grave goods placed within, and there were no preserved parts of their equipment or garments such as pins, jewellery, etc. Bodies were laid in elongated or oval burial pits, oriented in southeast-northwest direction. Based on the burials of the two adults, it can be concluded that the average length of the burial pit was around 1.4 m, while the child burial pit was of smaller dimensions. The distance between the graves is around 2.5–3.5 m, and their positions pos-

<sup>19</sup> Freeth 2000, 231.

<sup>20</sup> Barnes 2012, 10.



### Pogrebni ritual ranobrončanodobnih grobova

Kod tri evidentirana ranobrončanodobna groba može se primijetiti standardiziran pogrebni ritual. Riječ je o inhumacijskim ukopima kod kojih je pokojnik bio položen u raku u zgrčenom položaju na lijevom boku, s glavom orijentiranom prema jugu, odnosno jugoistoku, ruku položenih na donji dio trbuha ili na koljena. Uz pokojnike nisu priloženi grobni prilozi, a na pokojnicima nisu sačuvani dijelovi njihove opreme ili nošnje, poput igala, nakita i sl. Pokojnici su položeni u rake nepravilnoga izduženog do ovalnog tlocrta, orijentirane u smjeru jugoistok – sjeverozapad. Na osnovi ukopa dviju odraslih osoba može se zaključiti kako je prosječna dužina rake iznosila oko 1,4 m, a grob s ukopom djeteta manjih je dimenzija. Udaljenost između grobova kreće se od oko 2,5 do 3,5 m, a njihov razmještaj vjerojatno ukazuje na ukapanje u blago zaobljenoj liniji. U blizini nisu evidentirani drugi (istovremeni) grobovi, dok pokretni arheološki materijal iz kasnijeg kanala, koji leži sjeverno uz ranobrončanodobne grobove i sječe jednog od njih, ne indicira postojanje još kojega groba, koji je ukop kanala mogao uništiti. S obzirom na nedostatak grobnih priloga i opreme pokojnika te sterilnu zapunu grobova, njihovo je datiranje bilo moguće isključivo na osnovi radiokarbonskih datuma. Analiza uzorka kosti iz groba 2 ukazuje na razdoblje starije faze ranoga brončanog doba, stupnja Re Br A1. S većom vjerojatnošću grob se može datirati u 22. st. pr. Kr. Kosturni grobovi 3 i 4 pripisani su istome razdoblju na osnovi svog položaja u istoj grupaciji s grobom 1 te primijenjenog pogrebnog rituala. Dobiveni datum okvirno odgovara radiokarbonskim datumima za kraj vinkovačke kulture, odnosno kulturnog kompleksa Somogyvar – Vinkovci i početak kulture Kisapostag.

sibly indicate burial in a slightly curved line. There were no other (concurrent) graves registered nearby. The archaeological material found in the younger trench, which is situated north along the Early Bronze Age graves partially damaging one of them, does not indicate the existence of some other grave, which could have been destroyed by the digging of this trench. Considering the lack of grave goods and equipment or garment as well as the sterile fill of the grave pits, their dating was possible only on the basis of radiocarbon dates. Analysis of the bone sample from grave 2 indicates the period of the older phase of the Early Bronze Age, i.e. Re Br A1 stage. With greater probability this burial can be dated in the 22<sup>nd</sup> century BC. Skeletal graves 3 and 4 were ascribed to the same period based on their positions in the same group with grave 1 and the same burial practice. The obtained date roughly corresponds to the dates for the end of the Vinkovci Culture, i.e. cultural complex Somogyvar–Vinkovci, and the beginning of the Kisapostag Culture.

### 3. KULTUROLOŠKI OKVIR

#### Vučedolska kultura

Vučedolska je kultura svojim prepoznatljivim umjetničkim izrazom, bogatim duhovnim životom i dostignućima, prije svega na polju metalurgije, zasigurno jedna od najvažnijih manifestacija bakrenog doba na našim prostorima. Nastala na prostoru istočnoslavonskog i srijemskog prostora, krajem klasične faze<sup>21</sup> počinje svoju ekspanziju, koja poprima najveće razmjere u kasnoj fazi kulture. Iako se tada razbila na niz regionalnih varijanta, bila je prisutna na području od Praga na sjeveru do južne Bosne na jugu te od jugoistočnoalpskog prostora na zapadu do rumunjskog Banata na istoku. Još početkom brončanog doba, kada je u istočnoj Slavoniji zamjenjuje vinkovačka kultura, na prostoru srednje i jugoistočne Europe egzistiraju brojne postvučedolske manifestacije.<sup>22</sup>

U apsolutno kronološkim okvirima vučedolsku kulturu možemo datirati gotovo u cijelo 3. tis. pr. Kr. Radiokarbonski datumi s nalazišta Vučedol u rasponu su od 3100. do 2500. pr. Kr. i pripadaju vremenu rane i klasične faze vučedolske kulture<sup>23</sup>. Radiokarbonski datumi s Ervenice (ulica Matije Gupca 14) u Vinkovcima u rasponu su od 2890. do 2480. pr. Kr., a oni s Damića gradine u Starim Mikanovcima smještaju se u razdoblje između 2860. i 2470. pr. Kr. te pripadaju razdoblju klasične vučedolske kulture<sup>24</sup>. Uz stupanj B2 vežu se i dva korigirana radiokarbonska datuma s položaja Hotel Slavonija u Vinkovcima (2668.–2467. pr. Kr. i 2632.–2408. pr. Kr.)<sup>25</sup>. Dva mlađa kalibrirana datuma (2630.–2470. pr. Kr. i 2580.–2450. pr. Kr.) upućuju da je život na Vučedolu, kao i na Sarvašu i u Vinkovcima, trajao i u kasnoj fazi klasične vučedolske kulture (stupanj B2), suprotno prethodno

<sup>21</sup> S. Dimitrijević (1979, 278) podijelio je vučedolsku kulturu u tri osnovne faze: rana ili pretklasična (A), klasična (ranoklasična B1 i kasnoklasična B2) i kasna (C) vučedolska kultura.

<sup>22</sup> Dimitrijević 1979; Durman 1988.

<sup>23</sup> Balen 2010, 111–112, tab. 8.

<sup>24</sup> Miloglav 2016, tab. 1.

<sup>25</sup> Durman 2000, 96

### 3. CULTURAL FRAMEWORK

#### The Vučedol Culture

According to its recognizable artistic expression, rich spiritual life and achievements, especially in metallurgy, the Vučedol Culture is one of the most important Eneolithic occurrences in our region. Originating in the eastern Slavonian and Sarmatian area, it began its expansion at the end of its classical phase<sup>21</sup>, with the largest extent in the late phase of the culture. Although it disintegrated in a series of regional variants, the Vučedol Culture was present in the area from Prague in the north to southern Bosnia in the south and from the south-eastern Alpine area in the west to the Romanian Banat in the east. At the beginning of the Bronze Age, when it was replaced by the Vinkovci Culture in eastern Slavonia, numerous post-Vučedol appearances still existed in the area of Middle and South-eastern Europe.<sup>22</sup>

In the absolute-chronological framework, the Vučedol Culture can be dated to almost the entire 3<sup>rd</sup> millennium BC. Radiocarbon dates from the site Vučedol are in the range between 3100–2500 BC and belong to a period of the early and classical phase of the Vučedol Culture<sup>23</sup>. Radiocarbon dates from Ervenica (14 Matija Gubec Street) in Vinkovci range between 2890 and 2480 BC and the ones from Damića gradina in Stari Mikanovci between 2860 and 2470 BC, which puts them in the classical phase of the Vučedol Culture<sup>24</sup>. From Vinkovci, two corrected radiocarbon dates from the site Hotel Slavonia (2668–2467 BC and 2632–2408 BC) can be associated to the B2 stage<sup>25</sup>. Two younger calibrated dates (2630–2470 BC and 2580–2450 BC) indicate that life at the Vučedol site, as well as at Sarvaš and Vinkovci, lasted into the late phase of the classical Vučedol Culture (B2 stage), contrary to the earlier assumptions

<sup>21</sup> S. Dimitrijević (1979, 278) divided the Vučedol Culture into three main phases: early or preclassical (A), classical (early classical B1 and late classical B2) and late (C) Vučedol Culture.

<sup>22</sup> Dimitrijević 1979; Durman 1988.

<sup>23</sup> Balen 2010, 111–112, Tab. 8.

<sup>24</sup> Miloglav 2016, Table 1.

<sup>25</sup> Durman 2000, 96

iznesenim pretpostavkama da nije bio naseljen poslije B1 stupnja<sup>26</sup>. Najmlađi datum iz Rudine (2340.–2030. pr. Kr.) pripada razdoblju ranoga brončanog doba<sup>27</sup>.

Najveći broj ukopa vučedolske kulture pronađen je unutar naselja. Na eponimnom nalazištu Vučedol pokojnici u zgrčenom položaju polagani su u napuštene jame-podrume, često s velikom količinom priloga.<sup>28</sup> Među njima najpoznatiji su brojni grupni ukopi. Grob „bračnog para“ s oba pokojnika u zgrčenom položaju i velikom količinom priloga iskopao je 1938. godine na vučedolskom Gradcu R. R. Schmidt.<sup>29</sup> U grobu 3, iskopanom 1985. godine na Vinogradu Streim, nalazili su se ostaci osam pokojnika (jedan muškarac, šest žena i jedna djevojčica) na dnu 4 m duboke jame, zatrpani komadima drvenog ugljena. Šest je pokojnika na lubanjama imalo udubljenja. Glava jednog pokojnika nalazila se u lesnom naboju kojim je „zapečaćena“ grobnica. U grobu, datiranom između 3100. i 2750. pr. Kr., pronađeno je nekoliko cijelih posuda i životinjske kosti.<sup>30</sup> Osim navedenih, poznato je još nekoliko grupnih i pojedinačnih ukopa u jamama.<sup>31</sup> Tijekom 2006. godine istraženo je nekoliko grobova ukopanih u sloj, bez vidljive grobne rake. Ispod i oko kostura, orijentiranih jugozapad – sjeveroistok ili jugoistok – sjeverozapad, pronađeno je dosta vučedolskih nalaza. Jedan od kostura datiran je u razdoblje između 2900. i 2840. pr. Kr.<sup>32</sup>

Od ovoga pogrebnog rituala odstupaju ukopi pod tumulima, pronađeni u Velikoj humci pokraj Batajnice i Humci pokraj Velikog Begeja u Vojki, u kojima su pokojnici spaljeni i položeni u urne.<sup>33</sup>

<sup>26</sup> Dimitrijević 1979, 278, 303; Balen 2010, 111–112, tab. 8.

<sup>27</sup> Durman-Obelić 1989, tab. 1.

<sup>28</sup> Durman 1988, 20; Balen 2010, 115–116.

<sup>29</sup> Schmidt 1945, 41–44.

<sup>30</sup> Durman 2000, 42–56.

<sup>31</sup> Durman 1988, 20; Hoti 1994.

<sup>32</sup> Balen 2010, 115–116.

<sup>33</sup> Durman 1988, 20.

that it was not settled after the B1 stage<sup>26</sup>. The youngest date from Rudina (2340–2030 BC) belongs to the period of the Early Bronze Age.<sup>27</sup>

The largest number of Vučedol Culture burials was found within the settlement. At the eponymous site Vučedol, bodies in crouched position were placed in abandoned storage pits, often with numerous grave goods.<sup>28</sup> The best known among them are numerous group burials. A grave of a “couple”, with both of the buried individuals laid in a crouched position, and with a lot of grave goods, was excavated in 1938 by R. R. Schmidt at the site Vučedol Gradac.<sup>29</sup> In grave 3 at Vinograd Streim, excavated in 1985, there were remains of eight buried individuals (one male, six female, and one girl) at the bottom of a 4 m deep pit, covered with pieces of charcoal. Six of the individuals had a dent on the skull. The head of one of the buried individuals was in the loess charge with which the grave was sealed. In the grave, dated between 3100–2750 BC, a few whole vessels and some animal bones were found.<sup>30</sup> There are some more group and individual burials in pits beside the mentioned ones.<sup>31</sup> Several graves dug into the cultural layer, without visible burial pits, were excavated in 2006. Under and around the southwest-northeast or southeast-northwest oriented skeletons, a lot of finds of the Vučedol Culture were discovered. One of the skeletons is dated to the period between 2900–2840 BC.<sup>32</sup>

Burials under burial mounds at Velika humka near Batajnica and Humka near Veliki Begej in Vojka differ from this burial practice. The bodies were burned and placed in urns.<sup>33</sup>

<sup>26</sup> Dimitrijević 1979, 278, 303; Balen 2010, 111–112, Tab. 8.

<sup>27</sup> Durman-Obelić 1989, Tab. 1.

<sup>28</sup> Durman 1988, 20; Balen 2010, 115–116.

<sup>29</sup> Schmidt 1945, 41–44.

<sup>30</sup> Durman 2000, 42–56.

<sup>31</sup> Durman 1988, 20; Hoti 1994.

<sup>32</sup> Balen 2010, 115–116.

<sup>33</sup> Durman 1988, 20.

### Vinkovačka kultura

Za sada raspoložemo s nekoliko radiokarbonskih datuma za vinkovačku kulturu na području Slavonije. Dva uzorka iz Vinkovaca, s položaja Hotel, pronađena u poremećenom sloju s materijalom vučedolske i vinkovačke kulture, dala su rezultate  $3810 \pm 140$  (Z-1817) i  $3830 \pm 140$ , odnosno kalibrirane datume 2470.–2040. pr. Kr. i 2480.–2040. pr. Kr.<sup>34</sup> S. Forenbaher ove uzorke pripisuje vinkovačkoj kulturi i navodi naknadno kalibrirane datume za spomenute uzorke 2455.–2140. pr. Kr. (Z-1817) i 2460.–2146. pr. Kr. (Z-1818).<sup>35</sup> S područja Vinkovaca potječe i jedan paljevinski grob vinkovačke kulture apsolutno datiran u 2455.–2306. pr. Kr. ( $3881 \pm 25$ ).<sup>36</sup> Na nalazištu Josipovac Punitovački – Veliko polje I pronađeni su ostaci naselja i jedan paljevinski grob. Radiokarbonski su analizirani uzorci iz dvaju jamskih objekata te su dobiveni datumi: 2470.–2350. pr. Kr. ( $3926 \pm 24$ ) i 2390.–2210. pr. Kr. ( $3840 \pm 40$ ).<sup>37</sup> Tri uzorka s nalazišta Čepinski Martinci – Dubrava, od kojih dva iz grobova i jedan iz jame, dala su rezultate od 26. st. pr. Kr. do početka 23. st. pr. Kr.<sup>38</sup> Primjetno je kako se postojeći datumi za vinkovačku kulturu na području Slavonije kreću u širokome vremenskom rasponu, posebice imajući u vidu datume s položaja Hotel u Vinkovcima. Međutim, datumi za Josipovac Punitovački, dva datuma za Čepinske Martince te onaj za grob iz Vinkovaca dobro se poklapaju, ukazujući na razdoblje od sredine 25. st. pr. Kr. do 23. st. pr. Kr. U svakom slučaju, osim široko datiranih uzoraka s Hotela u Vinkovcima, nema poznatih datuma za vinkovačku kulturu na području Slavonije mlađih od 2200. pr. Kr.

Nekoliko radiokarbonskih datuma za kulturni kompleks Somogyvar – Vinkovci poznato je sa susjednog prostora, iz mađarskog dijela Baranje. Uzorci s lokaliteta

<sup>34</sup> Benkő *et al.* 1989, 998–999, tab. 1; Durman, Obelić 1989, 1006, tab. 1; Srdoč *et al.* 1989, 87.

<sup>35</sup> Forenbaher 1993, 342, 348, fig. 8.

<sup>36</sup> Kalafatić 2006.

<sup>37</sup> Hirschler 2009, 145, tab. 1.

<sup>38</sup> Teržan, Črešnar 2014, 664, 666, sl. 10.

### The Vinkovci Culture

For now, we have several radiocarbon dates for the Vinkovci Culture in the Slavonian area. Two samples from the site Hotel at Vinkovci, found in a disturbed layer with finds of Vučedol and Vinkovci cultures, gave the results  $3810 \pm 140$  (Z-1817) and  $3830 \pm 140$ , i.e. calibrated dates 2470–2040 BC and 2480–2040 BC.<sup>34</sup> S. Forenbaher attributes these samples to the Vinkovci Culture and cites subsequently calibrated dates for mentioned samples of 2455–2140 BC (Z-1817) and 2460–2146 BC (Z-1818).<sup>35</sup> From the Vinkovci area, there is also one incineration grave of the Vinkovci Culture, absolutely dated 2455–2306 BC ( $3881 \pm 25$ ).<sup>36</sup> At the site Josipovac Punitovački–Veliko polje I, the remains of a settlement and one incineration grave were found. Samples from two pits were radiocarbon analysed and dated: 2470–2350 BC ( $3926 \pm 24$ ) and 2390–2210 BC ( $3840 \pm 40$ ).<sup>37</sup> Three samples from the site Čepinski Martinci–Dubrava, two of them from graves and one from a pit, gave the results from the 26<sup>th</sup> century BC to the beginning of the 23<sup>rd</sup> century BC.<sup>38</sup> It can be noted that existing dates for the Vinkovci Culture in the territory of Slavonia extend across a wide time range, especially considering the dates from the site Hotel at Vinkovci. However, dates from Josipovac Punitovački, two dates from Čepinski Martinci, and one from the grave at Vinkovci correspond well, indicating the period from the mid-25<sup>th</sup> century BC to the 23<sup>rd</sup> century BC. In any case, except the wide dated samples from Hotel at Vinkovci, there are no known dates for the Vinkovci Culture in Slavonia after 2200 BC. Few radiocarbon dates for the Somogyvar–Vinkovci cultural complex are known from the neighbouring area, the Hungarian part of Baranja. Samples from the site Nagyarpad gave calibrated dates: Bln-1634 – 2460–2444 BC, 2440–2340 BC ( $3885 \pm 40$ ) and Bln-1945 – 2490–2482 BC, 2470–2310 BC ( $3900 \pm 60$ ), while for the sample from the site Szava a date of 2582–2468 BC ( $4000 \pm 50$ ) was

<sup>34</sup> Benkő *et al.* 1989, 998–999, Tab. 1; Durman, Obelić 1989, 1006, Tab. 1; Srdoč *et al.* 1989, 87.

<sup>35</sup> Forenbaher 1993, 342, 348, Fig. 8.

<sup>36</sup> Kalafatić 2006.

<sup>37</sup> Hirschler 2009, 145, Tab. 1.

<sup>38</sup> Teržan, Črešnar 2014, 664, 666, Fig. 10.



Nagyarpad dali su kalibrirane datume: Bln-1634 – 2460.–2444. pr. Kr., 2440.–2340. pr. Kr. (3885±40) i Bln-1945 – 2490.–2482. pr. Kr., 2470.–2310. pr. Kr. (3900±60), dok je za uzorak s nalazišta Szava dobiven datum 2582.–2468. pr. Kr. (4000±50).<sup>39</sup> Najbrojniji radiokarbonski datumi za Somogyvar – Vinkovci kulturni kompleks potječu s područja Slovenije. Riječ je o kalibriranim datumima dobivenim za uzorke s niza lokaliteta, koji datiraju kulturni kompleks Somogyvar – Vinkovci od kraja 27. st. pr. Kr. do početka 22. st. pr. Kr., pri čemu se intervali veće vjerojatnosti kreću između kraja 26. st. pr. Kr. i kraja 23. st. pr. Kr., a najviše ih je između 25. st. pr. Kr. i 24. st. pr. Kr.<sup>40</sup> Dendrokronološki datumi s Ljubljanskog barja ukazuju na trajanje ovog kompleksa tijekom 2. polovice 26. st. pr. Kr. i 25. st. pr. Kr.<sup>41</sup> Slovenski radiokarbonski rezultati odgovaraju onima s područja Hrvatske i Mađarske. B. Teržan i M. Črešnar, na osnovi svih poznatih datuma, kulturni kompleks Somogyvar – Vinkovci datiraju od 26. st. pr. Kr., s najvećim procvatom tijekom 25. st. pr. Kr. i prve polovice 24. st. pr. Kr., dok se polagano gasi tijekom druge polovice 24. st. pr. Kr. i prve polovice 23. st. pr. Kr.<sup>42</sup> Međutim, autori ističu kako nekoliko datuma sugerira preživaljavanje Somogyvar – Vinkovci kulturnog kompleksa do 21. st. pr. Kr.<sup>43</sup>

O pogrebnom ritualu nositelja vinkovačke kulture, odnosno kulturnog kompleksa Somogyvar – Vinkovci svjedoči nekolicina evidentiranih grobova. Na području samog grada Osijeka pronađena su dva paljevinska žarna groba,<sup>44</sup> naknadno pripisana vinkovačkoj kulturi.<sup>45</sup> U obližnjim Čepinskim Martincima istraženo je također nekoliko paljevinskih grobova.<sup>46</sup> I preostali grobovi

obtained.<sup>39</sup> The most numerous radiocarbon dates for the Somogyvar–Vinkovci cultural complex come from the Slovenian territory. These are calibrated dates obtained for the samples from the numerous sites, which date the Somogyvar–Vinkovci cultural complex between the end of the 27<sup>th</sup> century BC and the beginning of the 22<sup>nd</sup> century BC, whereas the intervals of higher probability range between the end of the 26<sup>th</sup> century BC and the end of the 23<sup>rd</sup> century BC, with the most of them between the 25<sup>th</sup> century BC and 24<sup>th</sup> century BC.<sup>40</sup> Dendrochronological dates from Ljubljansko barje indicate the time span between the 2<sup>nd</sup> half of the 26<sup>th</sup> century BC and the 25<sup>th</sup> century BC.<sup>41</sup> The Slovenian results correspond with those from the Croatian and Hungarian areas. On the basis of all the known dates, B. Teržan and M. Črešnar date the Somogyvar–Vinkovci cultural complex from the 26<sup>th</sup> century BC, with its most prosperous period during the 25<sup>th</sup> and the first half of the 24<sup>th</sup> century BC, while in the second half of the 24<sup>th</sup> and in the first half of the 23<sup>th</sup> century BC it gradually diminished.<sup>42</sup> However, authors point out that some dates indicate its survival to the 21<sup>st</sup> century BC.<sup>43</sup>

Few recorded graves testify about the burial practice of the bearers of the Vinkovci Culture, i.e. the Somogyvar–Vinkovci cultural complex. In the city of Osijek, two incineration urn graves were found,<sup>44</sup> later attributed to the Vinkovci Culture.<sup>45</sup> At the nearby Čepinski Martinci, several incineration graves were also excavated.<sup>46</sup> The remaining burials of the Vinkovci Culture from eastern Slavonia and western Sylvania were exclusively incineration burials as well. Urn burials were recorded at the sites Selci Đakovački,<sup>47</sup> Josipovac Punitovački–Veliko polje I<sup>48</sup>, and Vinkovci–Duga ulica.<sup>49</sup> Incinera-

<sup>39</sup> Raczky *et al.* 1992, 43.

<sup>40</sup> Teržan, Črešnar 2014, 663–665, sl. 8.

<sup>41</sup> Velušček *et al.* 2011; Velušček 2014, 639–641.

<sup>42</sup> Teržan, Črešnar 2014, 665, 666, sl. 11.

<sup>43</sup> Teržan, Črešnar 2014, 674.

<sup>44</sup> Bulat 1977, 13–17, T. III: 1–2.

<sup>45</sup> Šimić 2001b, 24, sl. 1, sl. 2.

<sup>46</sup> Zahvaljujemo dr. sc. Hrvoju Kalafatiću s Instituta za arheologiju u Zagrebu na podacima za nalaze s lokaliteta Čepinski Martinci – Dubrava.

<sup>39</sup> Raczky *et al.* 1992, 43.

<sup>40</sup> Teržan, Črešnar 2014, 663–665, Fig. 8.

<sup>41</sup> Velušček *et al.* 2011; Velušček 2014, 639–641.

<sup>42</sup> Teržan, Črešnar 2014, 665, 666, Fig. 11.

<sup>43</sup> Teržan, Črešnar 2014, 674.

<sup>44</sup> Bulat 1977, 13–17, T. III: 1–2.

<sup>45</sup> Šimić 2001b, 24, Fig. 1, Fig. 2.

<sup>46</sup> We wish to thank Hrvoje Kalafatić, PhD, The Institute of Archaeology, Zagreb, for the information about the findings from the site Čepinski Martinci–Dubrava.

<sup>47</sup> Kalafatić, Hršak 2007.

<sup>48</sup> Hirschler 2009, 149, Fig. 5, Fig. 8, T. 9: 3, 4.

<sup>49</sup> Kalafatić 2006.



vinkovačke kulture s područja istočne Slavonije i zapadnog Srijema isključivo su paljevinski. Po jedan žarni grob zabilježen je na nalazištima Selci Đakovački,<sup>47</sup> Josipovac Punitovački – Veliko polje I<sup>48</sup> i Vinkovci – Duga ulica.<sup>49</sup> Također, paljevinski su grobovi registrirani u okolici Bjelovara na lokalitetu Drljanovac<sup>50</sup> te na području oko ušća Save u Dunav, na nalazištima Rospri Čuprija<sup>51</sup> i Belegiš – Gradac.<sup>52</sup> Kosturni su grobovi u sklopu vinkovačke kulture, odnosno kulturnog kompleksa Somogyvar – Vinkovci vrlo rijetki. N. Tasić navodi nalaz dvaju kosturnih grobova na nekropoli Gradac u Belegišu, koji su se nalazili u blizini paljevinskih grobova vinkovačke kulture. Pokojnici su bili položeni u zgrčenom položaju, a u jednom od kosturnih grobova pronađen je vrč tipičan za ovu kulturu.<sup>53</sup> Na osnovi nalaza s nekropole Gradac u Belegišu, M. Garašanin je zaključio kako su u vinkovačkoj kulturi primjenjivana oba načina sahranjivanja: paljevinski i kosturni, pri čemu su u kosturnim grobovima pokojnici polagani u zgrčenom položaju na lijevom boku, dok su kod paljevinskih ukopa ostaci pokojnika stavljeni u žare.<sup>54</sup>

Na području Mađarske ravnine grobovi Somogyvar – Vinkovci kulturnog kompleksa prilično su rijetki. Dva su paljevinska groba poznata iz Keszthelyja, a postoji mogućnost da materijal s lokaliteta Ajka, Csabrendek i Monostorapati potječe iz uništenih grobova.<sup>55</sup> Jedina su dva kosturna groba evidentirana u južnoj Transdanubiji, na nalazištu Kaposujlak. Mlađa je muška osoba pokopana u zgrčenom položaju na lijevom boku u raku na dnu jarka, dok su ostaci ženske osobe pronađeni u nepravilnom položaju u većoj jami.<sup>56</sup> Razmatrajući poznate grobne

tion graves were also registered near Bjelovar at the site Drljanovac,<sup>50</sup> and in the area around the confluence of the Sava and Danube rivers at the sites Rospri Čuprija<sup>51</sup> and Belegiš–Gradac.<sup>52</sup> Skeletal graves are very rare in the Vinkovci Culture, i.e. Somogyvar–Vinkovci cultural complex. N. Tasić mentions two skeletal graves at the cemetery Gradac in Belegiš, which were situated near the incineration burials of the Vinkovci Culture. The bodies were laid in a crouched position, and in one grave there was a jug typical for this culture.<sup>53</sup> Based on the finds from the cemetery at Gradac in Belegiš, M. Garašanin concluded that both burial rites were practiced in the Vinkovci Culture; incineration and skeletal, wherein the bodies in skeletal graves were placed in a crouched position on the left side, while in incineration graves the remains were placed in urns.<sup>54</sup>

In the Hungarian area, flat graves of the Somogyvar–Vinkovci cultural complex are quite rare. Two incineration graves are known from Keszthely, and there is a possibility that finds from the sites Ajka, Csabrendek, and Monostorapati come from destroyed graves.<sup>55</sup> The only two skeletal burials were registered in southern Transdanubia, at the site Kaposujlak. A young male was buried in a crouched position on his left side at the bottom of the trench, while the remains of a female were found in an irregular position in a bigger pit.<sup>56</sup> Considering the known grave burials of the Somogyvar–Vinkovci cultural complex, G. Kulcsar noted that skeletal burials are rare in Slavonia and Syrmia and she connected them with the northward influences of the migrants along the rivers Drina, Danube and Tisza.<sup>57</sup> Known finds indicate that the dominant rite in the area of the Vinkovci Culture in Slavonia and Syrmia was incineration burial in urns. Certainly there were different burial practices in the area of the Somogyvar–Vinkovci cultural complex, wherein

<sup>47</sup> Kalafatić, Hršak 2007.

<sup>48</sup> Hirschler 2009, 149, sl. 5, sl. 8, T. 9: 3, 4.

<sup>49</sup> Kalafatić 2006.

<sup>50</sup> Majnarić-Pandžić 1981, 37.

<sup>51</sup> Todorović 1956, 40–41.

<sup>52</sup> Trbuhović 1956, 147–149.

<sup>53</sup> Tasić 1974, 190, 192; 1983, 48; 1984, 24–25.

<sup>54</sup> Garašanin 1983, 473.

<sup>55</sup> Kiss, Kulcsar 2007, 108–109.

<sup>56</sup> Somogyi 2002; Zoffmann 2002, 59.

<sup>50</sup> Majnarić-Pandžić 1981, 37.

<sup>51</sup> Todorović 1956, 40–41.

<sup>52</sup> Trbuhović 1956, 147–149.

<sup>53</sup> Tasić 1974, 190, 192; 1983, 48; 1984, 24–25.

<sup>54</sup> Garašanin 1983, 473.

<sup>55</sup> Kiss, Kulcsar 2007, 108–109.

<sup>56</sup> Somogyi 2002; Zoffmann 2002, 59.

<sup>57</sup> Kulcsar 2009, 274.

ukope Somogyvar – Vinkovci kompleksa, G. Kulcsar je istaknula kako su u Slavoniji i Transdanubiji kosturni grobovi rijetki te ih je povezala s utjecajima ili migracijama prema sjeveru duž Drine, Dunava i Tise.<sup>57</sup> Poznati nalazi za sada svakako ukazuju na to kako je paljevinski ukop u žarama bio dominantan pogrebni ritual vinkovačke kulture na području Slavonije i Srijema. Svakako, na području kulturnog kompleksa Somogyvar – Vinkovci prisutni su različiti pogrebni rituali, pri čemu se mogu nazrijeti određene regionalne varijante.<sup>58</sup> U tome smislu, pokapanje u paljevinskim žarnim grobovima mogla bi biti karakteristika prostora Slavonije i Srijema.

#### Kisapostag kultura

Nakon završetka života kulturnog kompleksa Somogyvar – Vinkovci, na području njegove rasprostranjenosti nastupaju značajne promjene uslijed kojih dolazi do formiranja niza novih kulturnih manifestacija. Na prostoru Transdanubije i u sjevernom dijelu Slovenije razvija se Kisapostag kultura. Slični nalazi iz zapadnog dijela Hrvatske pripisani su tzv. protolicenskoj fazi licenskokeramičke kulture,<sup>59</sup> dok se na jugoistočnom području formira vatinska kultura.<sup>60</sup> U sjeveroistočnom dijelu Hrvatske izrazito su rijetki nalazi koji se mogu pripisati postvinkovačkom horizontu. U literaturi se spominje nekropola Kisapostag kulture u Lugu u Baranji. Istraživali su je mađarski arheolozi, a materijal, pohranjen u Mađarskoj, ostao je neobjavljen.<sup>61</sup> Ulomak karakteristično ukrašenog lonca Kisapostag kulture pronađen je na Pristaništu u Osijeku.<sup>62</sup> Dijelovi keramičkih posuda, dekoriranih na način specifičan za Kisapostag kulturu, evidentirani su i na đakovačkom području (lokalitet Kuševac – Grabrovac), a budući da su

<sup>57</sup> Kulcsar 2009, 274.

<sup>58</sup> Kulcsar 2009, 269.

<sup>59</sup> Marković 2003.

<sup>60</sup> Tasić 2004, 28, 30–31; Ložnjak Dizdar 2007, 315, 321.

<sup>61</sup> Patay 1938, 40; Vinski-Gasparini 1956, 24; Bulat 1970, 65; Minichreiter 1987, 60; Šimić 2012, 202.

<sup>62</sup> Šimić 2001b, 25, sl. 3.

some regional differences can be noticed.<sup>58</sup> Therefore, the burial in the incineration urn graves could be characteristic of the Slavonian and Sarmian territory.

#### The Kisapostag Culture

After the end of Somogyvar–Vinkovci cultural complex, there were significant changes in its distribution area, due to which a number of new cultural instances were formed. In Transdanubia and the northern part of Slovenia, the Kisapostag Culture developed. Similar finds from the western part of Croatia are ascribed to the so-called “proto-Litzen phase of the Litzenpottery Culture”,<sup>59</sup> while in the south-east area, the Vatin Culture was formed.<sup>60</sup> In the north-eastern part of Croatia, finds which can be attributed to a post-Vinkovci horizon are extremely rare. In the literature, there is a mention of a cemetery of the Kisapostag Culture at Lug in Baranja. It was excavated by Hungarian archaeologists, and the material, stored in Hungary, was not published.<sup>61</sup> A fragment of a characteristically decorated pot of the Kisapostag Culture was found at Pristanište in Osijek.<sup>62</sup> Fragments of the ceramic vessels ornamented in the style specific for the Kisapostag Culture were also registered in the Đakovo area (site Kuševac–Grabrovac), and since they were found in a closed context together with Transdanubian encrusted pottery, it can be

<sup>58</sup> Kulcsar 2009, 269.

<sup>59</sup> Marković 2003.

<sup>60</sup> Tasić 2004, 28, 30–31; Ložnjak Dizdar 2007, 315, 321.

<sup>61</sup> Patay 1938, 40; Vinski-Gasparini 1956, 24; Bulat 1970, 65; Minichreiter 1987, 60; Šimić 2012, 202.

<sup>62</sup> Šimić 2001b, 25, Fig. 3.

pronađeni u objektu zajedno s transdanubijskom inkrustiranom keramikom, može se zaključiti kako pripadaju kasnoj fazi kulture.<sup>63</sup> Materijal Kisapostag obilježja pojavljuje se na području sjeverne Hrvatske sve do Posavine na jugu, o čemu svjedoče nalazi s lokaliteta Palež kod Gornjeg Slatinika na južnim obroncima Dilja,<sup>64</sup> kao i nalazišta s područja Slavanskog Broda. Na području brodske Tvrđave, na položajima Hotel – Stožerna vojarna i Oružni trg, istražen je dio naselja Kisapostag kulture s ukopanim, odnosno poluukopanim objektima,<sup>65</sup> dok su u sjeveroistočnom dijelu grada ostaci naselja ove kulture evidentirani na lokaciji Preljev P3 uz potok Glogovnicu.<sup>66</sup> Pregledom pokretnoga arheološkog materijala iz Novigrada na Savi, pohranjenog u Muzeju Brodskog Posavlja, također su ustanovljeni ulomci posuda Kisapostag kulture. Reevaluacijom nalaza, objavljenih kao licenska keramika, ustanovljena je prisutnost keramike Kisapostag karakteristika na još nizu nalazišta sjeverne Hrvatske.<sup>67</sup> Na području su Požeške kotline ovakvi nalazi zabilježeni na lokalitetu Klasje kod Pleternice,<sup>68</sup> a u okolici Našica u Vučjaku Feričanačkom.<sup>69</sup> Ostali nalazi Kisapostag kulture, odnosno „protolicenske faze“, evidentirani su u sjeverozapadnom dijelu Hrvatske. Među njima se ističe materijal iz Rađinca kod Čazme, gdje su utvrđeni ostaci jednoslojnog naselja s ukopanim objektima.<sup>70</sup> Spomenuti materijal Z. Marković pripisuje protolicenskoj

concluded that they belong to the late phase of the culture.<sup>63</sup> Material with Kisapostag characteristics appears in northern Croatia, and as south as Posavina, as evidenced by the finds from the site Palež near Gornji Slatinik on the southern slopes of Dilj Mountain,<sup>64</sup> as well as the sites from the area of Slavonski Brod. In the area of Tvrđava at Slavonski Brod, at locations Hotel/Stožerna vojarna and Oružni trg, a part of a settlement of the Kisapostag Culture with dugout and semi-dugout buildings was excavated,<sup>65</sup> while in the north-eastern part of the city, remains of the settlement of this culture were registered at location Preljev P3, by the Glogovnica Creek.<sup>66</sup> When reviewing the archaeological finds from Novigrad na Savi, stored at the Brodsko Posavlje Museum, fragments of Kisapostag vessels were also identified. Re-evaluation of the finds published in the literature as Litzen pottery revealed the occurrence of pottery with Kisapostag characteristics at a number of sites in northern Croatia.<sup>67</sup> In the Požega basin, such finds were recorded at the site Klasje near Pleternica,<sup>68</sup> and around Našice at Vučjak Feričanački.<sup>69</sup> Other finds of the Kisapostag Culture, i.e. the “proto-Litzen phase” were registered in the north-western part of Croatia. Among them, finds from Rađinci near Čazma stand out, where the remains of a single layer settlement with dugout buildings were found.<sup>70</sup> Z. Marković ascribes them to the proto-Litzen phase within his classification of Litzen pottery in northern Croatia, wherein this phase would be contemporaneous with

<sup>63</sup> Martinec 2002; Marković 2003, 127; Črešnar 2010, 116–117.

<sup>64</sup> Istraživanja na lokalitetu Palež provela je tvrtka „Geoarheo“, a pokretni su nalazi pohranjeni u Muzeju Brodskog Posavlja. Ovom prilikom zahvaljujemo višim kustosima Arheološkog odjela Muzeja Brodskog Posavlja L. Miklik Lozuk i J. Lozuku na podacima i mogućnosti uvida u materijal s lokaliteta Palež, Slavonski Brod – Tvrđava i Novigrad na Savi.

<sup>65</sup> Istraživanja na prostoru Tvrđave u Slavanskom Brodu proveo je Muzej Brodskog Posavlja. Istraživanja je vodio J. Lozuk, a provedena su 2003. godine na Oružnom trgu i 2008. godine na položaju Hotel – Stožerna vojarna. Riječ je o dijelovima istoga ranobrončanodobnog naselja Kisapostag kulture.

<sup>66</sup> Maljković 2012.

<sup>67</sup> Črešnar 2010.

<sup>68</sup> Majnarić–Pandžić 1977, 69, sl. 2; Črešnar 2010, 125.

<sup>69</sup> Marković 1994, 120; 2003, T. 6: 3; Črešnar 2010, 125.

<sup>70</sup> Štrk 1984.

<sup>63</sup> Martinec 2002; Črešnar 2010, 116–117; Marković 2003, 127.

<sup>64</sup> Excavations at the site Palež were carried out by “Geoarheo”, and removable finds are stored at the Brodsko Posavlje Museum. We wish to thank the senior curators of the Archaeology Department L. Miklik Lozuk and J. Lozuk for information and the possibility of insight into the archaeological finds from sites Palež, Slavonski Brod-Tvrđava, and Novigrad na Savi.

<sup>65</sup> Excavations at the site Tvrđava in Slavonski Brod were carried out by the Brodsko Posavlje Museum. The head of the excavations was J. Lozuk, and they were carried out in 2003 at Oružni trg, and in 2008 at Hotel/Stožerna vojarna. At these locations, parts of the same Early Bronze Age settlement of the Kisapostag Culture were found.

<sup>66</sup> Maljković 2012.

<sup>67</sup> Črešnar 2010.

<sup>68</sup> Majnarić–Pandžić 1977, 69, Fig. 2; Črešnar 2010, 125.

<sup>69</sup> Marković 1994, 120; 2003, T. 6: 3; Črešnar 2010, 125.

<sup>70</sup> Štrk 1984.

fazi u sklopu svojega stupnjevanja liscenske keramike u sjevernoj Hrvatskoj, pri čemu bi ova faza bila vremenski paralelna ranijoj i klasičnoj Kisapostag kulturi.<sup>71</sup> M. Črešnar materijal iz Rađinca svrstava u ranu fazu Kisapostag kulture i zaključuje kako se prva i druga faza ove kulture na području Slovenije mogu izjednačiti, ne samo kronološki već i kulturno, s protoliscenskim stupnjem Z. Markovića.<sup>72</sup>

Postojeći nalazi Kisapostag karakteristika s područja sjeverne Hrvatske, kao i oni proizašli iz novijih istraživanja na prostoru slovenskog dijela Štajerske i Prekmurja,<sup>73</sup> svjedoče da granicu rasprostranjenosti Kisapostag kulture treba pomaknuti južno od rijeka Rinye i Drave, koje se kao njezine granice navode u mađarskoj literaturi.<sup>74</sup> U područje rasprostiranja Kisapostag kulture treba uključiti i prostor sjeverne Hrvatske, na istoku otprilike do granice sa Srijemom (karta 2). U Srijemu se nakon vinkovačke kulture pojavljuju nalazi rane vatinske kulture, što je posljedica drugačijeg kulturnoga razvoja. Točna granica između Kisapostag kulture i rane vatinske kulture za sada se ne može preciznije odrediti, no svakako je treba očekivati na prostoru istočne Slavonije. Premda vrlo oskudni, nalazi Kisapostag obilježja za sada su jedini iz postvinkovačkog horizonta na prostoru sjeverne Hrvatske te se na trenutačnom stanju istraženosti može zaključiti kako vinkovačku kulturu na ovoj prostoru nasljeđuje kultura Kisapostag. Kontinuitet između kulturnog kompleksa Somogyvar – Vinkovci i Kisapostag kulture dokazuju nalazi s više lokaliteta smještenih uz južnu obalu Balatona, a također i s prostora slovenskog Prekmurja gdje su na nekoliko lokaliteta oko Murske Sobote registrirane obje kulturne pojave.<sup>75</sup>

<sup>71</sup> Marković 2003, 127–128.

<sup>72</sup> Črešnar 2010, 123, 127.

<sup>73</sup> Guštin 2005; Stanković 2009, 139–150, T. 81–112; Črešnar 2010; Kerman 2011a, 23–27, kat. br. 1–132; Kerman 2011b, 22–27, 131, kat. br. 1–326; Teržan, Črešnar 2014, 666–674.

<sup>74</sup> Kiss 2003, 148; Bondar 2005, 94; Bondar, Kiss 2007, 206.

<sup>75</sup> Honti *et al.* 2002, 34–35; Honti *et al.* 2004, 9–10, 13, 15, 41; Honti *et al.* 2007, 8–9, 16, 51, 62; Teržan, Črešnar 2014, 667–668.

the early and classical Kisapostag Culture.<sup>71</sup> M. Črešnar classifies the material from Rađinac to the early phase of the Kisapostag Culture and concludes that the first and second phases of this culture in Slovenia can be equated with proto-Litzen stage of Z. Marković, not only chronologically but also culturally.<sup>72</sup>

Known finds with Kisapostag characteristics from northern Croatia and those found in recent researches in the area of Slovenian Styria and Prekmurje,<sup>73</sup> testify that the boundary of the Kisapostag Culture has to be moved to the south of Rinya and Drava rivers, which are mentioned as a boundary of this culture in Hungarian literature.<sup>74</sup> The area of northern Croatia, all the way to the border with Syrmia to the east, should also be included as a part of the distribution area of the Kisapostag Culture (Map 2). In Syrmia, finds of the early Vatin Culture occurred after the Vinkovci Culture, which is the result of a different cultural development. An exact border between the Kisapostag Culture and the early Vatin Culture cannot be precisely determined for now, but one can expect it in the area of eastern Slavonia. Although very scarce, finds with Kisapostag characteristics are for now the only ones from a post-Vinkovci horizon in northern Croatia. At the present state of research, it can be concluded that the Kisapostag Culture succeeded the Vinkovci Culture in this area. Finds from a number of sites situated along the southern shore of Lake Balaton, and those from Slovenian Prekmurje, where both of the cultural appearances were registered at the same sites around Murska Sobota, prove the continuity between Somogyvar–Vinkovci cultural complex and the Kisapostag Culture.<sup>75</sup>

<sup>71</sup> Marković 2003, 127–128.

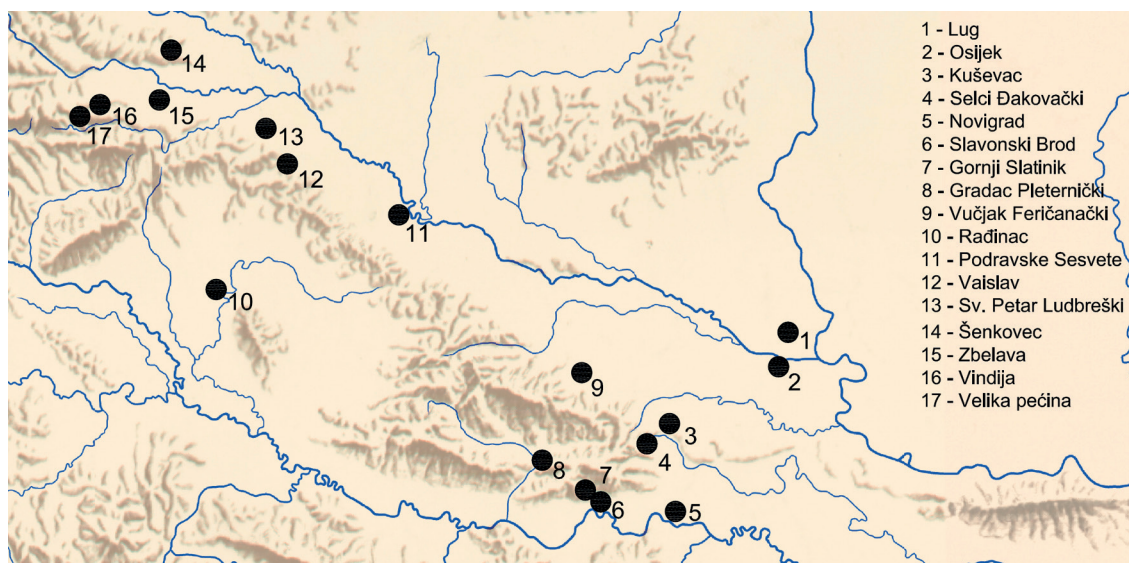
<sup>72</sup> Črešnar 2010, 123, 127.

<sup>73</sup> Guštin 2005; Stanković 2009, 139–150, T. 81–112; Črešnar 2010; Kerman 2011a, 23–27, kat. br. 1–132; Kerman 2011b, 22–27, 131, kat. br. 1–326; Teržan, Črešnar 2014, 666–674.

<sup>74</sup> Kiss 2003, 148; Bondar 2005, 94; Bondar, Kiss 2007, 206.

<sup>75</sup> Honti *et al.* 2002, 34–35; Honti *et al.* 2004, 9–10, 13, 15, 41; Honti *et al.* 2007, 8–9, 16, 51, 62; Teržan, Črešnar 2014, 667–668.





Karta / Map 2. Nalazi materijala Kisapostag obilježja na prostoru sjeverne Hrvatske / Finds with Kisapostag characteristics on the territory of northern Croatia. (izradila / drafted by M. Krmpotić).

Za sada ne raspolažemo ni jednim radiokarbonskim datumom za Kisapostag kulturu, odnosno „protolicensku fazu“ s područja Hrvatske. Slična je situacija i na prostoru Mađarske, gdje se njezina apsolutna datacija uglavnom bazira na relativno kronološkom odnosu sa susjednim kulturnim pojavama. Na toj je osnovi početak Kisapostag kulture u Mađarskoj apsolutno datiran oko 2100. pr. Kr., a njezin kraj oko 2000. pr. Kr., kada bi počinjala kultura transdanubijske inkrustirane keramike. Međutim, neki noviji radiokarbonski datumi za Kisapostag kulturu s područja Transdanubije ne uklapaju se u ovaj okvir. Analizirani uzorci s naselja Vörs – Mariaasszonysziget dali su kalibrirane datume u rasponu od 2010.–1870. pr. Kr. do 1740.–1630. pr. Kr.<sup>76</sup> S druge strane, kalibrirani radiokarbonski datumi za dva groba faze Bonyhad I s istoimenog lokaliteta, koja se veže uz stariju fazu Kisapostag kulture, znatno se bolje uklapaju. Riječ je o uzorcima kostiju iz kosturnih grobova BBQ242-243, analiziranim u više navrata, koji ukazuju na okvirno razdoblje 21. – 20. st. pr. Kr.<sup>77</sup> Više radiokarbonskih datuma za naselja Kisapostag kulture na području Slovenije ukazuju na razdoblje od 23. st. pr. Kr. do 17. st.

<sup>76</sup> Kiss 2012, 203.

<sup>77</sup> Kiss *et al.* 2015, 31–32, Fig. 11–12.

For now, we do not have a single date for the Kisapostag Culture or the “proto-Litzen phase” from Croatia. A similar situation is noticed in the Hungarian territory as well, where the absolute chronology of the culture is mostly based on its relative-chronological relation with the neighbouring cultural instances. According to that, the beginning of the Kisapostag Culture in Hungary is absolutely dated around 2100 BC, and its end around 2000 BC, when the Transdanubian encrusted pottery culture began. However, recent radiocarbon dates for the Kisapostag Culture in Transdanubia do not fit into this framework. Analysed samples from the settlement Vörs–Mariaasszonysziget gave the calibrated dates in the time span from 2010–1870 BC to 1740–1630 BC.<sup>76</sup> On the other hand, calibrated radiocarbon dates for two graves of the Bonyad I phase, which is connected to the older phase of the Kisapostag Culture, from the mentioned site, fit much better into the temporal framework. These are bone samples from the skeletal graves BBQ242–243, which were analysed several times and indicate roughly the period of the 21<sup>st</sup> and 20<sup>th</sup> century.<sup>77</sup> More radiocarbon dates for the settlements of the Kisapostag Culture in Slovenia indicate the period from the 23<sup>rd</sup> century BC to

<sup>76</sup> Kiss 2012, 203.

<sup>77</sup> Kiss *et al.* 2015, 31–32, Fig. 11–12.

pr. Kr., pri čemu se ovaj raspon može suziti na vrijeme od 22. st. pr. Kr. do 19. st. pr. Kr., s većom vjerojatnošću od početka 21. st. pr. Kr. do početka 19. st. pr. Kr.<sup>78</sup>

Do sada nema objavljenih grobova iz postvinkovačkog horizonta ranoga brončanog doba s područja sjeverne Hrvatske. Za grobove iz Luga u Baranji ne navode se nikakvi podaci, čak niti radi li se o paljevinskim ili kosturnim grobovima. Jedini nalaz, koji bi se tek okvirno mogao smjestiti u ovo razdoblje, navodni je grob iz Sigeteca u Podravini. Riječ je o slučajnom nalazu bodeža sa zaobljenom pločicom s četiri zakovice, koji navodno potječe iz kosturnoga groba.<sup>79</sup> Grobni ukopi Kisapostag kulture nisu poznati ni s prostora Slovenije. U mađarskoj su Transdanubiji zabilježeni i paljevinski i kosturni grobovi, pri čemu nedostatak priloga u kosturnim grobovima otežava njihovo kulturno opredjeljivanje. U kosturnim su grobovima pokojnici polagani u raku u zgrčenom položaju na boku, najčešće bez ikakvih priloga osim ponekad priložene posude.<sup>80</sup> Poznata su manja biritualna groblja Kisapostag kulture iz okolice Balatona, istražena tijekom gradnje autoceste M7. Na lokalitetu Ordacsehi – Csereföld istražena su, osim dvanaest paljevinskih, i tri kosturna groba ove kulture.<sup>81</sup> Groblje se protezalo u smjeru sjeverozapad – jugoistok, a činile su ga tri skupine grobova, od kojih je kod najsjevernije primjetan smještaj grobova u zaobljenoj liniji.<sup>82</sup> U kosturnim su grobovima pokojnici bili položeni u zgrčenom položaju, na lijevom boku, orijentirani u smjeru istok – zapad (grobovi 385 i 400), odnosno sjeveroistok – jugozapad (grob 404). Pokojnik u grobu 404 položen je u izrazito zgrčenom, gotovo čučjećem položaju, i jedini nema grobnih priloga. U preostala dva kosturna groba, uz dijelove nošnje pokojnika, bio je uz pokojnika priložen po jedan keramički

17<sup>th</sup> century BC, wherein this span can be narrowed to the time from 22<sup>nd</sup> century BC to 19<sup>th</sup> century BC, with higher probability from the beginning of the 21<sup>st</sup> century BC to the beginning of the 19<sup>th</sup> century BC.<sup>78</sup>

There are no published graves from the post-Vinkovci horizon of the Early Bronze Age from northern Croatia so far. There is also no information about burials found at Lug in Baranja, not even if they were incineration or skeletal graves. The only find which could be roughly dated in this period is a supposed grave from Sigetec in Podravina; a stray find of a dagger with the rounded hilt plate with four rivets, which was allegedly found in a skeletal grave.<sup>79</sup> Graves of the Kisapostag Culture in Slovenia are also not known. In Hungarian Transdanubia, incineration and skeletal graves were recorded, and the lack of grave goods in skeletal burials complicates their cultural attribution. In skeletal graves, bodies were laid in the grave pit in a crouched position, usually without any grave goods, excluding the sporadic vessel.<sup>80</sup> Small biritual cemeteries of the Kisapostag Culture are known in the area of Lake Balaton, excavated during the construction of highway M7. At the site Ordacsehi–Csereföld, three skeletal and twelve incineration graves of this culture were excavated.<sup>81</sup> The cemetery stretched out in the northwest–southeast direction, and consisted of three groups of graves, in the northernmost of which an alignment of graves in a slightly curved line can be noticed.<sup>82</sup> In the skeletal graves, bodies were laid in a crouched position on the left side, oriented east–west (graves 385 and 400) or northeast–southwest (grave 404). The individual buried in grave 404 was placed in an extremely crouched, almost squat position, and was the only one without grave goods. In two other skeletal graves, in addition to elements of garment, one ceramic vessel was enclosed. The arms of the buried individuals were usually in front of the

<sup>78</sup> Črešnar 2010, 122–126, sl. 7; Teržan, Črešnar 2014, 672–673, sl. 12.

<sup>79</sup> Willvonseder 1937, Taf. 49: 10; Vinski–Gasparini 1973, 31, 184, tab. 6: 12.

<sup>80</sup> Kiss 2003, 149.

<sup>81</sup> Honti *et al.* 2002, 20, 35; Somgyi 2004; Kiss, Kulcsar 2007, 110.

<sup>82</sup> Somgyi 2004, 349, 358, tab. 3.

<sup>78</sup> Črešnar 2010, 122–126, Fig. 7; Teržan, Črešnar 2014, 672–673, Fig. 12.

<sup>79</sup> Willvonseder 1937, Taf. 49: 10; Vinski–Gasparini 1973, 31, 184, Tab. 6: 12.

<sup>80</sup> Kiss 2003, 149.

<sup>81</sup> Honti *et al.* 2002, 20, 35; Somgyi 2004; Kiss, Kulcsar 2007, 110.

<sup>82</sup> Somgyi 2004, 349, 358, Tab. 3.

vrč. Ruke su pokojnika položene najčešće pred licem, međutim, u grobu 400 desna se ruka nalazi prekrivena preko donjeg dijela trbuha, a lijeva na prsima.<sup>83</sup> Na obližnjem položaju Ordacsehi – Major pronađena su četiri žarna groba Kisapostag kulture, odnosno faze kasna Kisapostag – rana inkrustirana keramika te pet kosturnih grobova s pokojnicima u zgrčenom položaju Kisapostag kulture.<sup>84</sup> Pokojnik iz kosturnoga groba 25 položen je također na lijevi bok, glave orijentirane na jugoistok i ruku savijenih ispod glave.<sup>85</sup> Na položaju Ordacsehi – Bugaszeg istraženi su ostaci naselja i nekoliko grobova kasne faze Somogyvar – Vinkovci kulturnog kompleksa i Kisapostag kulture.<sup>86</sup> Registrirani su i paljevinski i kosturni grobovi Kisapostag kulture, među ostalim i dvojni kosturni grob u kojem su oba pokojnika ležala na lijevom boku u zgrčenom položaju, s rukama ispod glave, bez grobnih priloga.<sup>87</sup> Tijekom zaštitnih istraživanja na trasi autoceste M7, na lokalitetu Balatonboglar – Berekre-dúló također su evidentirani zgrčeni kosturni grobovi Kisapostag kulture, pri čemu se ističe ukop pokojnika s bogatim grobnim priložima keramičkih posuda.<sup>88</sup> Također, istraženo je manje biritualno groblje Kisapostag kulture na lokalitetu Balatonlelle – Kenderföld, u kojem su grobovi uglavnom orijentirani sjever – jug ili jug – sjever. Dio grobova nije sadržavao priloge, međutim, u jednom grobu, oštećenom kasnijim ukopom u razdoblju antike, uz lubanju je pronađena manja posuda Kisapostag kulture koja svjedoči o njevovoj kulturnoj pripadnosti.<sup>89</sup> Na nalazištu Vörs – Papkert B, među više stotina kosturnih grobova datiranih od kasnoavarskog do ranoarpadskog razdoblja, evidentirano je i deset kosturnih grobova Kisapostag kulture.<sup>90</sup> Pokojnici leže ponovno u zgrčenom

face, but in grave 400, the right arm was laid over the lower abdomen, and the left one was on the individual's chest.<sup>83</sup> At the nearby site Ordacsehi–Major, four urn graves of the Kisapostag Culture, i.e. of its late Kisapostag – early encrusted pottery phase, and five skeletal graves of the Kisapostag Culture with bodies in a crouched position, were found.<sup>84</sup> The individual buried in skeletal grave 25 was placed on the left side, with its head oriented to the southeast and the arms bent below the head.<sup>85</sup> At the site Ordacsehi–Bugaszeg, the remains of a settlement and few graves of the late phase of the Somogyvar–Vinkovci cultural complex and the Kisapostag Culture were excavated.<sup>86</sup> Both incineration and skeletal graves were recorded, among others a skeletal grave with two buried individuals, both laid on the left side in a crouched position, with their arms beneath the head, and without any grave goods enclosed.<sup>87</sup> During the rescue excavations on highway M7, at the site Balatonboglar–Berekre–dúló, crouched skeletal graves of the Kisapostag Culture were discovered, including a burial with a rich assemblage of ceramic vessels.<sup>88</sup> A smaller biritual cemetery of the Kisapostag Culture was also excavated at the site Balatonlelle–Kenderföld, with graves mostly oriented in the north–south or south–north direction. Some of the graves did not have any grave goods, but in one grave, damaged by a burial from the Roman period, a smaller vessel of the Kisapostag Culture was found close to the skull, which confirms its cultural attribution.<sup>89</sup> At the site Vörs–Papkert B, among hundreds of graves dated from the Late Avar period to the Early Arpad period, ten skeletal graves of the Kisapostag Culture were recorded.<sup>90</sup> Bodies were again laid in a crouched position on the side, with their arms placed in front of the head.<sup>91</sup> At the site Bonyhad, situated in the south-eastern

<sup>83</sup> Honti *et al.* 2002, T. X: 4; Somogyi 2004, 350, 371, tab. 4, 377, tab. 10, 378, tab. 400.

<sup>84</sup> Bondar *et al.* 2001, 114.

<sup>85</sup> Bondar *et al.* 2001, T. I: 3.

<sup>86</sup> Honti *et al.* 2002, 35.

<sup>87</sup> Honti *et al.* 2002, 15, T. VII: 3.

<sup>88</sup> Honti *et al.* 2002, 30, 36.

<sup>89</sup> Honti *et al.* 2004, 15, 54, T. XXI: 2.

<sup>90</sup> Bondar 1989, 33; Költo *et al.* 1992, 302–303.

<sup>83</sup> Honti *et al.* 2002, T. X: 4; Somogyi 2004, 350, 371, Tab. 4, 377, Tab. 10, 378, Tab. 400.

<sup>84</sup> Bondar *et al.* 2001, 114.

<sup>85</sup> Bondar *et al.* 2001, T. I: 3.

<sup>86</sup> Honti *et al.* 2002, 35.

<sup>87</sup> Honti *et al.* 2002, 15, T. VII: 3.

<sup>88</sup> Honti *et al.* 2002, 30, 36.

<sup>89</sup> Honti *et al.* 2004, 15, 54, T. XXI: 2.

<sup>90</sup> Bondar 1989, 33; Költo *et al.* 1992, 302–303.

<sup>91</sup> Honti 1996, 49.



položaju na boku, s rukama položenima ispred glave.<sup>91</sup> Na lokalitetu Bonyhad, smještenom u jugoistočnome dijelu Transdanubije, istraženo je veće biritualno groblje ranog i srednjega brončanog doba. U sjeverozapadnom je dijelu groblja izdvojena skupina kosturnih grobova, orijentiranih u smjeru sjeverozapad – jugoistok, u kojima su pokojnici također ležali sa zgrčenim nogama, ruku položenih preko trbuha. Prilozi u grobovima bili su vrlo skromni te je, osim nekoliko primjeraka spiralnog nakita, pronađen samo jedan vrč cilindričnog vrata, karakterističan za Kisapostag kulturu.<sup>92</sup>

Poznati podaci jasno ukazuju na biritualnost u Kisapostag kulturi. Premda su paljevinski grobovi češći, nisu rijetkost ni kosturni. Kako bi objasnila pojavu različitih pogrebnih običaja, Sz. Honti pretpostavila je kako se različiti rituali mogu vezati uz različite faze kulture, vežući pritom kosturne ukope uz starije razdoblje.<sup>93</sup> V. Kiss i G. Kulcsar također navode kako su kosturni grobovi rijetki u mlađoj fazi. S obzirom na nalaze bogato opremljenih kosturnih grobova na lokalitetima Balatonakali i Vörs – Battyánidisznolegelő iz mlađe faze kulture, ove autorice pretpostavljaju kako je u mlađoj fazi kosturni ukop prakticiran samo pri pokapanju bogatih pojedinaca visokog statusa.<sup>94</sup> U prilog ovoj teoriji svjedoče i nalazi s groblja mlađe faze Kisapostag kulture Ordacsehi – Csereföld. Naime, na groblju nije ustanovljena vremenska distanca između paljevinskih i kosturnih grobova,<sup>95</sup> a imajući u vidu opremu pokojnika, očito je kako je ona u kosturnim grobovima bogatija, posebice u metalnim predmetima,<sup>96</sup> osim ako ovakva situacija nije rezultat različitih pogrebnih rituala. O prakticiranju kosturnog ukopa tijekom starije faze Kisapostag kulture svjedoče i nalazi s lokaliteta Bonyhad. U najstarijoj fazi, Bonyhad I, pojavljuju se

part of Transdanubia, a larger biritual cemetery from the Early and Middle Bronze Age was excavated. In the north-western part of the cemetery, there was a group of skeletal graves, oriented in the northwest–southeast direction, in which the bodies laid with their legs drawn toward the torso and their arms placed on the abdomen. Grave goods were rare and, besides several pieces of spiral ornaments, only one jug with a cylindrical neck, characteristic for the Kisapostag Culture, was found.<sup>92</sup>

Known data clearly indicates birituality in the Kisapostag Culture. Although incineration graves are more common, skeletal burials are not rare. To explain the appearance of different burial practices, Sz. Honti assumed that different practices can be associated with different phases of the culture, wherein skeletal burials were linked with the older period.<sup>93</sup> V. Kiss and G. Kulcsar also state that skeletal graves are rare in the younger phase. Considering the finds of richly equipped skeletal graves at sites Balatonakali and Vörs–Battyánidisznolegelő, from the younger phase of the culture, these authors presume that in the younger phase skeletal burial was practiced only when burying wealthy individuals of a higher status.<sup>94</sup> Finds from the cemetery of the younger phase of the Kisapostag Culture at Ordacsehi–Csereföld confirm this theory. Namely, the temporal distance between incineration and skeletal graves was not established,<sup>95</sup> and when considering the assemblages it is obvious that they were richer in skeletal graves, especially regarding metal objects,<sup>96</sup> unless this situation was not a result of different burial practices. Finds from the site Bonyhad also testify the skeletal grave practice during the older phase of the Kisapostag Culture. In the oldest phase, Bonyhad I, there were skeletal graves with the rare finds of ornaments in graves, and only in one case with the enclosed ceramic vessel. These graves are dated in the framework between 21<sup>st</sup> and

<sup>91</sup> Honti 1996, 49.

<sup>92</sup> Kiss *et al.* 2015, 31, Fig. 10.1.–2.

<sup>93</sup> Honti 1996, 49.

<sup>94</sup> Kiss, Kulcsar 2007, 111.

<sup>95</sup> Somogyi 2004, 351.

<sup>96</sup> Somogyi 2004, 373–380, tab. 6–13.

<sup>92</sup> Kiss *et al.* 2015, 31, Fig. 10.1.–2.

<sup>93</sup> Honti 1996, 49.

<sup>94</sup> Kiss, Kulcsar 2007, 111.

<sup>95</sup> Somogyi 2004, 351.

<sup>96</sup> Somogyi 2004, 373–380, Tab. 6–13.



kosturni grobovi sa skromnim nalazima nakita u grobu, a tek u jednom slučaju s priloženom posudom, apsolutno datirani okvirno u razdoblje 21. – 20. st. pr. Kr. U kasnijim fazama, koje se vežu uz mlađu fazu Kisapostag kulture te kulturu transdanubijske inkrustirane keramike (Bonyhad 2–5), dominira paljevinski ukop.<sup>97</sup>

#### 4. REZULTATI

##### Grob kasnoga bakrenog doba

Kosturni grob 1 bio je bez priloga te se njegova kulturna pripadnost vučedolskoj kulturi temelji na radiokarbonskoj analizi uzorka kosti, koja datira grob 1 između 2681. pr. Kr. i 2475. pr. Kr. (84,3% vjerojatnosti) te se uklapa u datume dobivene za kasni klasični stupanj vučedolske kulture (B2). Ovaj je grob ujedno i jedini nalaz koji možemo pripisati vučedolskoj kulturi. Arheološka istraživanja provedena na lokalitetu Osijek – Ciglana i Zeleno polje nisu otkrila tragove naselja vučedolske kulture pa možemo pretpostaviti da je ukop groba 1 bio izvan naselja iako do sada nisu otkrivene izdvojene vučedolske nekropole.

Zgrčeni su ukopi tipični za ovu kulturu, a većina objavljenih grobova obilovala je priložima, koji su olakšali njihovo datiranje. Ipak, brojni su primjeri zgrčenih ukopa bez priloga, na kojima nisu provedene radiokarbonske analize i čija kulturna pripadnost nije posve jasna. Na položaju Vinograd, Streim J. Brunšmid je 1897. godine otkrio petnaest zgrčenih ukopa, s glavama postavljenima na istok.<sup>98</sup> Izuzev nekoliko raštrkanih ulomaka keramike i životinjskih kostiju, grobovi su bili bez priloga.<sup>99</sup> Na području grada Vinkovaca od 1950-ih do danas otkriveno je više od trideset zgrčenih ukopa bez priloga, čija kulturna pripadnost još nije razriješena, a vjerojatno pripadaju starčevač-

<sup>97</sup> Kiss *et al.* 2015, 31.

<sup>98</sup> Navedenim su se ukopima u novije vrijeme bavile kolegice A. Solter i dr. sc. J. Balen iz Arheološkog muzeja u Zagrebu, kojima se ovom prilikom zahvaljujemo na podacima. Rezultati njihovih istraživanja i provedenih radiokarbonskih analiza u postupku su objave.

<sup>99</sup> Hoerns 1903, 266–268.

20<sup>th</sup> century BC. In later phases, which are related to the younger phase of the Kisapostag Culture and the Transdanubian encrusted pottery culture (Bonyhad 2–5) incineration burial predominates.<sup>97</sup>

#### 4. RESULTS

##### Late Eneolithic grave

Skeletal grave 1 did not have any grave goods, so its cultural affiliation to the Vučedol Culture was based on the radiocarbon analysis of a bone sample, which dates grave 1 between 2861–2475 BC (84.3% probability) and corresponds with dates for the late classical stage of the Vučedol Culture (B2). This grave is also the only find which can be attributed to the Vučedol Culture. Archaeological excavations carried out at the site Osijek–Ciglana and Zeleno polje did not reveal any traces of a Vučedol Culture settlement, so it can be assumed that the burial of grave 1 was outside the settlement, although separate Vučedol cemeteries were not found for now. Crouched burials are typical for this culture, and most of the published graves were abundant with grave goods, which facilitate their dating. However, examples of crouched burials without grave goods are numerous, and radiocarbon analysis on them was not conducted. Hence, their cultural determination is not clear. At the site Vinograd Streim, in 1897, J. Brunšmid found fifteen crouched burials with heads oriented to the east.<sup>98</sup> Except for a few fragments of ceramic and animal bones, the graves were without grave goods.<sup>99</sup> Over thirty crouched burials without grave goods have been found at Vinkovci since the 1950-s to present. Their cultural affiliation was not determined, and they presumably belong to

<sup>97</sup> Kiss *et al.* 2015, 31.

<sup>98</sup> Colleagues A. Solter and J. Balen, PhD, curators from the Archaeological Museum in Zagreb, dealt lately with the mentioned burials. We wish to thank them for the information. The results of their research and conducted radiocarbon analysis are yet to be published.

<sup>99</sup> Hoerns 1903, 266–268.

koj ili vučedolskoj kulturi.<sup>100</sup> Ovdje moramo navesti i grob pronađen na nalazištu Osijek – Ciglana i Zeleno polje prilikom zaštitnih arheoloških istraživanja na trasi plinovoda Belišće – Osijek provedenih 2006. godine. Istraživanja su se odvijala na povišenoj gredi, oko 300 m sjeverozapadno od trase istražene 2015. godine. Pokojnik je bio položen u grobnu raku u zgrčenom položaju, u smjeru jugoistok – sjeverozapad, također bez grobnih priloga. Kako nisu provedene radiokarbonske analize, njegova kulturna pripadnost još ostaje nepoznata.<sup>101</sup>

Na području Osijeka tragovi vučedolskog naselja pronađeni su tijekom gradnje artiljerijske kasarne u Donjem gradu.<sup>102</sup> U široj su okolini vučedolski nalazi prikupljeni pri terenskim pregledima ili manjim istraživanjima na nekoliko lokaliteta: Aljmaš – Ulica Matije Gupca, Čeminac – Okrugla zemlja, Dalj – Lisova skela i Ciglana, Daljska planina – Velika straža, Erdut – Veliki Liman i Veliki Varod, Ivanovac, Josipovac – Dalagaj, Klisa – Ekonomija, Kozarac, Lug – Gradina, Nemetin – Suvatovo i Samatovci – Pusta.<sup>103</sup> Na višeslojnom prapovijesnom lokalitetu Aljmaš – Podunavlje zaštitna su se arheološka istraživanja odvijala tijekom nekoliko godina, a otkriveni su ostaci sopotske, badenske, kostolačke, vučedolske, daljsko-bjelobrdske i vatinske kulture.<sup>104</sup> Na nalazištu Sarvaš – Gradac u višegodišnjim su istraživanjima otkriveni bogati slojevi badenske, kostolačke i vučedolske kulture.<sup>105</sup> Tijekom zaštitnih istraživanja vezanih uz gradnju autoceste Beli Manastir – Osijek – Svilaj otkriveno je i višeslojno nalazište Josipovac – Verušed s kasnoeneolitičkim horizontima badenske, kostolačke i vučedolske kulture.<sup>106</sup>

<sup>100</sup> Dimitrijević 1979: 285; usmeno priopćenje M. Krznarić Škrivanko. Radiokarbonske analize na navedenim kosturima su u planu, ali još nisu obavljene zbog nedostatka financijskih sredstava. Veliku zahvalu na podacima s istraživanja u Vinkovcima dugujemo kolegici M. Krznarić Škrivanko iz Gradskog muzeja Vinkovci.

<sup>101</sup> Skelac 2007, 69.

<sup>102</sup> Schmidt 1945, 146.

<sup>103</sup> Marković 1994, karta 14; Balen 2010, 120–123; Šimić 2012.

<sup>104</sup> Šimić 2001; 2006; 2012, 133.

<sup>105</sup> Schmidt 1945, 127–131; Balen 2005.

<sup>106</sup> Filipec *et al.* 2009, 47.

the Starčevo or Vučedol cultures.<sup>100</sup> Here, we must mention a grave found at the site Osijek–Ciglana and Zeleno polje during the rescue excavations on the gas pipeline route Belišće – Osijek in 2006. Excavations were carried out on a plateau some 300 m northwest of the route researched in 2015. A body was placed in a grave pit in a crouched position, in southeast-northwest direction, also without grave goods. Since radiocarbon analysis was not conducted, its cultural affiliation is still unknown.<sup>101</sup>

In Osijek, traces of a Vučedol settlement were found at Donji grad during the construction of an artillery barracks.<sup>102</sup> In the wider area, Vučedol finds were collected during field surveys or smaller excavations at several sites: Aljmaš–Ulica Matije Gupca, Čeminac–Okrugla zemlja, Dalj–Lisova skela and Ciglana, Daljska planina–Velika straža, Erdut–Veliki Liman and Veliki Varod, Ivanovac, Josipovac–Dalagaj, Klisa–Ekonomija, Kozarac, Lug–Gradina, Nemetin–Suvatovo and Samatovci–Pusta.<sup>103</sup> At the multi-layered prehistoric site Aljmaš–Podunavlje, rescue archaeological excavations were conducted for several years, and the remains of Sopot, Baden, Kostolac, Vučedol, Dalj–Bijelo Brdo and Vatin cultures were discovered.<sup>104</sup> At the site Sarvaš–Gradac during excavations which have been carried out for several years, rich cultural layers of the Baden, Kostolac and Vučedol cultures were found.<sup>105</sup> During the rescue excavations associated with the construction of the highway Beli Manastir – Osijek – Svilaj, the multi-layered site Josipovac–Verušed with Late Eneolithic horizons of the Baden, Kostolac and Vučedol cultures was discovered.<sup>106</sup>

<sup>100</sup> Dimitrijević 1979: 285; information from M. Krznarić Škrivanko. Radiocarbon analysis on the mentioned bones is planned, but has not yet been carried out due to a lack of financial resources. We owe great gratitude to colleague M. Krznarić Škrivanko, curator from the Vinkovci Town Museum for information about excavations at Vinkovci.

<sup>101</sup> Skelac 2007, 69.

<sup>102</sup> Schmidt 1945, 146.

<sup>103</sup> Marković 1994, Map 14; Balen 2010, 120–123; Šimić 2012.

<sup>104</sup> Šimić 2001; 2006; 2012, 133.

<sup>105</sup> Schmidt 1945, 127–131; Balen 2005.

<sup>106</sup> Filipec *et al.* 2009, 47.

### Grobovi ranoga brončanog doba

Očigledne su sličnosti u pogrebnom ritua- lu kod triju kosturnih grobova, pronađenih na lokalitetu Osijek – Ciglana i Zeleno polje koji su, na osnovi radiokarbonskog datuma za uzorak kosti iz groba 2, pripisani ranome brončanom dobu. Dobiveni datum poklapa se s mlađim datumima za vinkovačku kul- turu i najstarijima za Kisapostag kulturu. Premda u grobovima nisu evidentirani pri- lozi ili dijelovi nošnje, karakteristike grob- nog rituala daju smjernice za utvrđivanje njihove kulturne pripadnosti.

Premda dobiveni radiokarbonski datum ukazuje na mogućnost pripadnosti triju na- đenih grobova u vrijeme pretkraj vinkovač- ke kulture, imajući u vidu da neki datumi ukazuju na njezino moguće trajanje do u 21. st. pr. Kr.,<sup>107</sup> pogrebni ritual kod osječkih je ukopa uvelike različit od ustaljenoga grob- nog rituala, prakticiranog u okviru vinko- vačke kulture. Na osnovi poznatih podataka može se zaključiti kako nositelji vinkovačke kulture, odnosno kulturnog kompleksa So- mogyvar – Vinkovci prakticiraju paljevinski ukop pokojnika, pri čemu su ostaci pokoj- nika polagani u žare.<sup>108</sup> Kosturni grobovi u okviru kulture su rijetki, zabilježeni na tek dva nalazišta, pri čemu spomenuti kosturni grobovi s jednog (Belegiš – Gradac) nisu ni- kada objavljeni, dok oni s drugog nalazišta (Kaposujlak) ne predstavljaju karakteristič- ne grobne ukope, već je vjerojatno riječ o pokopu ubijenog neprijatelja, odnosno ritu- alnom ukopu.<sup>109</sup> Stoga je teško, na temelju do danas poznatih podataka, ranobronča- nodobne grobove iz Osijeka pripisati vinko- vačkoj kulturi.

S druge strane, datum za kosturni grob 2 iz Osijeka u potpunosti se poklapa s kalibrira- nim radiokarbonskim datumom dobivenim za uzorak ugljena iz poluzemunice M na lokalitetu Orehova vas, koja je sadržavala karakterističan materijal Kisapostag kultu- re, a okvirno i s onim za uzorak pšeničnog zrna, pronađenog na dnu vatrišta u istoj

<sup>107</sup> Teržan, Črešnar 2014, 674.

<sup>108</sup> Kalafatić 2006, 23.

<sup>109</sup> Zoffmann 2002, 59.

### Early Bronze Age graves

There are obvious similarities in the burial practice of the three skeletal graves found at the site Osijek–Ciglana and Zeleno polje, which have been ascribed to the Early Bronze Age, based on the radiocarbon dates for the bone sample from grave 2. The obtained date concurs with the younger dates for the Vinkovci Culture and the oldest ones for the Kisapostag Culture. Although there were no grave goods or other finds in the graves, the characteristics of the burial practice provide guidance for de- termining their cultural attribution.

Although obtained radiocarbon dates indicate a possibility that the three documented graves belong to the period at the end of the Vinkovci Culture, considering that some dates suggest its possible duration in the 21st century BC,<sup>107</sup> the burial practice of the graves in Osijek is fundamentally different from the usual burial practice of the Vinkovci Culture. Based on the known data, it can be concluded that the bear- ers of the Vinkovci Culture, i.e. the Somogyvar– Vinkovci cultural complex, practiced an incin- eration burial with the remains laid in urns.<sup>108</sup> Skeletal graves are rare in this culture, and they were recorded only at two sites, wherein the mentioned skeletal burials at one (Belegiš– Gradac) were never published, while those at the second site (Kaposujlak) do not represent typical grave burials, but probably a burial of a killed enemy or ritual burial.<sup>109</sup> Therefore, it is difficult to attribute the Early Bronze Age graves at Osijek to the Vinkovci Culture on the basis of the known data.

On the other hand, the date for skeletal grave 2 from Osijek fully corresponds with a calibrated radiocarbon date from a charcoal sample from semi-dugout dwelling M at the site Orehova vas, which contained characteristic material of the Kisapostag Culture, and roughly with those for a grain sample found at the bottom of a fire- place in the same pit dwelling.<sup>110</sup> Finds from Orehova vas, as those from Rogoza (Slivnica) and the older layers at the site Pod Kotom–jug,

<sup>107</sup> Teržan, Črešnar 2014, 674.

<sup>108</sup> Kalafatić 2006, 23.

<sup>109</sup> Zoffmann 2002, 59.

<sup>110</sup> Grahek 2014, 254–255, Fig. 14.1.5.–14.1.7.

zemunici.<sup>110</sup> Nalazi s Orehove vasi, kao i oni iz Rogoze (Slivnica) te starijih slojeva nalazišta Pod Kotom – jug, pripadaju starijoj fazi Kisapostag kulture u Sloveniji.<sup>111</sup> Istovremeno se grobovi iz Osijeka, prema praktičanom ritualu, dobro uklapaju u sliku pogrebnih običaja starije faze ove kulture u mađarskoj Transdanubiji.<sup>112</sup> Tijekom zaštitnih istraživanja u južnom dijelu Transdanubije posljednjih je 15-ak godina istraženo više groblja s kosturnim ukopima Kisapostag kulture, od kojih je, na žalost, objavljeno samo ono s lokaliteta Ordacsehi – Csereföld. Groblje je Dunaujvaros sadržavalo, osim jednoga kosturnog groba, isključivo paljevinske ukope, a i nalazi se na rubnom području rasprostranjenosti Kisapostag kulture te sadrži i materijal kultura Nagyrev i Vatyá.<sup>113</sup> Poznati kosturni ukopi Kisapostag kulture s prostora Transdanubije pokazuju niz sličnosti s pogrebnim ritualom ranoga brončanog doba na Zelenom polju u Osijeku. Neke sličnosti mogu se nazrijeti u organizaciji groblja, uspoređujući osječke grobove sa sjevernom skupinom grobova s lokaliteta Ordacsehi – Csereföld, gdje je primjetno ukopavanje pokojnika u zaobljenoj liniji. Sličnost se očituje i u položaju groblja u smjeru sjeverozapad – jugoistok. Rake ovalnog tlocrta nešto veće od dužine zgrčenog pokojnika, kakve su zabilježene u Osijeku, evidentirane su i na prostoru Transdanubije. Sličnosti se mogu primijetiti i u položaju pokojnika. Naime, u sva tri groba sa Zelenog polja pokojnici su položeni u zgrčenom položaju na lijevom boku, a na osnovi dostupnih podataka može se zaključiti kako je ovaj položaj bio uobičajen i kod kosturnih ukopa Kisapostag kulture u Transdanubiji. Izrazito zgrčeni položaj pokojnika iz groba 4 u Osijeku ima analogiju s položajem pokojnika u grobu 404 s lokaliteta Ordacsehi – Csereföld. Različitosti su primjetne u položaju ruku pokojnika. U osječkim su grobovima ruke položene preko donjeg dijela trbuha, ili se nalaze na koljenima, dok su u

belong to the older phase of the Kisapostag Culture in Slovenia.<sup>111</sup> At the same time, according to the burial practice, graves from Osijek fit well into the picture of funeral customs of the older phase of this culture in Transdanubia.<sup>112</sup> During the rescue excavations in southern Transdanubia in the last 15 years, several cemeteries with skeletal graves of the Kisapostag Culture were excavated, of which unfortunately only the one at the site Ordacsehi–Csereföld was published. In addition to one skeletal grave, the cemetery Dunaujvaros contained exclusively incineration burials. It is situated at the border of the distribution area of the Kisapostag Culture and contains finds of the Nagyrev and Vatyá cultures as well.<sup>113</sup> Known skeletal burials of the Kisapostag Culture from Transdanubia show a number of similarities with the burial practice of the Early Bronze Age at Zeleno polje in Osijek. Some similarities can be noticed in the organization of the cemetery, comparing graves from Osijek with the northern group of graves at the site Ordacsehi–Csereföld, where the burial in a curved line is noticeable. Another similarity is the orientation of the cemeteries in the northwest–southeast direction. Oval grave pits slightly larger than the length of the crouched bodies, as those at Osijek, were also documented in Transdanubia. Similarities can also be noticed in the position of the bodies. Namely, in all three graves at Zeleno polje, the bodies were laid in a crouched position on their left side, and on the basis of the available data it can be concluded that this position was usual in skeletal burials of the Kisapostag Culture in Transdanubia. The extremely constricted position of the body in grave 4 at Osijek has an analogy in the position of the individual buried in grave 404 at the site Ordacsehi–Csereföld. Differences are noticeable in the position of the arms. In the graves at Osijek the arms were placed over the lower abdomen or on the knees, while in the excavated graves from the Balaton area they are usually by the head. There were no grave goods in the burials at Zeleno polje, similar to many skeletal graves of the Kisapostag Culture in Transdanubia. All the graves at

<sup>110</sup> Grahek 2014, 254–255, sl. 14.1.5.–14.1.7.

<sup>111</sup> Teržan, Črešnar 2014, 671.

<sup>112</sup> Honti 1996, 49; Kiss, Kulcsar 2007, 111.

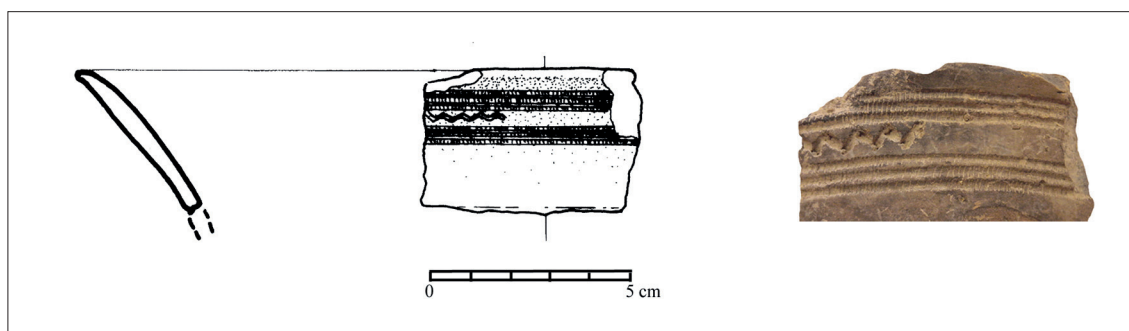
<sup>113</sup> Szathmari 1983.

<sup>111</sup> Teržan, Črešnar 2014, 671.

<sup>112</sup> Honti 1996, 49; Kiss, Kulcsar 2007, 111.

<sup>113</sup> Szathmari 1983.





Slika / Fig. 9. Ulomak posude Kisapostag kulture nađen u srednjobrončanodobnom objektu / Fragment of a vessel of the Kisapostag Culture found in the Middle Bronze Age structure (snimila i izradila / drafted and photographed by M. Krmpotić).

istraženim grobovima s područja Balatona najčešće u visini glave. U grobovima sa Zelenog polja nema grobnih priloga, kao često ni u kosturnim grobovima Kisapostag kulture u Transdanubiji. Svi su osječki grobovi orijentirani jug / jugoistok – sjever / sjeverozapad, dok u regiji oko Balatona nisu uočene takve pravilnosti. Na lokalitetu Bonyad pak svi su grobovi jednako orijentirani, ali u suprotnom smjeru od osječkih. Nedostatak priloga i bogatije opreme pokojnika u osječkim grobovima može se objasniti kronološkim razlozima budući da su grobovi datirani u stariju fazu Kisapostag kulture, u kojoj nisu zabilježeni bogati kosturni grobovi niti na prostoru Transdanubije.

Na osnovi iznesenih zapažanja može se zaključiti kako tri ranobrončanodobna kosturna groba s nalazišta Osijek – Ciglana i Zeleno polje pripadaju nositeljima Kisapostag kulture, na što ukazuju radiokarbonski datum i elementi pogrebnog rituala. Tijekom dosadašnjih istraživanja provedenih na ovom lokalitetu nisu zabilježeni ostaci naselja ranoga brončanog doba. Međutim, u istraživanjima provedenim 2015. godine pronađen je ulomak keramičke posude Kisapostag kulture (sl. 9) u zapuni mlađeg, srednjobrončanodobnog objekta, zajedno s brojnim ulomcima keramičkih posuda starije faze Belegiš kulture i inkrustiranom keramikom, kakva se pripisuje daljsko-bjelobrdskej kulturnoj grupi. Analogije za spomenuti ulomak mogu se pronaći na nalazištima Kisapostag kulture u mađarskoj Transdanubiji, primjerice, na naselju Bala-

Osijek were oriented in the south/southeast-north/northwest direction, while such regularity was not observed in the Balaton area. At the site Bonyhad, all the graves were equally oriented, but in the opposite direction from those in Osijek. The lack of grave goods and richer equipment in graves at Osijek can be explained by chronological reasons, since these graves are dated to an older phase of the Kisapostag Culture, when there were also no rich skeletal graves in Transdanubia.

On the basis of the presented observations, it can be concluded that the three Early Bronze Age graves at the site Osijek–Ciglana and Zeleno polje belong to the bearers of the Kisapostag Culture, as indicated by the radiocarbon dates and the elements of the burial practice. During former research conducted at this site, traces of an Early Bronze Age settlement were not recorded. However, during excavations in 2015, a fragment of a vessel of the Kisapostag Culture was found (Fig. 9) in the fill of a younger, Middle Bronze Age structure, together with numerous fragments of ceramic vessels of the older phase of the Belegiš Culture and encrusted pottery which is attributed to the Dalj–Bijelo Brdo cultural group. Analogies for the mentioned fragment can be found at the sites of the Kisapostag Culture in Hungarian Transdanubia, for example at the settlement Balatongyörök.<sup>114</sup> The found fragment possibly indicates the existence of a nearby settlement of the Kisapostag Culture at the site Osijek–Ciglana and Zeleno polje at an unknown location.

<sup>114</sup> Torma 1972, 19, 23, T. 4: 2, T. 6: 13.

tongyörök.<sup>114</sup> Pronađeni ulomak vjerojatno ukazuje na postojanje obližnjeg naselja Kisapostag kulture na lokalitetu Osijek – Ciglana i Zeleno polje na još neubiciranoj lokaciji.

Usporedni nalazi za ranobrončanodobne kosturne grobove iz Osijeka poznati su za sada ponajviše iz dijela Transdanubije oko Balatona, tj. sa samo jednog dijela područja rasprostranjenosti Kisapostag kulture, te ne pružaju reprezentativnu sliku pogrebnih običaja njezinih nositelja. Može se pretpostaviti postojanje određenih regionalnih različitosti u pogrebnom ritualu u okviru kulture, posebno s obzirom na to kako su na istim grobljima zastupljeni i paljevinski i kosturni grobovi, pri čemu su kod kosturnih ukopa na istome groblju prisutne i različite varijacije položaja, orijentacije i drugih elemenata rituala. Istovremeno, neki nalazi, poput grobova s lokaliteta Bonyad, upozoravaju i na moguće kronološke razlike.

#### Antropološka analiza

Na ljudskome je kosturnom materijalu iz četiri groba napravljena antropološka analiza. Budući da je pregledani uzorak brojčano malen, a i grobovi pripadaju različitim vremenskim razdobljima i kulturama, vrlo je teško načiniti zaključke o demografskoj slici i zdravstvenom stanju populacije kojoj su pripadali pokojnici. Unatoč tomu, ipak je moguće donijeti neke okvirne podatke o istraživanom kosturnom materijalu.

U grobu 1 prisutni su ostaci odrasle osobe ženskoga spola, starije od 50 godina. U grobovima 2 i 4 ostaci pripadaju muškarcima u dobi od 35 do 50 godina, dok su u grobu 3 ostaci djeteta u dobi od 10 do 15 godina. Kod svih su osoba uočene patološke promjene, a kod oba muškarca i nemetričke osobine.

Kod osobe u grobu 1 uočena je prisutnost osteopenije, odnosno stanja smanjene gustoće koštane mase. Budući da se smanjenje gustoće koštane mase pojavljuje u starijoj

<sup>114</sup> Torma 1972, 19, 23, T. 4: 2, T. 6: 13.

Comparative finds for the Early Bronze Age skeletal graves at Osijek are known, for now, mostly from the part of Transdanubia around Lake Balaton, i.e. only from one part of the distribution area of the Kisapostag Culture, so they do not provide a representative picture of the burial practices of its bearers. Some regional differences in burial practice of this culture can be assumed, particularly considering the fact that at the same cemeteries both incineration and skeletal graves are represented, within different variations of position, orientation, and other elements of burial practice in case of the skeletal graves. At the same time, some finds, like graves from the site Bonyhad, could also suggest possible chronological differences.

#### Anthropological analysis

Anthropological analysis was carried out on human skeletal remains from the four graves. As the analysed sample is small and the burials are associated with different chronological periods and cultures, it is difficult to reach conclusions about the demographic profile and health status of the population the deceased belonged to. However, some basic data on the analysed skeletal remains can be gained.

In grave 1, the remains belong to an adult female older than 50 years of age. In graves 2 and 4, the remains are of males aged between 35 and 50, while in grave 3, they belong to a juvenile aged between 10 and 15. Pathological changes were observed in all individuals, in addition to both males displaying nonmetric traits.

The female in grave 1 had osteopenia, a condition characterised by low bone density. As low bone density is associated with advanced age, its presence in an individual older than 50 is expected.

životnoj dobi, njezina je prisutnost u osobe starije od 50 godina očekivana.

Ektokranijalna poroznost, koja je uočena na ulomku lubanje djeteta iz groba 3, najčešće se povezuje s deficitarnim bolestima, kao što su anemija, rahitis i skorbut, no može se pojaviti i kod drugih bolesti, poput trauma, neoplazmi i tuberkuloze. U arheološkim populacijama djeca su skupina unutar zajednice koja je najpodložnija bolestima i stanjima prouzročenim neprimjerenom prehranom, što objašnjava i ovaj slučaj.

Periostitis u obliku blage strijacije, uočene na goljeničnim kostima muškarca iz groba 4, može se okarakterizirati kao nespecifična infekcija budući da kod osobe nisu uočene druge lezije. U ovom je slučaju periostitis vjerojatno nastao kao lokalizirani odgovor tkiva na infekciju nastalu zbog loma, reza ili udarca. Budući da se goljenična kost nalazi blizu površine kosti pa je tako podložnija traumi, ujedno je i najzahvaćenija kost u tijelu.

Kod oba muškarca uočene su degenerativne promjene na kralježnici: kod osobe iz groba 2 one su blaže, dok su kod osobe iz groba 4 jačeg intenziteta. Kako su za promjene odgovorni starija dob, ali i fizička aktivnost, vjerojatno se kod obojice muškaraca, zbog njihove relativno mlađe dobi, može govoriti da su promjene nastale uslijed fizičke aktivnosti.

Prisutnost apscesa i gubitka više zubi tijekom života, prisutnih kod oba muškarca, govore u prilog prehrani bogatoj ugljikohidratima i neprimjerenom oralnoj higijeni. Podaci o prehrani potvrđeni su i preliminarnim rezultatima analize stabilnih izotopa.

## 5. ZAKLJUČAK

Evidentan je problem kulturnog opredjeljivanja kosturnih grobova koji, osim kostiju samog pokojnika, ne sadrže nikakve druge arheološke nalaze, pa takvi grobovi često

Ectocranial porosity observed on a skull fragment of the child from grave 3 is most commonly related to deficiency diseases such as anaemia, rickets, and scurvy, but it can appear in other conditions like trauma, neoplasms, and tuberculosis. In archaeological populations, children are part of the population most affected by diseases and inadequate diet, which explains this case.

Periostitis in the form of slight striation observed on the tibiae of the male from grave 4 can be described as a nonspecific infection, since no other lesions were present on this individual. In this case, periostitis is likely a localised response of the tissue to an infection caused by a fracture, cut, or impact. As the tibia is situated near the skin it is more exposed to trauma, thus being the most commonly affected bone in the body.

Both males exhibit degenerative changes in the spine: the individual from grave 2 in slight form, and the individual from grave 4 in severe form. Considering that advanced age and physical activity cause these changes, given the relatively young age of both men, it can be assumed the changes are the result of physical activity.

The presence of abscess and ante mortem tooth loss in both males attests to a diet rich in carbohydrates, and inadequate oral hygiene. Dietary information is confirmed by the preliminary results of stable isotope analysis.

## 5. CONCLUSION

There is an evident problem of cultural attribution of the skeletal graves which, except for the skeletons of the buried individuals, do not contain any other archaeological finds, so such

ostanu neobjavljeni. Premda se ne može tvrditi kako je radiokarbonsko datiranje potpuno pouzdano, jedina je mogućnost određivanja starosti ovakvih grobova. Na osnovi radiokarbonske analize, grobovi s lokaliteta Osijek – Ciglana i Zeleno polje pripisani su razdoblju kasnoga bakrenog, odnosno ranoga brončanog doba. Između ukapanja pokojnika tijekom bakrenog doba i triju pokojnika u ranome brončanom dobu postoji vremenska distanca od vjerojatno nešto više od 400 godina. Stoga ne iznenađuje nepostojanje kontinuiteta pogrebnog mjesta. Radiokarbonski datumi i zapaženi elementi pogrebnog rituala omogućili su pripisivanje bakrenodobnoga groba vučedolskoj kulturi, a brončanodobnih kulturi Kisapostag. Nedostatak drugih nalaza vučedolske kulture na lokalitetu ukazuje na ukop groba izvan naselja, što odudara od uobičajenog načina pokopavanja pripadnika ove kulture unutar naselja. Važan je nalaz triju kosturnih grobova Kisapostag kulture, koji su prvi rano-brončanodobni kosturni grobovi zabilježeni na području sjeverne Hrvatske, a izuzev neobjavljenih grobova iz Luga, i jedini koji se mogu pripisati ovoj kulturi. Pokapanje pokojnika vučedolske kulture i kulture Kisapostag na položaju Ciglana i Zeleno polje ukazuje kako su u blizini vjerojatno smještene i naselja ovih kultura.

Dobiveni podaci o stabilnim izotopima ukazuju na istovrsnu prehranu pokojnika tijekom obaju razdoblja, baziranu na C3 biljkama. Rezultati antropološke analize upućuju na relativno dugi životni vijek pokojnice sahranjene tijekom kasnoga bakrenog doba. Kosturne ostatke iz ranoga brončanog doba predstavljaju kosti djeteta sahranjenog u kosturnom grobu 3 i ostaci dvojice muškaraca u dobi 35 do 50 godina u grobovima 1 i 4. Promjene na kostima djeteta upućuju na neprimjerenu prehranu, dok su na kostima obojice muškarca primijećene degenerativne promjene kralježnice, vjerojatno zbog fizičke aktivnosti, a prisutnost apscesa i gubitak više zubi svjedoče o prehrani bogatoj ugljikohidratima i neprimjerenoj oralnoj higijeni.

graves often remain unpublished. Although it cannot be stated that radiocarbon dating is absolutely reliable, it is the only possibility of determining the age of these graves. Based on radiocarbon analysis, the graves are attributed to the Late Eneolithic and Early Bronze Age periods. Between the burial of the individual during the Eneolithic, and those in the Early Bronze Age, there is a time span of probably more than 400 years. Therefore, the lack of continuity at the burial place does not surprise. Radiocarbon dates and noticed elements of burial practice enabled the attribution of the Eneolithic grave to the Vučedol Culture, and the Bronze Age graves to the Kisapostag Culture. The lack of other finds of the Vučedol Culture at the site indicates a grave burial outside the settlement, which differs from the traditional burial practice of the bearers of this culture inside settlements. The finds of three skeletal graves of the Kisapostag Culture are important, since they are the first Early Bronze Age skeletal graves found in northern Croatia, and, except for the unpublished burials at Lug, the only ones that can be attributed to this culture. The graves of the Vučedol and Kisapostag cultures at the site Ciglana and Zeleno polje indicate that the settlements of these cultures are probably located somewhere in the vicinity.

The obtained data on stable isotopes indicates a similar diet based on C3 plants during both periods. Results of the anthropological analysis show a relatively long lifespan of the female individual buried during the Late Eneolithic. Skeletal remains from the Early Bronze Age are represented by the child buried in grave 3 and two males aged 35-50 in graves 1 and 4. Changes on the remains of the juvenile individual indicate inadequate diet, whereas degenerative changes of the spine observed on both males are likely related to physical activity. The presence of abscess and ante mortem tooth loss confirms a diet rich in carbohydrates and a low level of dental hygiene.



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# Inhumacija djece na nekropoli Više grobalja antičkog Viminacija

## Skeletal graves of children from the necropolis Više grobalja of ancient Viminacium

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*Predmet rada su grobovi inhumiranih pokojnika dječjeg uzrasta na nekropoli Više grobalja, antičkog Viminacija. Ukupno su analizirana 2273 groba s ostacima inhumiranih pokojnika, od kojih 639 pojedinaca pripada dječjem uzrastu (28%) životne dobi od novorođenčeta do petnaeste godine. Među grobovima su obrađene i grupne sahrane više pokojnika u kojima je pored jedne, ili više odraslih osoba, sahranjeno i dijete. Iako je u prvim stoljećima kremacija bila jedini oblik sahranjivanja, djeca nisu spaljivana, prije svega iz praktičnih razloga, odnosno nije bilo dovoljno koštanih ostataka koji bi se mogli sahraniti, zato su inhumirana. Prevladavaju sahrane slobodno ukopanih pokojnika ili u drvenom lijesu. Grobovi s konstrukcijom od opeke su rijetki, kao i sahrane s pokrivačem od polovice amfore. Grobni su prilozi iz grobova inhumirane djece jednolični. Među njima dominiraju posude od keramike (vrč, lonac, zdjela, pehar...) i svjetiljke. Ipak, dječji se grobovi po pojedinim prilozima izdvajaju od grobova odraslih. Predmeti kao što su bule, raznobojne perle, različiti privjesci, školjke i puževi, osim što su bili posebno vezani uz pokojnika, imali su cilj štititi ga od zlih duhova.*

**Ključne riječi:** djeca, inhumacija, nekropola, grobni prilog, Više grobalja, Viminacij

*The topic of this paper are the skeletal children's graves of the classical Viminacium necropolis Više grobalja. A total of 2273 graves with the remains of inhumed individuals were analysed, 639 of which (28%) belong to children up to 15 years of age. Among the graves, group funerals of several deceased individuals where a child was found buried next to one or more adults were also analysed. Although cremation was the only form of burial in the first centuries AD, the children were not incinerated, primarily due to practical reasons; there would not be enough skeletal remains to bury after burning, so they were inhumed. Funerals in grave pits or in wooden coffins are dominant at the site. Graves made of bricks and burials with a half of an amphora as cover are rare. The grave inventory of the inhumed children is uniform. Among the finds, the most dominant are ceramic vessels (jugs, pots, bowls, cups...) and oil-lamps. Still, the children's graves differ from those of adults regarding certain grave goods. The objects such as bullae, polychrome beads, various pendants, shells and snails, apart from being specially linked with the deceased, served the purpose of protecting the deceased against evil spirits.*

**Keywords:** children, inhumations, necropolis, grave inventory, Više grobalja, Viminacium

Kontinuirana zaštitna arheološka istraživanja antičkog Viminacija (naselje Kostolac, Srbija), nekadašnjega glavnoga grada provincije Gornje Mezije (*Moesia Superior*), iza sebe su ostavila brojne podatke koji se uglavnom odnose na nekropole kojima je grad bio okružen.<sup>1</sup> Saznanja o svakodnevnom životu, običajima i navikama, kako u ovozemaljskom tako i onozemaljskom svijetu žitelja Viminacija, temelje se na analizama grobova i priloga kojima ovaj grad prednjači u odnosu na njemu slične. Tijekom duge povijesti istraživanja viminacijskih nekropola ukupno je istraženo više od 14 000 grobova u kojima je sahranjeno preko 30 000 pokojnika u rasponu od 1. do 4. stoljeća.

Južne su nekropole Viminacija teritorijalno i brojčano u najvećoj mjeri istražene i još se istražuju, stoga predstavljaju najbolji uzorak za proučavanja sepulkralnog života žitelja antičkog Viminacija. Među njima se izdvaja nekropola Više grobalja, čiji je naziv preuzet iz suvremene katastarske podjele zemljišta (karta 1). Nekropola je teritorijalno ograničena u većoj mjeri istraženim rovovima s jugozapadne i sjeveroistočne strane te kronološkim razdobljem u trajanju od dva i pol stoljeća (od 1. do sredine 3. stoljeća).<sup>2</sup>

Na materijalu s ove nekropole u najvećoj je mjeri izvršena antropološka analiza skeletnih ostataka pa su zbog toga grobovi inhumiranih pokojnika dječje dobi tema ovog rada. Iako je na nekropoli istovremeno primjenjivano biritualno sahranjivanje, zbog nedovoljnog broja antropološki obrađenih ostataka kremiranih kostiju i uslijed njihovih nedostataka pri oštećenju grobova radom mehanizacije, nismo u mogućnosti primjereno pristupiti analizi grobova koji se odnose na pojedince dječje dobi, u kojih

<sup>1</sup> Mirković 1968, 56–73; 1986, 21–59; Зотовић, Јордовић 1990; Korać, Golubović 2009.

<sup>2</sup> Prvi su grobovi na nekropoli istraženi 1983. godine i u kontinuitetu su istraživani sve do 1986. godine. Iskopavanja su zaštitnog karaktera u manjem obimu vršena tijekom 2009. i 2013. godine, a nastavljena su u 2015. godini. Grobovi inhumiranih pokojnika u terenskoj su dokumentaciji označeni slovom G, dok su kremacije G1. Isti je sustav primijenjen i u ovom radu.

A decade long research in conservative archaeology of the ancient Viminacium (today near the village of Kostolac, Serbia), a former capital of the Upper Moesia province (*Moesia Superior*) has resulted in abundant data mostly referring to the surrounding necropolises.<sup>1</sup> The findings about the everyday lives of the inhabitants of Viminacium, and their customs and habits, both in this world and the next, are based on the analysis of the graves and grave inventories found in greater number in this city than in any other similar city. Throughout the long history of excavations on the necropolises of Viminacium, over 14,000 graves with over 30,000 deceased individuals from the period between the 1<sup>st</sup> and the 4<sup>th</sup> century AD were excavated and studied.

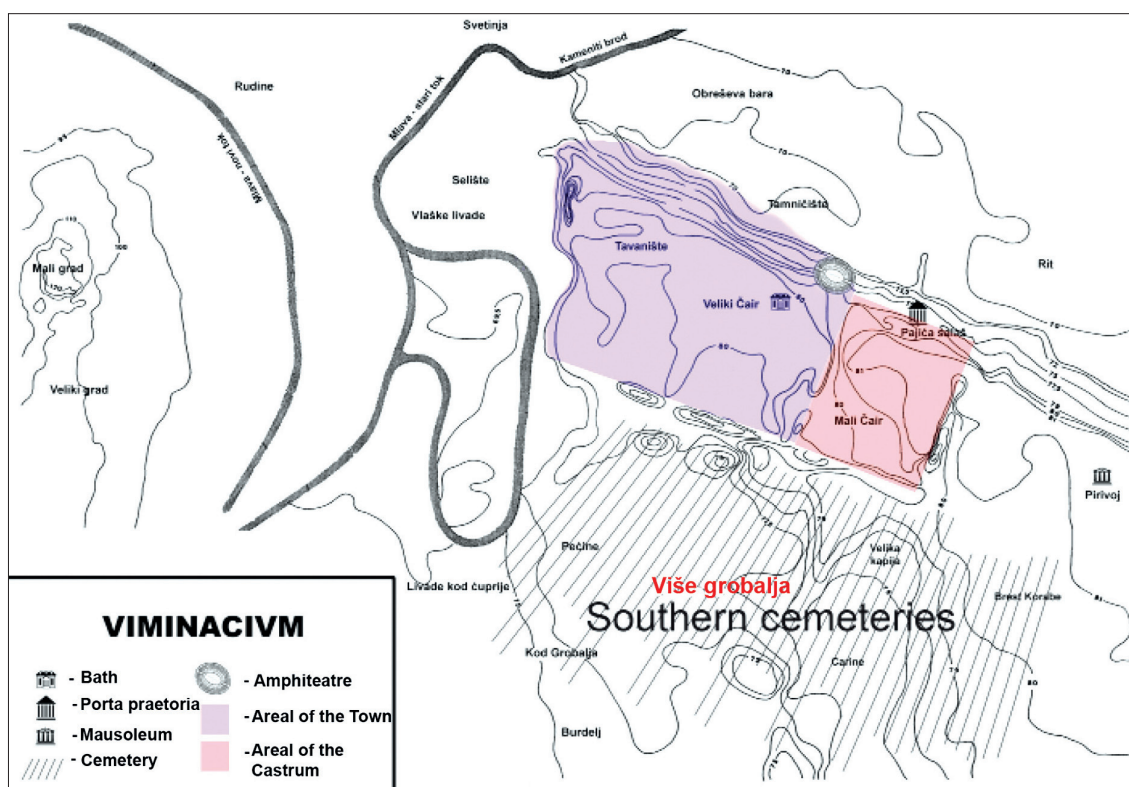
The southern Viminacium necropolises are territorially and in number greatly explored and some are still under research, thus representing the best exemplar for the analysis of the sepulchral life of the inhabitants of classical Viminacium. Among the necropolises, the most prominent one is the Više grobalja necropolis, its name being taken from the contemporary land registry (Map 1). The necropolis is encircled by researched trenches on its southeast and northwest side and by graves belonging to a chronological period lasting for two and a half centuries (1<sup>st</sup> – 3<sup>rd</sup> c. AD).<sup>2</sup>

The topic of this paper are the skeletal children's graves found at this necropolis because anthropological analysis of most other skeletal remains in the area was already conducted. Although biritual burials were simultaneously being practised on the necropolis, due to insufficient anthropological analysis of the cremated remains and the lack of bones themselves, which is a result of excavation with machines, we are unable to adequately analyse children's cremation graves, the practice of which was usually avoided.<sup>3</sup> Still, it should be noted that a recent

<sup>1</sup> Mirković 1968, 56–73; 1986, 21–59; Зотовић, Јордовић 1990; Korać, Golubović 2009.

<sup>2</sup> The first graves on the necropolis were being continuously researched from 1983 until 1986. Rescue excavations were conducted in smaller range during 2009 and 2013, and continued in 2015. The skeletal graves of the deceased were marked with the letter G in the field documentation, while cremation was marked with G1. The same system was used in this paper.

<sup>3</sup> Mikić 1987, 33–44.



Karta / Map 1. Prikaz opće situacije na lokalitetu Viminacij / General situation at the site Viminacium (Golubović, Mikić 2012, 174, Fig. 1).

je inače izbjegavana kremacija.<sup>3</sup> Ipak, treba navesti da novije analize spaljenih kostiju iz Zvonimirova (Hrvatska)<sup>4</sup> pokazuju mogućnost prikupljanja korisnih informacija o pokojniku (spol, starost, bolesti...) i stoga očekujemo u budućnosti više radova na ovu temu. Dokazano je da pirolitičkim procesom spaljene kosti dobivaju homogenu strukturu i postaju otpornije na promjene u zemlji (vlaga, kiselost zemljišta i prodiranje mikroorganizama) nego što je to slučaj s inhumiranim kosturom.<sup>5</sup>

Navedeni su razlozi bili presudni da bi se analiza odnosila isključivo na grobove inhumiranih pokojnika dječje dobi. Antropološka je analiza pouzdana samo kod skeleta koji su bolje sačuvani, ali treba naglasiti da su analize vršene osamdesetih godina prošlog stoljeća, kada je istraživana nekropola, dakle u vrijeme kada su bili ograničeni do-

analysis of the cremated bones from Zvonimirovo (Croatia)<sup>4</sup> shows the possibility of collecting useful information about the deceased (sex, age, illnesses etc.), and therefore more papers on this topic are expected in the near future. It has been proven that bones burned through the pyrolytic process gain a homogenous structure and become less susceptible to changes in the soil (humidity, soil acidity, and microorganism activity) than inhumed skeletons.<sup>5</sup>

The aforementioned reasons were crucial when deciding to analyse exclusively the graves of inhumed children. Anthropological analysis is reliable only in the skeletons that are better preserved, but it should be noted that the analysis undertaken during the 1980s, when the necropolis was excavated, was conducted in a time when the range of the anthropological profession was limited. It should also be noted that modern anthropology is not able to reliably determine the sex of children until their fifteenth

<sup>3</sup> Mikić 1987, 33–44.

<sup>4</sup> Šlaus, Novak 2013, 513–521.

<sup>5</sup> Миладиновић-Радмиловић 2009, 9.

<sup>4</sup> Šlaus, Novak 2013, 513–521.

<sup>5</sup> Миладиновић-Радмиловић 2009, 9.

meti antropološke struke. Također, treba naglasiti da suvremena antropologija nije u mogućnosti pouzdano odrediti spol djece sve do njihove petnaeste godine. Mada postoje kriteriji i za to razdvajanje.<sup>6</sup> Uzrast je djece određen samo u manjeg broja skeleta. Zbog loše očuvanosti, u velikom broju slučajeva duge kosti dječjih skeleta nisu mogle biti izmjerene. U tim je situacijama erupcija mliječnih i trajnih zuba morala biti osnovni kriterij utvrđivanja starosti.<sup>7</sup> Tijekom tekuće godine obranjena je doktorska disertacija koja se bavi antropološkom analizom skeleta iz rimskog razdoblja Viminacija, u kojoj je od arheološki iskopanih 7839 inhumiranih skeleta, antropološki obrađeno 4498 pojedinačnih i grupnih grobova. Na osnovu izvršene paleodemografske analize, zaključeno je kako postotak sahranjene djece do 19. godina iznosi 27,22%.<sup>8</sup>

Na nekropoli Više grobalja ukupno su analizirana 2273 groba s ostacima inhumiranih pokojnika, od kojih 639 pojedinaca pripada dječjem uzrastu (28%) životne dobi od novorođenčeta do petnaeste godine. Među grobovima su obrađene i grupne sahrane više pokojnika u kojima je osim jedne, ili više odraslih osoba, sahranjeno i dijete. Statistički su dječje sahrane manje zastupljene na nekropoli Više grobalja nego što je to situacija na sličnim nekropolama iz istog razdoblja.<sup>9</sup> Rezultat toga može biti stupanj očuvanosti osteološkog materijala koji ovisi o više čimbenika:

- o destrukciji grobova
- o gubitku kostiju poremećajem tla (eroziji)
- o kemijskom sastavu zemljišta (kiselosti tla)
- o aktivnosti mikroorganizama u tlu
- o prisutnosti vode; temperaturi tla
- o intenzitetu sahranjivanja (uništavanju starih grobova ukopavanjem novih)
- o postojanju ili nepostojanju grobne konstrukcije.

<sup>6</sup> Schutkowski 1993, 199–205.

<sup>7</sup> Хошовски 1991, 273–278.

<sup>8</sup> Микић 2016, 64.

<sup>9</sup> Kreković 1992, 71–79.

year. Even though there are criteria for such a distinction.<sup>6</sup> The age of the children was determined only in a small number of skeletons. Due to poor preservation, long bones of children's skeleton could not be used as parameters in many cases. In these cases, the eruption of deciduous or permanent teeth had to be the main criterion for determining age.<sup>7</sup>

This year, a doctoral dissertation has been defended, in which an anthropological analysis of the skeletons from the Roman period of Viminacium has been carried out. Out of the 7839 excavated inhumed skeletons, 4498 individual and group graves were anthropologically analysed. Based on the paleodemographic analysis, it was concluded that the percentage of buried children up to 19 years of age was 27,22%.<sup>8</sup>

From the necropolis Više grobalja, a total of 2273 graves with the remains of inhumed individuals was analysed, 639 of which belong to children (28%) up to 15 years of age. Among the graves, group funerals of several deceased individuals where a child was found buried next to one or more adults were also analysed. Children's graves are present to a lesser extent at the explored necropolis than is the case with similar necropolises from the same time period.<sup>9</sup>

The cause of this may be the preservation level of the osteological material which depends on many factors:

- The destruction of graves
- The loss of bones by soil disruption (erosion)
- Chemical composition of the soil (the acidity)
- The activity of microorganisms in the soil
- The presence of water; the soil temperature
- Burial intensity (destruction of old graves to create space for new ones)
- The existence of grave construction – or the lack thereof.

Furthermore, the mechanical destruction of the skeletons which occurred during the archaeological excavations should not be disregarded, as well as the unsuitable storage of the osteological material in the museums.<sup>10</sup>

<sup>6</sup> Schutkowski 1993, 199–205.

<sup>7</sup> Хошовски 1991, 273–278.

<sup>8</sup> Микић 2016, 64.

<sup>9</sup> Kreković 1991, 71–79.

<sup>10</sup> Miladinović 2006, 15–17.



Ne treba zanemariti ni mehanička oštećenja skeleta pri arheološkim iskopavanjima, i na kraju neprimjeren smještaj osteološkog materijala u muzejskim ustanovama.<sup>10</sup>

Poput situacije u Viminaciju, niža je stopa smrtnosti djece zabilježena i na lokalitetima u Sremskoj Mitrovici (*Sirmium*) i njezinoj okolini, gdje je od 188 antropološki analiziranih osoba, 44 dječje dobi (23,4%).<sup>11</sup> Slične su rezultate dale i analize skeleta iz antičkog razdoblja Hrvatske. Najmanja je smrtnost djece zabilježena u kontinentalnom dijelu Hrvatske (23,2%), zatim slijede Zadar s okolinom (25,1%) i istočnojadransko područje s najvišom stopom smrtnosti djece (34,6%).<sup>12</sup>

Za strukturalnu analizu grobova inhumirane djece opredijelili smo se kako bismo došli do saznanja o njihovu socijalnom statusu u društvu, običajima i vjerovanjima koja su Rimljani njegovali prema najmlađim članovima Carstva. Klasifikacija grobova i analiza grobnih priloga najbolji su pokazatelji koji nam daju određena saznanja vezana uz položaj djece u jednom dijelu Carstva u razdoblju njegove najveće moći (1. – 3. stoljeće) koji se svakako mogu implementirati i na druge oblasti Carstva. Do sada se stručna javnost nije bavila ovom problematikom na prostorima rimske provincije Gornje Mezije i jedino su obrađene sahrane novorođenčadi ili infanata (lat. *infans* – onaj koji nije sposoban govoriti), dakle djece do godinu dana života s jednog dijela viminacijske nekropole Više grobalja.<sup>13</sup> Jedan od razloga nedostatka literature koja se bavi ovom starosnom kategorijom su poteškoće s kojima se suočavaju antropolozi tijekom analize antropološkog materijala koji je problematičan i često ne pruža mogućnost utvrđivanja precizne starosti. Posebice se to odnosi na skeletne ostatke novorođenčadi koji su fragilniji i podložni bržem propadanju u tlu.<sup>14</sup> Tek se posljednjih desetljeća javljaju studije

Like the situation in Viminacium, the lower death rate of children was noted on the sites in and near Sremska Mitrovica (*Sirmium*) where 44 skeletons of juvenile age were found out of 188 anthropologically analysed individuals (23.4%).<sup>11</sup> Similar results were also found by the analyses of skeletons dating from the classical period in Croatia. The lowest death rate of children was noted in the continental part of Croatia (23.2%), followed by Zadar and the surrounding area (25.1%), and the East Adriatic area with the highest death rate for children (34.6%).<sup>12</sup>

We have opted for the structural analysis of the skeletal children's graves to reach conclusions about their social status, as well as the customs and beliefs the Romans had towards the youngest members of their Empire. The classification of the graves and the analysis of the grave inventory best demonstrate the specific information regarding the status of children in one part of the Empire during the period of its greatest power (1<sup>st</sup> – 3<sup>rd</sup> c. AD). These findings could certainly be applied to other regions of the Empire as well. So far, scientists have not dealt with this problem in the region of the Upper Moesia province and only graves of infants were analysed (Lat. *infans* - the one unable to speak); children up to one year of age from one part of the Viminacium necropolis Više grobalja.<sup>13</sup> One of the reasons for the lack of literature on children are the difficulties anthropologists frequently meet with during the analysis of the dubious anthropological material which often does not give the opportunity for determining the precise age of the individuals. This especially applies to the more fragile skeletal remains of infants, which are prone to faster decay in the soil.<sup>14</sup> Only in recent years have studies been published with the analyses of the osteological material of adults' and children's skeletons from the classical period on the sites in the surrounding area (Sremska Mitrovica, Zadar and the surrounding area, continental Croatia, and the East Adriatic region).<sup>15</sup>

<sup>10</sup> Miladinović 2006, 15–17.

<sup>11</sup> Miladinović-Radmilović 2009a, 827.

<sup>12</sup> Novak 2008, 154–155.

<sup>13</sup> Радовић 2010, 175–186.

<sup>14</sup> Радовић 2010, 176.

<sup>11</sup> Miladinović-Radmilović 2009a, 827.

<sup>12</sup> Novak 2008, 154–155.

<sup>13</sup> Радовић 2010, 175–186.

<sup>14</sup> Радовић 2010, 176.

<sup>15</sup> Novak 2008; Miladinović-Radmilović 2009a.

u kojima je obrađivan osteološki materijal odraslih i dječjih skeleta iz antičkog razdoblja s lokaliteta iz okruženja (Sremska Mitrovica, Zadar i okolica, kontinentalna Hrvatska i istočnojadranska oblast).<sup>15</sup>

Velika je stopa smrtnosti djece bila realnost s kojom su se Rimljani svakodnevno srećali i prihvaćali kao neizbježnost. U doba Republike po zakonu Nume Pompilija (7. stoljeće pr. n. e.) preminula djeca do godinu dana života nisu bila oplakivana, međutim, to se često odnosilo i na djecu starije dobi. Razlog tomu bila je velika stopa smrtnosti djece čije bi žaljenje ograničavalo roditelje u obavljanju važnih državnih poslova, prije svega ako su bili pripadnici viših društvenih klasa. U praksi to nije bilo pravilo, o čemu svjedoče antički izvori i arheološki dokazi koji potvrđuju da su roditelji tugovali za svojom rano preminulom djecom, sahranjivali ih uz omiljene predmete, amulete i obavljali pogrebne rituale, odnoseći se prema njima kao prema ravnopravnim članovima obitelji i društva.<sup>16</sup> Imućni su roditelji podizali i nadgrobne spomenike svojoj rano preminuloj djeci.<sup>17</sup>

U sepulkralnoj praksi ranog Rimskog Carstva dominira kremacija koja se zadržala do sredine 3. stoljeća, međutim, iznimku su predstavljale sahrane djece do prve godine života, a ponekad i starije, koja su inhumirana. Prema Pliniju, novorođenčad kojoj nisu izrasli zubi uvijek su inhumirana.<sup>18</sup> U antičkim izvorima spominje se pojam *suggrunadaria* koji se odnosio na grobove novorođene djece koja nisu napunila četrdeset dana, jer takvi grobovi nisu tretirani kao bustumi zbog nedovoljne mase kostiju koja bi pri spaljivanju uopće mogla izazvati plamen.<sup>19</sup> Bioantropologija potvrđuje da je tijekom prve godine života ljudski kostur formiran od malo tvrdoga koštanog tkiva, stoga nakon spaljivanja nema dovoljno ko-

The high mortality rate in children was a reality the Romans were dealing with on a daily basis and accepted as an inevitable part of life. In the age of the Roman Republic, according to the law passed by Numa Pompilius (7<sup>th</sup> century BC), deceased children up to one year of age were not mourned. This often applied to older children as well. The reason was a high mortality rate in children, the mourning of whom would limit their parents in performing important government work, all the more so if they belonged to a higher social class. However, ancient sources and archaeological evidence confirm that this was not done so in practice. Namely, parents would mourn their early deceased children, bury them with their favourite objects or amulets, and hold commemorations, regarding them as equal members of a family and society.<sup>16</sup> This is confirmed by the inscriptions on grave stones dedicated to the young deceased children.<sup>17</sup>

In the sepulchral practice of the Early Roman Empire, cremation was the dominant method of burial until the middle of the 3<sup>rd</sup> century AD, the only exception being infants, and sometimes older children who were inhumed without cremation. According to Pliny, infants who have not grown teeth were always inhumed without cremation.<sup>18</sup> In ancient sources, the term *suggrunadaria* is mentioned, referring to the graves of newborns not older than forty days, because those graves were not treated as *bustums* due to the insufficient bone mass that could start a flame in the first place.<sup>19</sup> Bioanthropology confirms that during the first year of life the human skeleton is formed by a small amount of bone tissue, so there would be no bone remains to bury after cremation - rather, they would disintegrate. Thus, due to practical reasons, i.e. physical characteristics, the Romans would not cremate the skeletons of infants, and often children in the early years of their life, but rather inhumed them without cremation.<sup>20</sup>

<sup>15</sup> Novak 2008; Miladinović-Radmilović 2009a.

<sup>16</sup> Seneca, *Epistula XCIX*; Зотовић, Јордовић 1990; Korać, Golubović 2009.

<sup>17</sup> Rubel, Soficaru 2012, 165.

<sup>18</sup> Plinius, *Naturalis historiae* VII, XVI: 72.

<sup>19</sup> Fulgentius, *Expositio ermonum antiquorum*, 7.

<sup>16</sup> Seneca, *Epistula XCIX*; Зотовић, Јордовић 1990; Korać, Golubović 2009.

<sup>17</sup> Rubel, Soficaru 2012, 165.

<sup>18</sup> Plinius, *Naturalis historiae* VII, XVI: 72.

<sup>19</sup> Fulgentius, *Expositio ermonum antiquorum*, 7.

<sup>20</sup> Rubel, Soficaru 2012, 163.

štanih ostataka koji bi se mogli sahraniti, već dolazi do njihove razgradnje.<sup>20</sup> Dakle, iz praktičnih razloga, odnosno fizičkih osobina, skelete novorođenčadi, a često i starije djece, Rimljani nisu podvrgavali obredu kremacije, već su ih inhumirali.

Na nekropoli Više grobalja istovremeno su obavljane sahrane inhumiranih i kremiranih pokojnika iz kanaba i vojnika iz logora. Na njoj su primjenjivani funerarni obredi autohtonog (Kelti, Tračani i Iliri), orijentalnog (obrnici, trgovci i vojnici iz Male Azije i grčke oblasti) i rimskog stanovništva.<sup>21</sup> Kremacije, kao osnovni tip sahranjivanja u razdoblju ranog Carstva, pripadaju autohtonom i rimskom stanovništvu, dok inhumacije pripadaju doseljenicima iz istočnih provincija i djeci mlađe dobi u koje su se izbjegavala kremiranja.

Pouzdanost se od 405 antropološki opredijeljenih kremiranih pokojnika s jednog dijela nekropole Više grobalja može reći da su 36 dječje dobi, s tim što su 17 inhumirani u grobovima kremiranih pokojnika, dok su 19 kremirana samostalno ili zajedno s odraslim osobama. Dakle, statistički, riječ je o 9%. Slična je situacija na nekropoli Zadar-Relja.<sup>22</sup> Ukratko ćemo analizirati situacije u kojima su djeca inhumirana u kremiranim grobovima nekropole Više grobalja. U osam grobova djeca u dobi do jedne godine inhumirana su pokraj kremirane odrasle osobe različitog spola, za koju se može pretpostaviti da predstavlja roditelja. U tri je groba ponovljena ista situacija, s tim što su inhumirana djeca starijeg uzrasta (od 4 do 10 godina). U tri su groba djeca inhumirana s oba kremirana roditelja, dok je u grobu G1-191 uz kremiranu osobu muškog spola (između 20 i 30 godina) kremirano dijete (između 12 i 15 godina), dok je novorođenče inhumirano. Specifičnost predstavlja grob (G1-249) u kojem je kremirano dijete od dvije godine, dok je novorođenče inhumira-

<sup>20</sup> Rubel, Soficaru 2012, 163.

<sup>21</sup> Mirković 1968, 57, 69; 1986, 58–59; Јовановић 1984, 100–129; Jovanović 2000, 210; .

<sup>22</sup> Novak 2008, 144–145. S antičke nekropole Zadar-Relja su od ukupno 22 paljevinska groba, dvoje djece (9,1%).

Funerals of the inhumed and cremated deceased inhabitants from the settlements and the soldiers from the camp were performed at the same time at the Više grobalja necropolis. On the necropolis, indigenous funerary rituals (Celtic, Thracian, and Illyrian), Oriental (craftsmen, merchants and soldiers from Asia Minor and Greece) and the customs of the Roman population were practised.<sup>21</sup> Cremation as a basic type of burial in the early period of the Empire is attributed to the indigenous and Roman population, while regular inhumation is attributed to immigrants from Eastern provinces and children under the age at which cremation was avoided.

It can be said with certainty that 36 out of 405 anthropologically analysed cremated individuals from one part of the Više grobalja necropolis were children, 17 of which were inhumed in graves of cremated individuals, while 19 were cremated independently or together with adults. In percentages, this would lead to a figure of 9%. The situation is similar at the necropolis Zadar-Relja.<sup>22</sup>

We will briefly analyse the cases where the children were inhumed in cremated graves at the Više grobalja necropolis. In eight of the graves, children up to one year of age were inhumed next to cremated adults of both sexes, which may lead to the assumption that the adult in question was a parent. The same situation was present in three other graves, with the difference in the age of the children, who were somewhat older (4 to 10 years of age). The children in yet another three graves were inhumed with both parents cremated, while in grave G1-191, there is a cremated male individual (between 20 and 30 years old) together with a cremated child (12 – 15 years old), and the skeletal remains of an infant. A peculiarity is grave G1-249, in which a two-year-old child was cremated, while an infant was inhumed without cremation. In three cases, the inhumed infants were covered with ceramic pots. When it comes to the graves where the children were cremated, the obtained

<sup>21</sup> Mirković 1968, 57, 69; 1986, 58–59; Јовановић 1984, 100–129; Jovanović 2000, 210.

<sup>22</sup> Novak 2008, 144–145. On the necropolis Zadar-Relja from the classical period, out of 22 cremated skeletons, two belonged to children.

no. U tri su slučaja inhumirana novorođenčad bila pokrivena keramičkim loncem. Ako analiziramo grobove u kojima su kremirana djeca, onda dobiveni rezultati pokazuju da su ona starijeg uzrasta (od 6 do 15 godina), samostalno kremirana ili su kremirana uz jednu odraslu osobu (16 grobova), dok su samo tri novorođenčeta kremirana uz odraslu osobu. Često su grobovi kremirane djece imali pokrivač od imbreksa, tegula i opeka (četiri groba) ili su djeca bila sahranjena u zdjeli ili amfori (dva groba).<sup>23</sup>

#### TIPOLOŠKA KLASIFIKACIJA GROBOVA INHUMIRANE DJECE

Prve skeletne sahrane u Viminaciju su s kraja 1. stoljeća n. e. Tijekom 2. stoljeća dolazi do postupnog prodora doseljenika iz istočnih provincija, za koje je inhumacija jedini oblik sahranjivanja.<sup>24</sup> U tome razdoblju prevladavaju sahrane slobodno ukopanih pokojnika ili u drvenom lijesu. Takav slučaj odnosi se, kako na odrasle osobe tako i na djecu. Grobovi s konstrukcijom od opeke datirani su nešto kasnije i u njima su uglavnom sahranjivane odrasle osobe različitog spola, dok su rijetki dječji grobovi istoga tipa. Teritorijalno, ovaj tip grobova izdvaja se od ostalog dijela nekropole jer uglavnom obuhvaća južni dio nekropole Više grobalja (Trasa odlagača i Kanal) na kojoj su vršene sahrane do kraja 3. stoljeća.

Na istraživanoj nekropoli, od ukupnog broja inhumirane djece (639), najviše je slobodno ukopanih, odnosno sahranjenih u običnoj grobnoj raci, manje ili više pravokutnog oblika (405 grobova, 63%). U više od polovice grobova ovog tipa nema priloga (40%), dok su ostali s priložima (23%). Na slici 1 prikazana je tipološka klasifikacija dječjih grobova sa i bez priloga.

<sup>23</sup> Analiza se odnosi samo na kremirane grobove s nekropole Više grobalja koji je publicirao i čiju je antropološku analizu načinio antropolog Ž. Mikić. Vidjeti u Зотовић, Јордовић 1990; Korać, Golubović 2009.

<sup>24</sup> Görlicke-Lukić 2000, 96.

results show older children (6 – 15 years old) individually cremated or cremated with an adult (16 graves), while only three infants were cremated with an adult. Often the graves of cremated children had a layer of imbrices, tegulae, and bricks (4 graves) over them, or were buried in a bowl or amphora (2 graves).<sup>23</sup>

#### TYPOLICAL CLASSIFICATION OF THE SKELETAL CHILDREN'S GRAVES

The first skeletal funerals in Viminacium date to the end of the 1<sup>st</sup> century AD. During the 2<sup>nd</sup> century a gradual arrival of settlers from eastern provinces who use skeletal inhumation as the only form of burial occurs.<sup>24</sup> During this period, funerals in plain grave pits or burial of the deceased in a wooden coffin are dominant. This refers to both adult individuals and children. Graves constructed with bricks – where mostly adult individuals of both sexes were buried, while children's graves of this type are very rare – were established somewhat later. Territorially, these types of graves are separated from the rest of the necropolis, mostly located in the southern part of the necropolis Više grobalja (Trasa odlagača and Kanal) where funerals were performed until the end of the 3<sup>rd</sup> century.

At the excavated necropolis, out of 639 inhumed children, the majority was naturally buried, i.e. buried in a plain grave pit, more or less rectangular in shape (405 graves, 63%). In more than half of the graves of this type there were no grave goods (40%), while other graves contained grave goods (23%). Figure 1 shows the typological classification of children's graves with and without grave goods.

<sup>23</sup> The analysis refers solely to the cremated graves from the Više grobalja necropolis, which are published, and for which a careful anthropological analysis by Ž. Mikić was conducted. See in Зотовић, Јордовић 1990 and Korać, Golubović 2009.

<sup>24</sup> Görlicke-Lukić 2000, 96.



Drugu grupaciju grobova čine djeca sahranjena u drvenom lijesu ili položena na drvenu dasku, dok su u rijetkim slučajevima samo prekrivena daskom (210 grobova, 33%). Ostaci su lijesa iznimno rijetki i oskudni, dok su željezni čavli pronađeni kod lubanje, stopala i s bočnih strana skeleta, kao jedini svjedoci o postojanju sanduka. Grobovi s priložima čine 30%, dok su preostala 3% bez priloga.

Trećoj skupini pripadaju grobovi djece sahranjene u lijesu od opeka ili tegula (18 grobova, 3%). Grobovi su formirani od zidanih, vodoravno složenih opeka, povezanih zemljom ili vapnenim mortom, ili su od nasatično postavljenih opeka i tegula. U rijetkim su slučajevima sačuvani pokrivači od opeka, tegula ili imbreksa iako su u većini slučajeva oštećeni radom mehanizacije, pljačkom ili ukopom drugog groba. Grobni prilozima su nađeni u 2% grobova, dok u 1% nema priloga.

U rijetkim slučajevima u grobovima slobodno pokopanih pokojnika, sahranjenih u drvenom lijesu ili u grobovima zidanim od opeka, nailazi se na neobrađeno kamenje (škriljevac, vapnenac ili „crvenka“)<sup>25</sup> kojim su grobovi bili pokriveni ili su pojedinačni nalazi predstavljali obilježje groba.

Slobodno pokopani pokojnici dječje dobi, pokriveni polovicom amfore, a u jednom slučaju zdjelom, pronađeni su u šest slučajeva (1%). Kod polovice je utvrđeno da su novorođenčad, dok za ostale nije bilo moguće utvrditi dob. Tri su pokojnika s priložima. U grobu G-210 pronađeni su: staklena posuda, perle, balzamarij i brončani ključ, dok su u preostala dva, s po jednim prilogom: novac Trajana i brončano zvonce. Brojni su primjerci sahrane novorođenčadi ispod amfore ili drugog recipijenta širom Carstva, posebno tijekom kasnoantičkoga razdoblja (Dobrudža, Gruzija). Neki autori povezuju taj običaj s povratkom u uterus.<sup>26</sup>

<sup>25</sup> „Crvenka“ je prirodna vrsta kamena iz lokalnog kamenoloma u blizini Viminacija.

<sup>26</sup> Rubel, Soficaru 2012, 164–165.

The second group of graves belongs to children buried in a wooden coffin or laid on a wooden board, while in rare cases they are simply covered with a board (210 graves, 33%). The remains of the coffins are very rare and scarce, and iron nails are found next to the skull, feet, and on the sides of the skeleton as the only evidence of the existence of a coffin. Grave goods were found in 30% of the graves, while the other 3% did not contain grave goods.

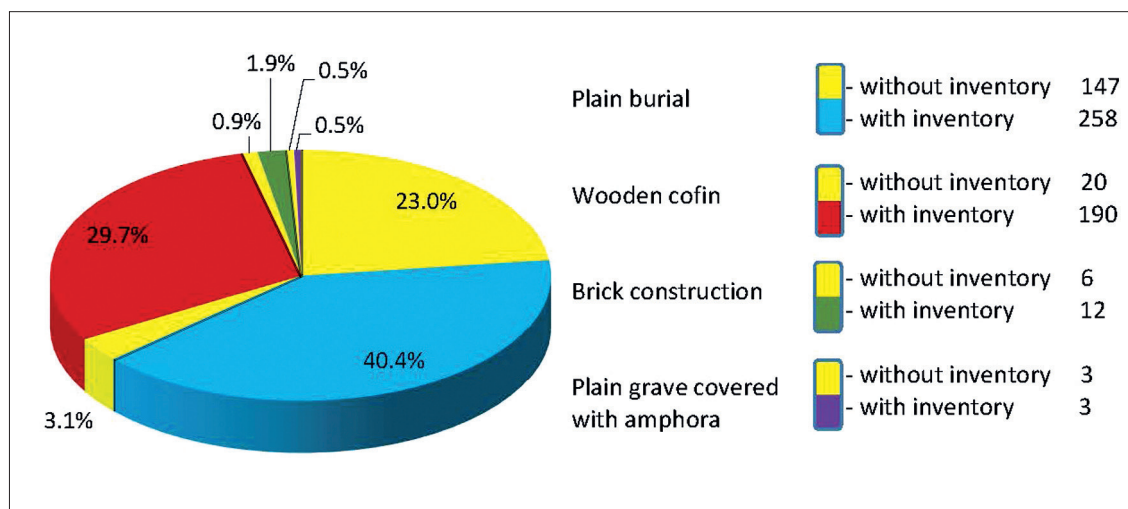
The third group consists of the graves of children buried in a coffin made of bricks or tegulae (18 graves, 3%). The coffins are formed by horizontally laid bricks interconnected with earth or lime plaster or by edgewise set bricks or tegulae. In rare cases the covers of bricks, tegulae, or imbrex were preserved, even though they were in most cases damaged by the machine work, looting, or digging another grave. Grave goods were found in 2% of the graves, while in 1% there were no grave goods.

In rare cases of plain graves pits, burials in wooden coffins, or those made of bricks or rough stones were found (shale, lime, or “crvenka”),<sup>25</sup> which either covered the graves or such individual finds marked the grave site.

Plain grave pits covered with a half of an amphora, and in one case by a bowl, were found in six graves (1%). Half of them were infants, while the age of the others remains unidentified. Three graves contained grave goods. Grave G-210 contained a glass bottle, beads, a balsamarium, and a bronze key, while the remaining two each contained one object; a coin of Trajanus and a bronze bell. The burial of newborns in amphorae or some other recipient is known throughout the whole Roman Empire, especially in the late classical period (Dobrudža, Georgia). Some authors tend to link this tradition to the idea of the return to the uterus.<sup>26</sup>

<sup>25</sup> “Crvenka” is a type of rock (red petrified clay) from the local Viminacium quarry.

<sup>26</sup> Rubel, Soficaru 2012, 164–165.



Slika / Figure 1. Tipološka klasifikacija inhumiranih dječjih grobova / Typological classification of the inhumed children's graves.

Dob djece u većini slučajeva nije precizno utvrđena. Od ukupnog broja dječjih grobova (639), za 268 pojedinaca dob nije precizno određena. Djeca su po dobi izdvojena u pet skupina. Prvu skupinu čine novorođenčad, odnosno djeca do prve godine života. Ova je dobna skupina najbrojnija (152). Uglavnom, slobodno su pokopani i sahranjeni u drvenom lijesu, dok ih je najmanje sahranjeno u kovčegu od opeka, odnosno pokriveno amforom.

Sljedeću skupinu čine djeca od druge do četvrte godine (41). Gotovo je polovica sahranjena u drvenom lijesu, a nešto manje ih je slobodno ukopano. S djecom dobi od četvrte do osme godine suprotna je situacija. Od trideset tri sahrane, dvije je trećine slobodno pokopane djece, dok je jedna trećina sahranjena u sanduku od drva. Djeca starije dobi, od osme do dvanaeste godine (23), gotovo su podjednako sahranjivana u drvenom lijesu, ili su slobodno pokopana, dok je jedno u dobi između desete i dvanaeste godine sahranjeno u kovčegu od opeke.

Brojčano su najmanje zastupljeni grobovi djece u dobi od dvanaeste do petnaeste godine života (19). Od ovog broja za dvije sahrane može se reći da su izvršene u drvenom lijesu, dok su svi ostali pokojnici slobodno pokopani. Grupne sahrane djece

The age of the children in most cases is not precisely determined. Out of 639 children's graves, age was determined approximately for 268 individuals. The children are divided by their age into five groups. The first group consists of infants, i.e. of one-year-old children. This age group is the most numerous (152). The children from this group were mostly buried in plain grave pits or in a wooden coffin, while a very small number was buried in a brick structure, or covered by an amphora.

The next group consists of children ranging from two to four years of age (41). Almost half of the children in this group were buried in a coffin made of wood, and a little less than that was buried in plain grave pits. The situation is reversed for the children of four to eight years of age. Out of 33 graves, two thirds are plain grave pits, while one third contained a wooden coffin. Older children, 23 of them (8 – 12 years old) were almost equally buried in wooden coffins or in grave pits, while one aged between ten and twelve was buried in a brick structure.

The rarest are the graves of children between the ages of twelve to fifteen (19). Of these two funerals can be said to have been made in a wooden coffin, while all other deceased were buried directly in grave pits. Group funerals of children with adult individuals or older children are present in several cases. A plain grave pit of

s odraslim pojedincima ili starijom djecom prisutne su u nekoliko slučajeva. Grob slobodno pokopanog djeteta (G-26) pronađen je iznad groba slobodno sahranjene odrasle žene (G-24). Vjerojatno je riječ o sahrani djeteta iznad majčina groba. Dvojni je grob (G-47 i 48) u drvenom lijesu sadržavao skellete dviju osoba, od kojih je jedna u dječjoj dobi od 10 do 12 godina, dok je druga odrasla osoba ženskog spola u dobi oko 30 godina. U grobu G-106 slobodno su ukopane tri osobe, dvije odrasle nepoznate dobi i spola, dok je treća dječje dobi. Dijete od šest godina sahranjeno je u drvenom lijesu (G-167) i sahranjeno je u grobu kremiranog pokojnika mlađe dobi (G1-229). Slična je situacija s djetetom od šest mjeseci (G-169) koje je sahranjeno u grobu kremiranog djeteta u dobi od 10 godina (G1-138). Dvojna sahrana djeteta od 4 do 6 godina i žene od 30 do 40 godina izvršena je u slobodno ukopanom grobu G-194.<sup>27</sup> Slična je situacija u dvojnim grobovima G-625 A, B i G-798 A, B u kojima su slobodno pokopani dijete i odrasla osoba. Precizna dob i spol pokojnika nisu utvrđeni.<sup>28</sup>

Skeletni ostaci pokojnika dječje dobi često su nedovoljno sačuvani i nije moguće utvrditi točan položaj. U slučajevima gdje je to bilo moguće utvrditi, skeleti su uglavnom položeni na leđa, s rukama pored tijela ili na zdjelici. Međutim, sedam pokojnika dječje dobi bilo je sahranjeno na lijevom, odnosno desnom boku, u zgrčenom položaju. Svi su slobodno pokopani, u jednom je grobu novac Hadrijana, dok su dva iz druge polovine 2. stoljeća. Prilozi su prisutni samo u dva slučaja, i to su novac i jedna keramička posuda. Dob je utvrđena u četvero djece i kreće se od osamnaest mjeseci do osme godine.<sup>29</sup>

<sup>27</sup> Зотовић, Јордовић 1990, 56, 58, 63, 65, 67.

<sup>28</sup> Podaci su preuzeti iz dokumentacije Arheološkog instituta u Beogradu, terenski dnevnik Više grobalja iz 1984. godine, str. 880 i 1040.

<sup>29</sup> Зотовић, Јордовић 1990, 56, Г-20; 66, Г-188; 68, Г-220; Korać, Golubović 2009, 353, G-421; Podaci za ostale dvojne grobove preuzeti su iz dokumentacije Arheološkog instituta u Beogradu, terenski dnevnik Više grobalja iz 1984. godine, str. 809, G-551 i iz 1985. godine, str. 2000, G-1882 i str. 2259, G-2169.

a child (G-26) was found above a grave of an adult woman (G-24). This was probably a child's burial above the mother's grave. A double grave (G-47 and 48) contained skeletons of two individuals in a wooden coffin. One of the individuals was a child aged between ten and twelve and the other an adult female around the age of 30. In grave 106 there were three buried individuals; two adults of unknown age and sex, while the third individual was a child. A six-year-old child was buried in a wooden coffin (G-167) in the grave of a cremated younger individual (G1-229). This is similar to the burial of a six-month-old child (G-169) who was buried in a ten-year-old child's grave (G1-138). A double funeral of a child four to six years of age and a woman aged between 30 and 40 was performed in a plain grave pit (G-194).<sup>27</sup> The situation is similar to double graves 625 A, B and 798 A, B where a child was buried with an adult individual. The precise age and sex of the deceased were not determined.<sup>28</sup>

The skeletal remains of children are often not preserved and it is not always possible to determine their exact position. In cases where this was possible, the skeletons are mostly supine burials, with arms laid next to the body or crossed over the pelvis of the deceased. However, seven deceased children were buried on their sides, either left or right, in foetal position. The burials were all plain grave pits; one had a coin of Hadrian inside, while two are from the second half of the 2<sup>nd</sup> century. Grave goods are present only in two instances – coins and a ceramic vessel. The age of the four children was determined to be between eighteen months and eight years.<sup>29</sup>

<sup>27</sup> Zotović, Jordović 1990, 56, 58, 63, 65, 67

<sup>28</sup> The data was taken from the Institute of Archaeology in Belgrade's documents; field diary of Više grobalja from 1984, pg. 880 and 1040.

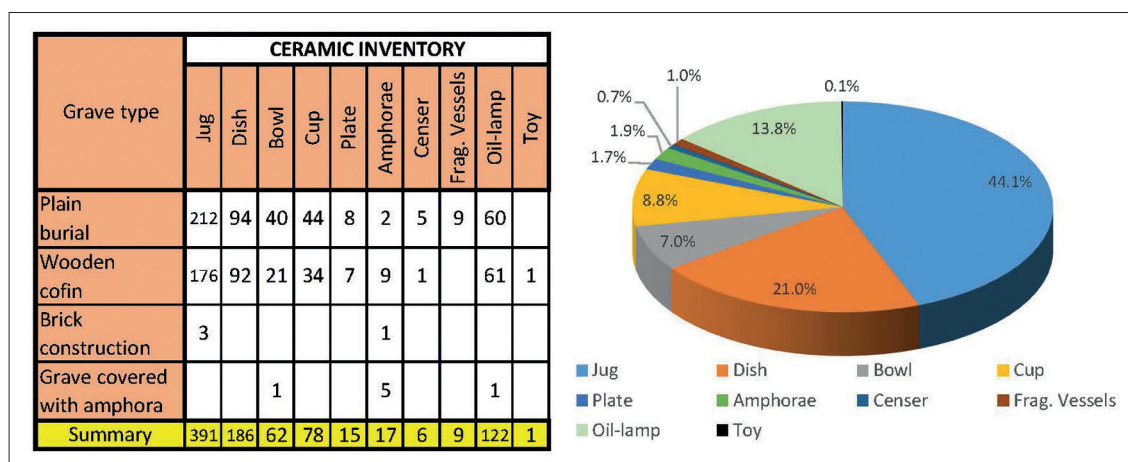
<sup>29</sup> Зотовић, Јордовић 1990, 56, Г-20, 66, Г-188, 68, Г-220; Korać, Golubović 2009, 353, G-421. Data for the other double graves was taken from the Institute of Archaeology in Belgrade's documents; field diary of Više grobalja from 1984, pg. 809, G-551 and from 1985, pg. 2000, G-1882 and pg. 2259, G-2169.

## GROBNI PRILOZI

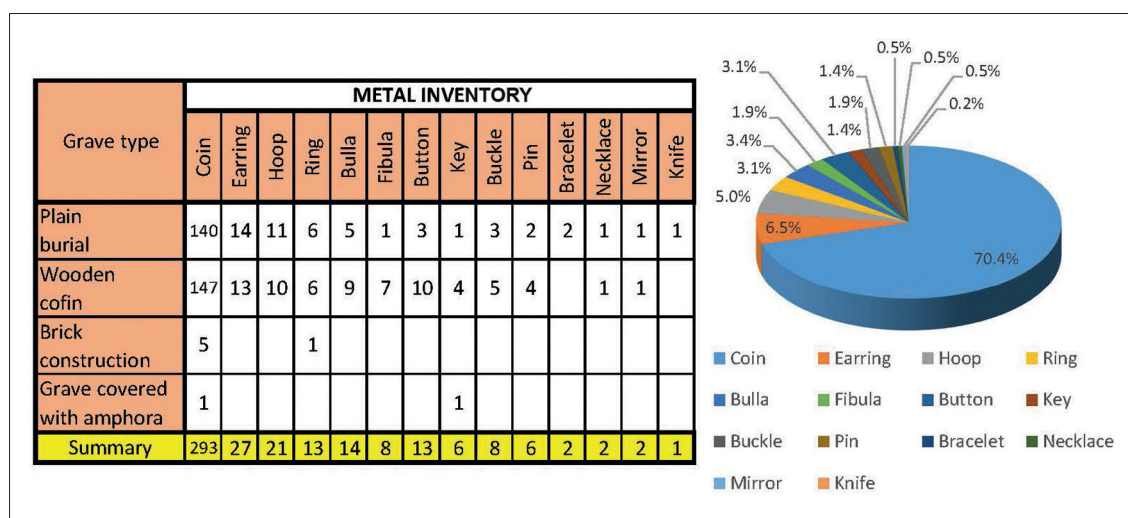
Grobni prilozi iz grobova inhumirane djece su jednolični. Među njima dominiraju posude od keramike (vrč, lonac, zdjela, pehar...) i svjetiljke (sl. 2). Gotovo su identični nalazi podjednako zastupljeni u grobovima slobodno ukopane djece i sahranjene u drvenom lijesu. Najčešće su pronađena po tri vrča u grobu, po jedan ili dva u manjoj mjeri, dok su u dva groba nađena čak po četiri vrča. Sve su ostale posude najčešće prisutne s po jednim primjerkom, ali ima i iznimaka, poput lonaca koji su s po dva primjerka prisutna u dvadeset grobova. Svjetiljke predstavljaju česte priloge i obično su zastupljene s po jednim primjerkom, rijetko s po dva, dok su u jednom grobu pronađene tri svjetiljke.

## GRAVE INVENTORY

The grave inventory of the skeletal graves of children is uniform. Among the grave goods, the most dominant find are ceramic vessels (jugs, pots, bowls, cups...) and oil-lamps (Fig. 2). Almost identical finds are equally present in children's burials in plain grave pits and burials in wooden coffins. Three jugs in a single grave are the most common find; finds of one or two jugs are less common, while two graves yielded as many as four jugs. All other ceramic vessels are usually present with one piece in each grave, but there are some exceptions to the rule, such as the twenty graves containing two ceramic pots each. Oil-lamps are common grave goods and one is usually found per grave, rarely two, whereas in one grave three were discovered.



Slika / Figure 2. Prikaz keramičkih nalaza / Ceramic finds.



Slika / Figure 3. Prikaz metalnih nalaza / Metal finds.





Slika / Figure 4. Nalazi iz dječjega groba G-2250 / Finds from child's grave G-2250 (Dokumentacioni centar Viminacium / The Documentation Centre of Viminacium; snimila / photo by B. Milovanović).

Novac je najbrojniji od svih grobnih priloga (sl. 3). Podjednako je prisutan u grobovima slobodno ukopanih pokojnika i onih sahranjenih u drvenom lijesu. Rijetko je prisutan u kovčezima od opeka i samo je jedan primjerak iz groba pokrivenog amforom. Uglavnom, nalazi se po jedan novac u grobu, a u iznimno rijetkim slučajevima po dva ili tri.

Postoje primjerci koji su perforirani, što ukazuje da su nošeni kao privjesci na ogrlici ili naušnici, a pronađeni su s raznovrsnim privjescima, kao što su: bule, školjke, falusi, zvonca, perle i sl. (sl. 4). Za razliku od jednom probušenog novca, koji se uglavnom smatra privjeskom, kod onih tri puta probušenih pojavljivala su se i drugačija mišljenja, da su povremeno bili prišivani i na odjeću.<sup>30</sup> Ostatak je tkanine pronađen na novcu iz dječjega groba G-216. Novac s viminacijske nekropole Više grobalja posebno je obrađen i publiciran u monografiji koja je korištena za datiranje obrađenih grobova u ovome radu.<sup>31</sup>

Ostali prilozi odnose se na dijelove nošnje (fibule, gumbi, kopče, igle, čavli za cipele), osobni nakit (naušnice, alke, prstenje, ogrlice), toaletni pribor (balzamariji, ogledala, boce) i na predmete koji su imali ulogu amuleta, odnosno apotropejski znak (bule, perle, privjesci u obliku falusa, zvonca, zubi divljih životinja, školjke i puževi). Predmete za igru čine rijetki primjerci žetona, kockica i jedna zvečka (sl. 3, 5, 6).

<sup>30</sup> Vojvoda, Mrđić 2015, 30–36.

<sup>31</sup> Vojvoda, Mrđić 2015.

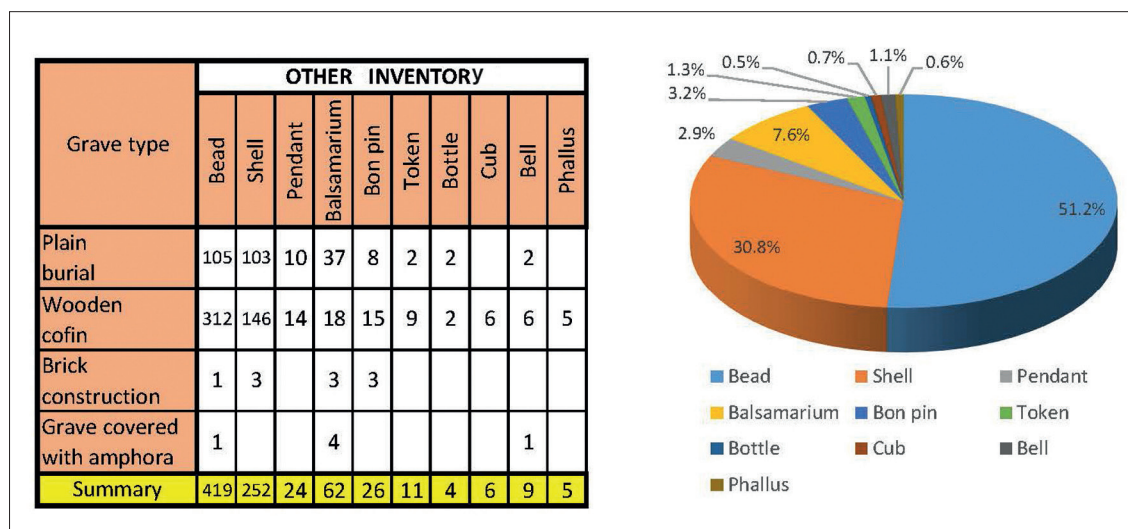
Of all the grave goods, coins are the most numerous (Fig. 3). They are equally present in the plain grave pits and in burials in wooden coffins. They are rarely present in brick structures and there was only one find in an amphora-covered grave. One coin is usually found per grave, and in extremely rare cases up to two or three are found.

Some are perforated, which suggests that they used to be worn as pendants on a necklace or earring and were found with various other pendants: bullae, shells, phalluses, bells, beads etc. (Fig. 4). Unlike singly perforated coins, which are generally assumed to be pendants, different opinions arise with regard to those with three perforations which state that sometimes they were also sewn onto clothing.<sup>30</sup> In child's grave G-216, cloth remnants were preserved on the coin. The coins from the Viminacium necropolis Više grobalja were separately analysed and published in a study used for dating the analysed graves in this paper.<sup>31</sup>

The rest of the grave inventory consists of parts of clothing (fibulas, buttons, buckles, pins, hobnails), personal jewellery (earrings, hoops, rings, necklaces), toiletries (balsamariums, mirrors, bottles), and objects that had the role of an amulet, or were of apotropaic character (bullae, beads, bell and phallus shaped pendants, wild animals' teeth, shells and snails). Rare are objects representing toys – tokens, cubes, and a rattle (Fig. 3, 5, 6).

<sup>30</sup> Vojvoda, Mrđić 2015, 30–36.

<sup>31</sup> Vojvoda, Mrđić 2015.



Slika / Figure 5. Prikaz ostalih nalaza / Other finds.



Slika / Figure 6. Pijetao, zvečka iz dječjega groba G-699, C-4749 / Rooster, rattling toy from child's grave G-699, C-4749 (Narodni muzej Požarevac / National Museum of Požarevac; Д. Спасић-Бурић 2015, 170, кат. бр. / cat. no. 72).



Slika / Figure 7. Dečji grob G-2250 / Child's grave G-2250 (dokumentacija Arheološkog instituta u Beogradu / documentation of the Institute of Archaeology in Belgrade).





Slika / Figure 8. Detalj iz dječjega groba G-2267 / Detail from child's grave G-2267 (dokumentacija Arheološkog instituta u Beogradu / documentation of the Institute of Archaeology in Belgrade).

Primjećujemo da u grobovima inhumirane djece dominira standardni repertoar: novac, vrč i svjetiljka, kao i u grobovima odraslih osoba (sl. 7, 8).<sup>32</sup> U pogrebnom ritualu djece nije primjenjivan poseban tretman u odnosu na starije. Grobni su prilozima uglavnom imali cilj osigurati ugodan put i boravak pokojnika u zagrobni život. Novcem je plaćan prelazak preko rijeke, svjetiljkom je osvjetljen put, u vrčevima su se nalazile tekućine za libaciju (voda, vino i ulje), a hrana u posudama za blagovanje (zdjele, tanjuri).

Ipak, dječji se grobovi po pojedinim prilozima izdvajaju od grobova odraslih. Predmeti, kao što su bule, raznobojne perle, različiti privjesci, školjke i puževi, osim što su bili posebno vezani uz pokojnika, imali su cilj štititi ga od zlih duhova (sl. 4, 9).<sup>33</sup>

<sup>32</sup> Korać, Golubović 2009, 527–528.

<sup>33</sup> Barber, Bowsher 2000, 325.

We can see that in skeletal children's graves the usual inventory predominates: coins, a jug, and an oil-lamp, the same as in graves of adult individuals (Fig. 7, 8).<sup>32</sup> The funeral rites for children were not different from those performed for adults. The grave goods were usually placed there to secure a safe journey to the afterlife for the deceased and secure their stay there. The coins are used to pay for the fare across the river, the oil-lamp served to light the way, while the jugs contained liquid sacrifices (water, wine, and oil), and the food was put in dining dishes (bowls, plates...).

Still, children's graves differ from the graves of adults by some grave goods. The objects such as bullae, polychrome beads, various pendants, shells and snails, apart from being specially linked with the deceased, protected against evil spirits (Fig. 4, 9).<sup>33</sup>

<sup>32</sup> Korać, Golubović 2009, 527–528.

<sup>33</sup> Barber, Bowsher 2000, 325.



Slika / Figure 9. Moguća rekonstrukcija ogrlice iz dječjega groba G-2250 / Possible reconstruction of a child's necklace from grave G-2250 (Dokumentacioni centar Viminacium / The Documentation Centre of Viminacium; snimila / photo by B. Milovanović).

Inhumirana djeca na nekropoli Više grobalja pripadaju siromašnjoj društvenoj klasi Viminacija, o tome svjedoče jednostavne sahrane u običnim rakama i drvenim sanducima, dok su rijetko zastupljeni kovčezi od opeka i tegula. Također, skromni i malobrojni prilozi potvrđuju ovu činjenicu, ali isto tako je sigurno da su žitelji Viminacija poštovali djecu. Tijekom pogreba djece primjenjivani su svi pogrebni rituali kojima nije zaobiđena ni novorođenčad koja je uglavnom inhumirana. Iznad dječjih su grobova pronađene žrtvene površine koje svjedoče o održavanju redovitih pogrebnih obreda.

Bule su nalažene u grobovima slobodno ukopane djece i sahranjene u drvenom lijesu.<sup>34</sup> U grobovima inhumirane djece s istražene nekropole, ukupno je pronađeno četrnaest primjeraka, s tim što je u grobu djeteta sahranjenog u drvenom lijesu bilo četiri bule (G-216). Jedna je srebrna, a ostale su

<sup>34</sup> Goette 1986, 138, bilj. 24. Bulu su prema pisanim izvorima nosili slobodno rođeni dječaci do stjecanja zrelosti (između 14. i 17. godine), a onda su je prilagali Larima. Na brojnim reljefima i skulpturama dječaci su doista prikazivani s bulom oko vrata. Prema Plautu, i žene su do udaje mogle nositi bulu.

The inhumed children from the necropolis Više grobalja belong to a poorer social class of Viminacium, simple funerals in ordinary grave pits and wooden coffins being proof of that, while brick structures are rare. Modest and scarce inventories also serve to confirm this fact, but it is also obvious that the residents of Viminacium respected children. When burying children, the same funeral rites as for adults were performed – even for infants who were inhumed. Sacrificial surfaces were found above the children's graves, which give proof of regular commemorations.

Bullae were found in plain grave pits as well as in burials in wooden coffins.<sup>34</sup> A total of 14 bullae were found in the skeletal graves of children at the excavated necropolis, and as many as 4 were found in a grave of a child buried in a wooden coffin (G-216). One bulla is silver, while the other bullae are made of bronze. One was found on the chest, while the other bullae were found together with pendants of wild boar teeth, shells, beads, and two bells at the child's

<sup>34</sup> Goette 1986, 138, n. 24. According to written sources, the bulla was carried by freeborn boys until maturity (between 14 and 17 years of age), when they would offer it to the Larres. On numerous reliefs and sculptures, boys were depicted with bullae around their necks. According to Plautus, women were also allowed to wear bullae until marriage.



brončane. Jedna je pronađena na grudima, dok su se ostale, zajedno s privjescima od zuba vepra, školjkama, perlama, i dva zvonca, nalazile pokraj nogu, kao i dio narukvice ili ogrlice pohranjene vjerojatno u drvenoj škrinji. Dijete je u dobi do jedne godine. Novcem Domicijana, grob je datiran u kraj 1. i početak 2. stoljeća.<sup>35</sup> Slična je situacija i s ostalim grobovima.<sup>36</sup> Međutim, u jednom grobu bula je jedini grobni prilog ili se nalazi samo uz fibulu, dok je u drugome grobu sa svjetiljkom, vrčem i kadionicom.

Na svim do sada istraženim nekropolama Viminacija pronađeno je 167 bula (jedna zlatna, jedanaest srebrnih, dok su ostale od bronce). Više su zastupljene u grobovima inhumiranih (78), a manje u grobovima kremiranih pokojnika (29) različitih uzrasta i spola, iako prevladavaju dječje sahrane (najmanje 35). Za sada je potvrđeno sedam sahrana odraslih osoba s bulama (tri muškarca, dvije žene i dva odrasla pokojnika neutvrđenog spola). Na temelju položaja unutar grobova, utvrđeno je kako je bula nošena na ogrlici oko vrata, pokraj nogu naknadno stavljena zajedno sa sličnim priložima apotropejskog karaktera, dok je jedan nalaz korišten kao privjesak na narukvici.<sup>37</sup> Bula na torkvesu pronađena je u četiri groba (tri kremacije i jedna inhumacija).<sup>38</sup>

Na prostoru rimskih provincija Panonije, Norika, Reciye, Germanije i Britanije bule su uglavnom pronađene u grobovima inhumirane i kremirane djece. Ovo potvrđuju pojedini grobovi iz Panonije, u kojima su bule pronađene, ne samo u grobovima dječaka već i djevojčica, dok je po jedan primjerak iz groba odraslog muškarca, odnosno žene. Dosadašnji nalazi bula iz gro-

feet, as parts of bracelets or necklaces probably stored in a wooden box. The child belongs to the group of children up to one year of age. The grave is dated with a coin of Domitian to the end of the 1<sup>st</sup> and the beginning of the 2<sup>nd</sup> century AD.<sup>35</sup> The situation is similar in the other graves as well.<sup>36</sup> However, in one grave, the bulla was the only grave good, with the addition of a single fibula, while in a second grave it was found together with an oil-lamp, a ceramic jug, and a censer.

In all the cemeteries of Viminacium excavated so far, 167 bullae were found (one gold, eleven silver, and the rest bronze). Bullae are found more often in skeletal graves (78), and less in cremation graves (29) of individuals of different ages and sexes, but they definitely predominate in children's burials (at least 35). For now, seven burials of adults with bullae were confirmed (three male; two female, and two adults of undetermined sex). Based on the location of the bullae inside the graves, it was noted that they were worn around the neck, and subsequently placed by the legs together with similar grave goods of apotropaic character, while one find was used as a pendant on a bracelet.<sup>37</sup> Bullae on torques were found in four graves (three cremation graves and one skeletal grave without cremation).<sup>38</sup>

In the Roman provinces of Pannonia, Noricum, Raetia, Germania, and Britannia, bullae are usually found in graves of inhumed (without cremation) and cremated children. This is supported by individual graves from Pannonia in which bullae were found not only in the graves of boys, but also girls, while one specimen was found in the grave of an adult male or female. The former finds of bullae from the graves of

<sup>35</sup> Зотовић, Јордовић 1990, 68, Т. 36: 2–12, Т. 37: 13–15; Vojvoda, Mrđić 2015, 19, kat. br. 294. U grobu s viminacijske nekropole (lokalitet Pirivoj, G -379) sahranjeno je novorođenče s tri bule različitog materijala (srebro, bronca i olovo). Grob je datiran u prvu polovicu 3. stoljeća (Stojić 2015, 51).

<sup>36</sup> U trideset grobova sa svih do sada istraženih viminacijskih nekropola bula je činila sastavni dio ogrlica od različitih perli i privjesaka, školjki i puževa (Stojić 2015, 48).

<sup>37</sup> Stojić 2015, 47–48, 50.

<sup>38</sup> Zotović 1995, 160–162.

<sup>35</sup> Зотовић, Јордовић 1990, 68, Т. 36: 2–12, Т. 37: 13–15; Vojvoda, Mrđić 2015, 91, cat. no. 294. A grave from the necropolis of Viminacium (site Pirivoj, G-379) containing a new-born baby with three bullae of different materials (silver, bronze, and lead). The grave is dated to the first half of the 3rd century (Stojić 2015, 51).

<sup>36</sup> In 30 graves from all of the investigated necropolises of Viminacium, bullae are an integral part of necklaces made out of different beads and pendants, shells and snails (Stojić 2015, 48).

<sup>37</sup> Stojić 2015, 47–48, 50.

<sup>38</sup> Zotović 1995, 160–162.



Slika / Figure 10. Moguća rekonstrukcija ogrlice od školjki iz dječjega groba G-2250 / Possible reconstruction of a shell necklace from child's grave G-2250 (Dokumentacioni centar Viminacium / The Documentation Centre of Viminacium; snimila / photo by B. Milovanović).

bova Panonije,<sup>39</sup> Mezije<sup>40</sup> i Dakije<sup>41</sup> ukazuju da nošenje bule nije bio odraz društvenog statusa pokojnika, već je bula prilagana kao amulet i imala je apotropejsko značenje. Sadržaj bule najčešće čine ostaci biljke ili biljke umotane u tkaninu. Rijetko se nalaze sjemenke voća, korijandra, a u jednom slučaju mali kip Harpokrata u lovorovu listu.<sup>42</sup> Zaštitnička moć sadržaja bule spominje se jedino kod Makrobija koji navodi da štiti od "urokljivog oka".<sup>43</sup>

Ljušture školjki i puževa (uglavnom morskih, rijetko riječnih) u grobovima mogu imati utilitarnu, dekorativnu, votivnu i simboličku funkciju (sl. 10; privjesci za ogrlice, za dekoraciju odjeće ili toaletnih kutija; kao simboli Venere, boginje ljepote i plodnosti).

<sup>39</sup> Migotti 2007, 187–219;

<sup>40</sup> Petrović 1993, 69; Grbić 1994, 208, kat. br. 490, T. 54: 1; Петровић 1997, 133; Černač 2000, 52, kat. br. 2, T. 1: 2; Pop-Lazić 2002, 67–68;

<sup>41</sup> Benea 2004, 141–143; Hamat 2010, 214.

<sup>42</sup> Migotti 2007, 187–219.

<sup>43</sup> Brown 2000, 259.

Pannonia,<sup>39</sup> Moesia<sup>40</sup> and Dacia<sup>41</sup> show that bullae were not a reflection of the social status of the deceased, but that they were put in graves as amulets and had apotropaic significance. The bulla usually contains the remains of plants or plants wrapped in cloth. More rare finds are seeds of fruits, coriander, and in exceptional cases, a small statue of Harpocrates in laurel leaf.<sup>42</sup> The protective power of the contents of a bulla is mentioned only by Macrobius, who states that they protect the wearer against "evil eye".<sup>43</sup>

Shells and snails (mostly marine, rarely fresh water species) in graves can have a utilitarian, decorative, votive, and symbolic function (Fig. 10; as necklace pendants, to adorn clothes or jewellery boxes; as symbols of Venus, the goddess of beauty and fertility). In children's graves,

<sup>39</sup> Migotti 2007, 187–219;

<sup>40</sup> Petrović 1993, 69; Grbić 1994, 208, cat. no. 490, T. 54: 1; Петровић 1997, 133; Černač 2000, 52, cat. no. 2, T. 1: 2; Pop-Lazić 2002, 67–68.

<sup>41</sup> Benea 2004, 141–143; Hamat 2010, 214.

<sup>42</sup> Migotti 2007, 187–219.

<sup>43</sup> Brown 2000, 259.

U dječjim su grobovima imale funkciju amuleta, odnosno zaštite protiv uroka. Često je riječ o primjercima nejestivih gastropoda (*Conus mediterraneus*, *Pirenella conica*, *Certhium vulgatum*) koji su korišteni kao privjesci na ogrlicama, narukvicama i naušnicama.<sup>44</sup>

Na nekropoli Više grobalja u grobovima inhumiranih pokojnika dječje dobi školjke su pronađene u 53 groba, i to duplo više u drvenim kovčezima nego u slobodno ukopanih pokojnika. U jednom grobu s konstrukcijom od opeke (G-2040) pronađena je polovica ljuštura školjke uz dva vrča, tri koštane igle i svjetiljka. Školjke su pronađene uz različite perle i privjeske (bula, falus, zvonce, perforirani zub životinja, perforirana ljuštura puža). Pojedine ljušture školjki su s perforacijom, ali često su oštećene i nije uvijek pouzdano jesu li korištene kao privjesci. Školjke pronađene u ovome kontekstu bile su sastavni dio ogrlica i narukvica koje su imale funkciju zaštite pokojnika od zlih sila u onozemaljskom životu. Međutim, školjke se nalaze i uz različite posude od keramike, svjetiljke i novac. U ovim slučajevima mogle su predstavljati hranu (kad je riječ o većoj količini) ili su imale simboličku funkciju vezanu uz boginju Veneru, plodnost i besmrtnost.

Brončana su zvonca pronađena u sedam grobova, s tim što su u grobovima 216 i 825, nađena po dva primjerka. Ima ih u grobovima slobodno ukopane djece (G-1296 i 1373), sahranjene u drvenom kovčegu (G-216, 825, 1655 i 2124) i u grobu prekrivenom polovicom amfore (G-673). U navedenim grobovima nalaze se zajedno s ljušturama školjki, koštanim privjescima, perlama, životinjskim zubima i bulama. Dio su ogrlice magijsko-apotropejskog karaktera koja specifičnim zveckanjem štiti pokojnika.<sup>45</sup> Perforirani zubi divljih životinja u

they served as amulets, or as protection against evils. Inedible gastropods (*Conus mediterraneus*, *Pirenella conica*, *Certhium vulgatum*) were usually used as pendants on bracelets, necklaces, or earrings.<sup>44</sup>

When it comes to the skeletal graves of children from the necropolis Više grobalja, shells were found in 53 graves, and the graves of the individuals buried in wooden coffins contained double the amount of shells than those of individuals buried in plain grave pits. In one grave with a brick structure (G-2040), a half of a shell was found together with two jugs, three bone pins and an oil-lamp. The shells in other graves were found next to various beads and pendants (a bulla, a phallus, a bell, a perforated animal tooth, or a perforated snail). Some shells were perforated, while others are damaged so it is not known whether they were used as pendants. The shells found in this context were parts of necklaces and bracelets with the purpose to protect the deceased from evil spirits in the otherworldly life. However, the shells are most often found with various ceramic vessels, oil-lamps, and coins. In these cases, they might have represented food (when a larger amount is present) or had a symbolic function associated with the goddess Venus – fertility and immortality.

A bronze bell was found in seven graves, with the exception of graves G-216 and G-825, in which two were found in each. They were found in plain graves pits (G-1296 and 1373), burials with wooden coffins (G-216, 825, 1655, 2124), and in a grave covered with a half of an amphora (G-673). In these graves, the bells were found together with shells, bone pendants, beads, animal teeth, and bullae, thus composing a necklace of magical and apotropaic character that would produce a specific jingling sound used to protect the deceased.<sup>45</sup> Perforated teeth of wild animals found in children's graves (G-216, 247, 261, 490) symbolise the strength of those animals whose power is in their strong teeth,

<sup>44</sup> Спасић-Ђурић 2015, 104–105.

<sup>45</sup> Спасић-Ђурић 2008, 122–128, Fig. 2. U grobu inhumiranog djeteta iz viminacijske nekropole (lokalitet Pećine, G-1807), uz brončano zvonce pronađeni su sljedeći predmeti: školjka, bula, zub divlje svinje, koštani privjesak, tri falusa od kosti, perle od kojih je jedna od karneola, falusnog oblika. Svi su bili pohranjeni u drvenom kovčežiću i vjerojatno su predstavljali dio ogrlice. Osim u funerarnom kontekstu, zvonca su se vješala ispred kućnih vrata, hramova, ali su činila i dio konjske orme.

<sup>44</sup> Спасић-Ђурић 2015, 104–105.

<sup>45</sup> Спасић-Ђурић 2008, 122–128, Fig. 2. In a grave of an inhumed child at the Viminacium necropolis (Pećine site, G-1807), the following objects were also found along with a bronze bell: a shell, a bulla, a tooth of a wild boar, a bone pendant, three phalluses made of bone, and beads (one of which was made of carnelian and has the shape of a phallus). The objects were buried in a small wooden box and were probably parts of a necklace. Outside the funerary context, the bells were hung above house doors, temples, and were a part of horse harnesses.



dječjim grobovima (G-216, 247, 261, 490) simboliziraju snagu tih životinja, čija se moć krije u jakim zubima, stoga su s tim ciljem i nošeni kao privjesci, a ponajprije su ih nosila djeca.<sup>46</sup>

Falusi, kao privjesci ili aplike, imali su apotropejsku funkciju, posebno u dječjim grobovima.<sup>47</sup> Četiri su falusa (tri od bronce i jedan od kosti) iz grobova pokojnika dječje dobi sahranjenih u drvenom lijesu (G-189, 331, 1726 i 1897). Svi su imali funkciju privjesaka uz raznovrsne perle ili ljušturre školjki. Privjesak iz groba 189 reljefno je izrezan na tankoj trapezoidnoj koštanoj pločici, s prstenastom alkom u gornjem dijelu i stiliziranim stidnim dlačicama sa strane.<sup>48</sup> Falusoidni privjesci iz grobova istražene nekropole datirani su novcem od 2. do sredine 3. stoljeća.<sup>49</sup> Brončanim su primjercima analogni nalazi iz okruženja: Ritopek (*Castra Tricornia*), Beograd (*Singidunum-castrum*), Guberevac (iz groba), Ivoševac kod Knina (*Burnum*) i Bribir (*Varvaria*).<sup>50</sup> Sa šireg prostora Carstva identični su nalazi iz Trier, Ursina i Britanskog muzeja.<sup>51</sup>

U grobu G-2267, na predmetu od kosti (obrađeni parožak jelenjeg roga), koji je imao funkciju aplikacije ili poklopca, reljefno je prikazan falus (sl. 11). Grob pri-

which was why the teeth were worn as pendants by children.<sup>46</sup>

Phalluses as pendants or ornaments had an apotropaic function, particularly in children's graves.<sup>47</sup> Four phalluses (three bronze, and one made of bone) were found in graves of children buried in wooden coffins (G-189, 331, 1726 and 1897). They all served as pendants, together with various beads or shells. A pendant found in grave 189 was carved in relief on a thin trapezoid bone plate with a round metal ring in its upper part and stylised pubic hair on the sides.<sup>48</sup> The dates for the phallic pendants from the excavated necropolis are based on the coins found there, ranging between the 2<sup>nd</sup> and the middle of the 3<sup>rd</sup> century AD.<sup>49</sup> Finds from the relative vicinity are analogous with the bronze ones: Ritopek (*Castra Tricornia*), Belgrade (*Singidunum-castrum*), Guberevac (from a grave), Ivoševac near Knin (*Burnum*), and Bribir (*Varvaria*).<sup>50</sup> From the wider area of the Empire, the finds from Trier, Ursine, and the British Museum are identical to the phalluses found at Viminacium.<sup>51</sup>

In grave G-2267, on an object made of bone (an analysed point of a deer antler) which served as a decorative feature or a lid, a phallus is shown in relief (Fig. 11). The grave is that of a newborn buried in a plain grave pit and with numer-

<sup>46</sup> Зотовић, Јордовић 1990, Т. 36: 7, Т. 43: 18, 19; Т. 46: 7; Korać, Golubović 2009, 397, G-490:4.

<sup>47</sup> Falusi su, osim djece, štitali i ostale čiji je život bio često ugrožen, a to su prije svih vojnici i gladijatori, zatim životinje, naročito konjsku opremu i sl. Lunulasti privjesci konjske orme s falusima poznati su iz Garduna (*Tilurium*; Sanader, Tončinić 2010, 97, kat. br. 89-90). U svakodnevnom životu falusoidni su prikazi postavljani ispred privatnih i javnih objekata, raskršća, gradskih vrata, s ciljem da štite životni prostor od svake vrste zla. Nekada su kombinirani sa zvončićima i tzv. praporcima (*tintinnabulum*) i visjeli su na kućnim vratima označavajući sreću jer je falus neutralizirao nesreću (Johns 2002, 64-65, ill. 13-14).

<sup>48</sup> Analogni primjerak od bronce poznat je iz groba kremiranog pokojnika iz iste nekropole (G1-1365), a poznati su slični nalazi iz Trier, Britanskog muzeja, Germanije i Recije. Za navedene analogije vidjeti Спасић-Ђурић 2008, 130, 141.

<sup>49</sup> Зотовић, Јордовић 1990, 66, Т. 31: 8-9, Т. 32: 9-13; Спасић-Ђурић 2008, 128-139; Korać, Golubović 2009, 298.

<sup>50</sup> Крунић 1997, 79-80, kat. br. 85-88; Miletić 2010, 155-157, kat. br. 34-44.

<sup>51</sup> Bonnet *et al.* 1989, 118, N°55; Johns 2002, ill. 10; Faust, Seewaldt, Weidner 2007, 55, N°31b.

<sup>46</sup> Зотовић, Јордовић 1990, Т. 36: 7, Т. 43: 18, 19; Т. 46: 7; Korać, Golubović 2009, 397, G-490:4.

<sup>47</sup> In addition to children, phalluses also protected adults whose lives were often endangered such as soldiers and gladiators. They protected animals too, especially when they were a part of a horse's harness etc. Pendants for harnesses in the shape of a lunular phallus were found in Gardun (*Tilurium*; Sanader, Tončinić 2010, 97, cat. no. 89-90). In everyday life, the phallic ornaments were put in front of private and public buildings, on crossroads, and on city gates to protect the living area against any kind of evil. Sometimes, they were combined with small bells and so-called sleigh bells (*tintinnabulum*), and would be hung on house entrances to signify fortune, because the phallus would neutralise misfortune (Johns 2002, 64-65, ill. 13-14).

<sup>48</sup> An analogous bronze exemplar was found in a grave of a cremated individual from the same necropolis (G1-1365) and we are familiar with similar finds from Trier, the British Museum, Germania, and Raetia. For the aforementioned analogies, see in Спасић-Ђурић 2008, 130, 141.

<sup>49</sup> Зотовић, Јордовић 1990, 66, Т. 31: 8-9, Т. 32: 9-13; Спасић-Ђурић 2008, 128-139; Korać, Golubović 2009, 298.

<sup>50</sup> Крунић 1997, 79-80, cat. no. 85-88; Miletić 2010, 155-157, cat. no. 34-44.

<sup>51</sup> Bonnet *et al.* 1989, 118, N°55; Johns 2002, ill. 10; Faust, Seewaldt, Weidner 2007, 55, N°31b.





Slika / Figure 11. Nalaz s prikazom falusa iz dječjega groba G-2267 / Object with a representation of a phallus from child's grave G-2267 (Dokumentacioni centar Viminacium / The Documentation Centre of Viminacium; snimila / photo by B. Milovanović).

pada slobodno ukopanom novorođenčetu s brojnim priložima (sl. 9; ljuštura puža, školjke, bula, perle, perforirani zub...). Prilozi su bili smješteni na gomili pokraj nogu, pretpostavljamo u kutiji ili torbici, i svi su u svojstvu amuleta. Dvije perle od raznobojnog stakla su sa "okcima", što dodatno opravdava prisutnost falusa koji štiti od "zlog oka". Grob je datiran novcem Antonina Pija. Analogni je nalaz poznat iz Britanskog muzeja.<sup>52</sup>

Na kutiji za vosak iz Viminacija (lokali-tet Pećine, G1-1140) apliciran je brončani falus, a zbog apotropejske moći tog prikaza, predmet je vjerojatno nakon primarne upotrebe smješten u grob pokojnika neodređenog spola i dobi.<sup>53</sup> Na viminacijskim nekropolama poznati su slični privjesci u obliku falusa, ne samo od bronce i kosti, već i od srebra, karneola, jantara i stakla. Stilizirane su jantarne perle u obliku falusa poznate iz Hajdina i Ptuja, dok za primjerak od karneola i stakla nisu poznate analogije.<sup>54</sup>

Falusoidni su privjesci nošeni na tijelu, oko vrata, nazivani su *fascinum* i imali su funkciju zaštite, kako na ovom tako i na onome svijetu. Plinije i Varon potvrđuju da su djeci oko vrata stavljeni falusni simboli kako bi

ous grave goods (Fig. 9: snails, shells, a bulla, a perforated tooth...). The finds were placed at the feet, presumably in a box or a bag, and they all served as amulets. Two beads made of polychrome glass have "eyes" on them, which additionally solidifies the function of the phallus as protection against "evil eye." A coin of Antoninus Pius was also found in the grave. An analogous find is known from the British Museum.<sup>52</sup>

On a seal box from Viminacium (Pećine site, G1-1140) a bronze phallus is represented, and because of its apotropaic power, the object was probably buried after primary use in a grave of an individual whose age and sex are unknown.<sup>53</sup> Similar phallic pendants are found in Viminacium necropolises, made not only of bronze and bone, but also from silver, carnelian, amber and glass. We are familiar with the stylised amber beads shaped like phalluses from Hajdin and Ptuj, whereas there are no analogies for those made of carnelian and glass.<sup>54</sup>

Phallic pendants were worn on an individual's body, around the neck, they were called *fascinum*, and protected the wearer in this world and the next. Plinius and Varro confirm that children wore phallic symbols around their necks to neutralise evil eye and attract good fortune.<sup>55</sup> Being

<sup>52</sup> Johns 2002,73, ill. 56.

<sup>53</sup> Спасић-Ђурић 2008, 148-150, сл. 12: 8; Milovanović, Raičković Savić 2013, 222, tab. 1, 224 (Type II, Variant 1).

<sup>54</sup> Vomer-Gojković 1996, 315-316; Спасић-Ђурић 2008, 121-174.

<sup>52</sup> Johns 2002,73, ill. 56.

<sup>53</sup> Спасић-Ђурић 2008, 148-150, Fig. 12: 8; Milovanović, Raičković Savić 2013, 222, Tab. 1, 224 (Type II, Variant 1).

<sup>54</sup> Vomer-Gojković 1996, 315-316; Спасић-Ђурић 2008, 121-174.

<sup>55</sup> Marcade 1969, 10-12, 20; Kiefer 1971, 115-117.

neutralizirali zlo urokljivih očiju i donijeli sreću.<sup>55</sup> Djeca, kao osjetljiva bića, bila su najugroženija i podložna zavidnim pogledima i urokljivim očima stoga im je bila neophodna zaštita kakvu im je pružao falus. U svim je dječjim grobovima falus imao dodatne "pratioce" (puževe, školjke, zub vepre, zvonce, bulu, perle s „okcima“) koji su dodatno pojačavali magijsko-apatropejski značaj ogrlice ili narukvice, imajući za cilj zaštitu pokojnikova groba, kao i njega samoga.

Igračke, poput zvečki od keramike u obliku raznih životinja, sporadično se nalaze u dječjim grobovima, a na istraženoj nekropoli pronađena je zvečka u obliku pijetla u grobu pokojnika sahranjenog u drvenom lijesu (G-699, sl. 6). U grobu su pronađeni sljedeći prilozi: tri vrča, stakleni i keramički balzamarij, svjetiljka i novac. Grob je iz 2. stoljeća.<sup>56</sup> Fragmentirana je glava pijetla pronađena u žrtvenom sloju iste nekropole, dok se ostale zoomorfne igračke od keramike (orao, golub, kokoš, konj, pas) nalaze u grobovima kremiranih i skeletno sahranjenih pokojnika, ali i u slojevima između grobova spomenute nekropole, kao i na nekropoli Pećine. Korištene su, ne samo kao igračke-zvečke već i kao votivni darovi namijenjeni božanstvima ili kao suveniri.<sup>57</sup>

Tijekom antičkog razdoblja djeca su se bavljala na razne načine, igrajući se igračkama, o čemu svjedoče brojni reljefni i figuralni prikazi. Osim igračaka u obliku minijaturnih životinja, djeci su za igru bili namijenjeni i različiti minijaturni predmeti (alati, dijelovi namještaja...). U Viminaciju je pronađen jedan minijaturni krevet za bebe (krevetić) od kosti.<sup>58</sup> Kao predmeti za igru korišteni su žetoni od kosti, paste i kamena,

<sup>55</sup> Marcade 1969, 10–12, 20; Kiefer 1971, 115–117.

<sup>56</sup> Premk 1995, 147–148, Fig. 10; Спасић-Ђурић 2002, 137, сл. 115; 2015, 104, 170, кат. бр. 72. Zvečka u obliku goluba pronađena je na viminacijskoj nekropoli Pećine u grobu inhumiranog pokojnika G-3471.

<sup>57</sup> Premk 1995, 143–154; Спасић-Ђурић 2002, 136, сл. 114.

<sup>58</sup> Спасић-Ђурић 2006, 295–310, Т. 1: 1. Krevetić je iz kremiranoga groba (lokalitet Pećine, G1-95). U ovome slučaju svadbena je krevetić položen kao žrtva Geniju od strane mlade, preminule nevjeste.

sensitive, children were the most endangered and susceptible to envious stares and evil eye, and therefore they need the protection provided by a phallus. In all children's graves, the phallus had additional "company" (snails, shells, a wild boar's tooth, a bell, a bulla, and beads with eyes), which enhanced the magical-apatropeic meaning of the necklace or bracelet, serving as protection for both the grave and the deceased.

Toys such as ceramic rattles shaped like various animals are sporadically found in children's graves, and at the excavated necropolis a rattle shaped like a rooster was found in a grave of an individual buried in a wooden coffin (G-699; Fig. 6). The following grave goods were found in the grave: three jugs, a glass and ceramic balsamarium, an oil-lamp, and coins. The grave dates to the 2<sup>nd</sup> century AD.<sup>56</sup> The fragmented rooster's head was found in a sacrificial layer of the same necropolis, while other ceramic toys (an eagle, dove, chicken, horse, dog) were found in cremation and skeletal burials of the deceased, but also in layers between the graves at the mentioned necropolis, as well as the necropolis Pećine. Toys were used not only as rattles, but also as votive gifts intended for deities or as souvenirs.<sup>57</sup>

During the classical period, children entertained themselves in a variety of ways; playing with toys as evidenced by numerous reliefs and figural representations. In addition to toys in the shape of miniature animals, various miniature objects (tools, pieces of furniture...) were designed for children to play with. In Viminacium, a tiny cot for babies was found made of bones.<sup>58</sup> Among the objects used for playing are also tokens made of bone, glass paste, and stone, as well as dice made of bone and clay. Tokens or tokens with dice were found only in six graves. In grave G-418, two bone dice were found with two tokens. The grave dates to the 2<sup>nd</sup> century

<sup>56</sup> Premk 1995, 147–148, Fig. 10; Спасић-Ђурић 2002, 137, Fig. 15; 2015, 104, 170, cat. no. 72; In the *Viminacium* necropolis (Pećine site), a rattle shaped like dove was found in an inhumed deceased grave G-3471.

<sup>57</sup> Premk 1995, 143–154; Спасић-Ђурић 2002, 136, Fig. 114.

<sup>58</sup> Спасић-Ђурић, 2006, 295–310, Т. 1: 1. The cot is from a cremation grave (Pećine site, G1-95). In this case, the bridal bed was an offering to Genius by the young, deceased bride.

kao i koštane i glinene kockice. Ukupno je u šest grobova bilo žetona ili žetona s kockicama. U grobu G-418 su pronađene dvije koštane kockice s dva žetona. Grob je datiran novcem Marka Aurelija u 2. stoljeće, a u njemu je sahranjeno dijete u dobi između šest i osam godina. U grobu G-1022 je pronađeno pet kockica s tri žetona. Grob je datiran novcem iz 3. stoljeća.<sup>59</sup>

Zanimljivo je prisustvo sumpora u dječjim grobovima, kao i sahrane pasa u grobu neposredno ispod ili iznad dječjeg skeleta. Ove su dvije situacije vezane isključivo uz dječje sahrane, vjerojatno kao posebna zaštita pokojnika dječje dobi. Grumen je sumpora stavljan u lonac, zdjelu ili drugu keramičku posudu unutar groba. U četiri groba inhumirane djece pronađen je sumpor (G-52, 169, 221 i 223), dok je jedan nalaz iz groba s kremacijom (G1-18).<sup>60</sup> Specifičan je miris vjerojatno imao cilj odbiti zle sile i zaštititi, kako samog pokojnika tako i grob. Sahrana psa iznad (G-52) ili ispod (G-86) groba inhumiranog djeteta vjerojatno nije slučajnost. Takve su situacije poznate i na drugim nekropolama. Pas, kao pratitelj psihopompa, u ovome je slučaju čuvar dječjega groba.<sup>61</sup> Međutim, nekada su djeca sahranjivana sa svojim ljubimcima, stoga ne treba odbaciti ni ovu mogućnost. Inače, sahrane su pasa poznate na teritoriju antičkog Viminacija, ne samo uz dječje grobove već i na žrtvenim površinama iznad grobova, kao i u slojevima između grobova. Ove sahrane tumače se kao ritualni obredi posvećeni htonskim božanstvima (Hekata, Dijana, Epona). Na istoimenoj nekropoli poznata je individualna sahrana psa s dvije keramičke svjetiljke. Pas je sahranjen oko 10 cm ispod donjeg sloja kremiranog pokojnika i očigledna je povezanost pokojnika s psom koji je imao poseban tretman. Slični su primjeri pronađeni i na ostalim viminacijskim nekropolama (Nad Klepečkom i Pirivoj). U jednom je slučaju pas sahranjen u blizini dislociranih kostiju konja i pokojnika mlađeg uzrasta.

<sup>59</sup> Vojvoda, Mrđić 2015, 268, kat. br. 1888; 304, kat. br. 2309.

<sup>60</sup> Зотовић, Јордовић 1990, 116.

<sup>61</sup> Зотовић, Јордовић 1990, 115–116.

AD, based on a coin of Marcus Aurelius, and a child aged 6 – 8 was buried inside. In grave G-1022, five dice with three tokens were found. The date was determined by a coin from the 3<sup>rd</sup> century AD.<sup>59</sup>

The presence of sulphur in children's graves is an interesting occurrence, as well as burials of dogs immediately below or above a child's skeleton. These are the two situations associated exclusively with children's funerals, and probably served as a special kind of protection for the deceased child. A lump of sulphur would be placed in a pot, bowl, or any other ceramic vessel inside the grave. Sulphur was found in four skeletal graves of children (G-52, 169, 221, and 223), while one was discovered in a grave of a cremated individual (G1-18).<sup>60</sup> The specific smell was probably used to repel the forces of evil and protect both the deceased and the grave itself. The burials of dogs above (G-52) or below (G-86) an inhumed child's grave are probably not a coincidence. Such situations were found in other necropolises as well. A dog as a psychopomp follower is in this case the guardian of the child's grave.<sup>61</sup> However, sometimes the children would be buried with their pets, so this possibility should not be dismissed either. There are known dog funerals around the territory of ancient Viminacium, not only in children's graves, but also on sacrificial surfaces above the graves and in the layers between the graves. These funerals are interpreted as rituals dedicated to the chthonic deities (Hecate, Diana, or Epona). At the same necropolis, an individual dog burial was found with two ceramic oil-lamps. The dog was buried around 10 cm below the lower layer of a cremated deceased and the connection of the person to the dog – which had special treatment – is obvious. Similar examples are found in other Viminacium necropolises (Nad Klepečkom and Pirivoj). In one case, a dog was buried near dislocated horse bones and a younger human individual. This was probably a joint burial of animals and a human.<sup>62</sup>

<sup>59</sup> Vojvoda, Mrđić 2015, 268, cat. no. 1888; 304, cat. no. 2309.

<sup>60</sup> Зотовић, Јордовић 1990, 116.

<sup>61</sup> Зотовић, Јордовић 1990, 115–116.

<sup>62</sup> Vuković-Bogdanović, Jovičić 2015, 687–702.

Vjerojatno je riječ o zajedničkoj sahrani životinja s čovjekom.<sup>62</sup>

U pogrebnom ritualu inhumirane djece u grobu su ponekad prisutne i životinjske kosti (G-189, butna kost ovce, goveđa plećka). One predstavljaju hranu koja je polagana istovremeno sa sahranom pokojnika. Takva je praksa bila poznata i u grobovima odraslih inhumiranih i kremiranih pokojnika i svjedoči o vjeri u život poslije smrti i potrebi za hranom, kao osnovnim izvorom života.<sup>63</sup>

Djeca na viminacijskoj nekropoli Više grobalja nisu sahranjivana na zasebnim, izdvojenim mjestima, kao što je to bio slučaj s novorođenčadi na nekropoli El Djem u istočnom Tunisu, na kojoj su sahranjeni na zasebnoj nekropoli. Brojni su slučajevi sahrane novorođene djece u Britaniji ispod podova kuća, u dvorištu i u različitim poljoprivrednim objektima. Ovaj običaj nije bio slučajnost, već predstavlja poseban odnos prema tek rođenoj djeci, za koju su posebno birana mjesta za pokop.<sup>64</sup> Identični slučajevi zasad nisu poznati na Viminaciju.

## ZAKLJUČAK

Na nekropoli Više grobalja antičkog Viminacija inhumacija djece, posebno mlađe dobi, činila je gotovo trećinu ukupnog broja sahranjenih pokojnika. Stopa smrtnosti djece bila je visoka, ali znatno niža u odnosu na druge nekropole Carstva (*Cambodunum*, *Gerulata*), dok iznimku predstavlja nekropola u Pečuhu, sa samo 19,1%.<sup>65</sup> Iako je u prvim stoljećima kremacija bila jedini oblik sahranjivanja, djeca nisu spaljivana, prije svega iz praktičnih razloga, odnosno nije bilo dovoljno koštanih ostataka koji bi se mogli sahraniti, pa su inhumirana. Dakle, iz

<sup>62</sup> Vuković-Bogdanović, Jovičić 2015, 687–702.

<sup>63</sup> Зотовић, Јордовић 1990, 115.

<sup>64</sup> Moore 2009, 33–54; Soren, Soren 1999.

<sup>65</sup> Krekovič 1992, 76; Mikić 1984, 5–109.

Animal bones are sometimes found in burials of inhumed children (G-189, a sheep femur and a bull scapula). The bones are the remains of food placed there together with the deceased. This was the practice in graves of adult individuals buried with and without cremation and signifies the belief in life after death and the need for food as the basic source of life.<sup>63</sup>

The children at the Viminacium necropolis Više grobalja were not buried in a separate place, as was the case with the infants at the necropolis El Djem in eastern Tunisia, where they would be buried in a separate necropolis. There are numerous cases of newborn funerals in Britain under floors of houses, in yards, and in various agricultural buildings. This custom was not coincidental; it reflects a special relationship to the new-born children, for which sites for burial are specially selected.<sup>64</sup> Similar cases have not yet been observed at Viminacium.

## CONCLUSION

The graves of children, especially younger children, at the classical period Viminacium necropolis Više grobalja accounted for almost one third of all the buried individuals. The mortality rate of children was high, but still significantly lower than in other necropolises of the Empire (*Cambodunum*, *Gerulata*), with the exception of the necropolis in Pécs, with a mortality rate for children of only 19.1%.<sup>65</sup> Although in the first centuries AD the only form of burial was cremation, children were not cremated, primarily due to practical reasons (there would not be enough bones to bury), so they were inhumed

<sup>63</sup> Зотовић, Јордовић 1990, 115.

<sup>64</sup> Moore 2009, 33–54; Soren, Soren 1999.

<sup>65</sup> Krekovič 1992, 76; Mikić 1984, 5–109.



praktičnih razloga, odnosno fizičkih osobina, skelete novorođenčadi, a često i djece u prvim godinama života, Rimljani nisu podvrgavali obredu kremacije. Prevladavaju sahrane slobodno ukopanih pokojnika ili u drvenom lijesu. Grobovi s konstrukcijom od opeke su rijetkost, kao i sahrane s pokrivačem od polovice amfore. Na temelju grobnih tipova i skromnih priloga možemo zaključiti da su sahranjena djeca s istražene nekropole pripadala žiteljima skromnih ekonomskih mogućnosti. To su bili pripadnici romaniziranog i rimskog društva koji su djecu mlađe dobi skeletno sahranjivali, jednako kao i oni orijentalnog podrijetla. Djeca su u pogrebnom ritualu poštovana podjednako kao i odrasli. Žrtvene površine iznad dječjih grobova svjedoče da su vršeni redoviti grobni rituali, dok priloge iz grobova možemo podijeliti na one koji su predstavljali uobičajene nalaze vezane uz vjeru u zagrobni život: keramičke posude, svjetiljke, novac, dijelove odjeće, osobne predmete. Drugu skupinu čine predmeti koji se najčešće nalaze u dječjim grobovima: bule, ljuštore školjki i puževa, privjesci u obliku falusa, zvonca i sl. Grumen sumpora i ukop psa, neposredno ispod ili iznad djeteta, predstavljaju specifičnost, vezanu isključivo uz osobe mlađe dobi. Navedeni su nalazi i situacije magijsko-apatropejskog značaja, a cilj im je sačuvati pokojnika, kao i grob od zlih sila, uroka i svih neugodnosti tijekom putovanja i boravka u onozemaljski svijet. Pas može biti i dječji ljubimac, a ne samo psihopomp. Još možemo zaključiti da djeca nisu sahranjivana na posebnim mjestima i imala su ista prava u pogrebnim obredima kao i odrasli.

without cremation. So, due to practical reasons, i.e. physical characteristics, infants' skeletons and often those of children in their early years of life were not cremated by the Romans. The funerals in plain grave pits or in wooden coffins are dominant. Graves made of bricks and burials with the half of an amphora cover are rare. Based on the grave types and scarce inventories, we can conclude that the buried children from the excavated necropolis were the offspring of citizens belonging to a lower economic rung. Romanized families and Romans here always inhumed their children without cremation, the same as citizens of Oriental descent. The children were honoured as much as adults when it came to funeral rites. Sacrificial surfaces above children's graves confirm that regular commemoration rituals were performed. The goods found in children's graves can be divided into three categories. The first group of finds represents the usual grave goods related to the belief in the afterlife: ceramic vessels, oil-lamps, coins, parts of clothing, and personal items. The second group consists of objects most commonly found in children's graves: bullae, shells, snails, phallic pendants, bells, and toys. Lumps of sulphur and the burial of dogs above or below the child represent a peculiarity, exclusively associated with the graves of children. These finds are of magical and apotropaic character; they serve to protect the deceased and their grave against evil forces, evil eye, and all other inconveniences during their journey to and stay in the afterlife. A dog could also be a child's pet and not just a psychopomp. Still, we can conclude that children were not buried in special places and had equal rights regarding funeral rites as adults.

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# Novoobjavljeni ulomci votivnih pločica s prikazom podunavskih konjanika iz Arheološkog muzeja u Zagrebu

## New fragments of the votive plaques depicting the Danube horsemen from the Archaeological Museum in Zagreb

UDK / UDC: 904:739.5"652"

Izvorni znanstveni rad / Original scientific paper

*Tri ulomka olovnih votivnih pločica, u literaturi poznatih pod nazivom pločice podunavskih konjanika, prvi su put objavljena u ovom radu, a naglašena je i problematika nazivlja kulta kojem se pripisuju. U fundus Muzeja dospjeli su kao akvizicije iz mjesta Petrovci kod Rume (Bassianae), iz Siska (Siscia) i Surduka (Rittium). Na temelju vidljivoga ikonografskog sadržaja na ulomcima, analogijom je u cjelosti rekonstruiran izgled pločica pa su određene prema postojećim tipologijama I. Iskra-Janošić, D. Tudora, E. Ochsenschlagera, R. Ertla. Ulomci su sažeto interpretirani i prostorno-vremenski kontekstualizirani. Naglašeni su novouočeni ikonografski elementi (simbol orla u najvišem registru), uz nov prijedlog tumačenja kulta.*

**Ključne riječi:** ulomci olovnih votivnih pločica, kult podunavskih konjanika – problematika nazivlja, rekonstrukcija, tipologija, interpretacija, nov prijedlog tumačenja

*Three fragments of lead votive plaques, known in the literature as plaques of the Danube horsemen, are published for the first time in this paper, emphasizing the problem of terminology used for the cult to which they are attributed. They were acquired for the Museum from Petrovci near Ruma (Bassianae), Sisak (Siscia), and Surduk (Rittium). Based on the visible iconographic elements and by using analogy, the layout of the plaques was completely reconstructed, and they were defined using typologies proposed by I. Iskra-Janošić, D. Tudor, E. Ochsenschlager, and R. Ertl. The fragments are interpreted and contextualised in space and time. New iconographic elements are identified (the eagle symbol in the highest register), suggesting new interpretations of the cult.*

**Keywords:** fragments of lead votive plaques, the cult of the Danube horsemen – problem of terminology, reconstruction, typology, interpretation, new suggestion of interpretation

## PROBLEM NAZIVA KULTA

Pri reviziji antičke građe iz funda Arheološkog muzeja u Zagrebu, u lipnju 2015. godine, pronađena su tri ulomka olovnih votivnih pločica s prikazima podunavskih konjanika. U ovom su radu pregledno objavljeni.

U literaturi su spomenici poznati pod nazivima pločice kulta Kabira,<sup>1</sup> Kabira ili Dioskura,<sup>2</sup> podunavskih konjanika<sup>3</sup> ili pločice kulta lunarne božice.<sup>4</sup> U posljednjem djelu autorica ukazuje na ikonografsku nelogičnost kojom bi centralno božanstvo kulta bili konjanici. Slijedeći ustaljene ikonografske elemente, autorica smatra kako je žensko božanstvo, centralna figura prikaza svih tipova ovih spomenika u olovu, ujedno okosnica kulta. Konjanici, koji je flankiraju, zapravo nisu primarno božanstvo kulta. Iako je u navedenom radu uz iscrpnu argumentaciju ukazano na neutemeljenost atribucije podunavskim konjanicima i predložena determinacija središnjeg božanstva kao lunarne božice, i dalje je „kult podunavskih konjanika“ učestao kolokvijalni termin za kult i pripadajuće olovne artefakte.

Svakako, treba istaknuti i mišljenje M. Tatcheva koja smatra da uopće nije riječ o kultu jer nema potpuno standardizirane ikonografije. Autorica smatra kako je raznorodan ikonografski sadržaj na olovnim pločicama<sup>5</sup> odraz heterogene kulturološke i vjerske strukture unutar rimske vojske, nositelja ovog sustava vjerovanja. Pločice su, smatra Tatcheva, samo materijalno svjedočanstvo privrženosti misterijama sinkretističke božice.<sup>6</sup>

Relativizirajući određenje termina „kult“, kao i njegovu ustaljenu (neopravdanu) atribuciju podunavskim konjanicima, a imajući u vidu kroničan nedostatak ovakvih spome-

<sup>1</sup> Antonescu 1889.

<sup>2</sup> Nowotny 1896; Hampel 1903; Hoffiller 1904.

<sup>3</sup> Tudor 1976.

<sup>4</sup> Zotović 1998.

<sup>5</sup> Učestalo i opetovano se prikazuju tek centralno žensko božanstvo i konjanici koji je flankiraju, op. a.

<sup>6</sup> Tatcheva 2000, 244–245.

## PROBLEMS WITH THE ATRIBUTION OF THE CULT

During the revision of the Greek and Roman collection in the storage of the Archaeological Museum in Zagreb, in June 2015, three fragments of lead votive plaques depicting the Danube horsemen were found. They are reviewed in this paper.

In the literature, these artefacts are known as the plaques of the cult of Cabirus,<sup>1</sup> Cabirus or Dioscuri,<sup>2</sup> the Danube horsemen,<sup>3</sup> or the cult of the lunar goddess plaques.<sup>4</sup> The author of the last mentioned work points to the iconographic illogicality according to which the Danubian horsemen would be the central deity of the cult. Following the established iconographic elements, the author thinks that the female deity, the central figure on all types of these lead plaques, is the core of the cult. The horsemen that flank her are not really the primary deity of the cult. Although the previously mentioned work, using comprehensive arguments, points to the unfounded attribution to the Danube horsemen and suggests the definition of the central deity as a lunar goddess, the “cult of the Danube horsemen” is still used as a common colloquial term for this cult and the associated lead artefacts.

M. Tatcheva's opinion should also be mentioned here. She thinks that, because of the lack of fully standardized iconography, this is not a cult. The author believes that the heterogeneous iconographic content of the lead plaques<sup>5</sup> is a reflection of a heterogeneous cultural and religious structure within the Roman army, which was spreading this belief system. The plaques are, according to Tatcheva, only the material evidence of a commitment to the mysteries of a syncretistic goddess.<sup>6</sup>

By relativizing the definition of the term “cult”, as well as its well-established (unjustified) attribution to the Danube horsemen, and given

<sup>1</sup> Antonescu 1889.

<sup>2</sup> Nowotny 1896; Hampel 1903; Hoffiller 1904.

<sup>3</sup> Tudor 1976.

<sup>4</sup> Zotović 1998.

<sup>5</sup> Only the central female deity and the horsemen that flank her are frequently and repeatedly displayed, a/n.

<sup>6</sup> Tatcheva 2000, 244–245.

nika iz stratigrafskog konteksta, nalazimo se u poziciji koja nas upućuje na analitički pristup ikonografskom sadržaju. U ovom će radu teorijsko razmatranje o fenomenu kulta ipak biti ostavljeno po strani.

## PREGLED TIPOLOGIJA

R. Ertl posljednji je predlagatelj tipologije,<sup>7</sup> uključivši u razmatranje ovog kulta nalaze iz okolice Karnunta (*Carnuntum*),<sup>8</sup> a njegova se tipologija donekle referira na Tudorovu. Također, Ertl smatra kako konjanici nisu centralno božanstvo kulta, a sklon je determinirati ga kao Eponu.<sup>9</sup> I. Pavlović posljednji je od hrvatskih autora koji je pisao o ovoj temi, dotakavši pritom i problem naziva kulta, referirajući se na djelo Lj. Zotović.<sup>10</sup>

U ovom su radu pregledno objavljeni i opisani fragmenti triju takvih pločica. Također, rekonstruiran je i interpretiran sadržaj prikaza te su prema sadržaju i obliku tipološki određene, koristeći postojeće tipologije I. Iskra-Janošić<sup>11</sup> (pločica 1 i 3), E. Ochsen-schlagera<sup>12</sup> (pločica 1, 2 i 3), D. Tudora<sup>13</sup> (pločica 1, 2 i 3) i tipologiju R. Ertla<sup>14</sup> (pločica 1, 2 i 3).

## ULOMAK 1

A-18512 (sl. 1)

### Opis

Ulomak je prve pločice pronađen u Arheološkome muzeju u Zagrebu pri reviziji antičke građe. Na poleđini je signirano „Petrovci 27“ pa se može pretpostaviti kako su Petrovci kod Rume (*Bassianae*) mjesto nabave spomenika.

<sup>7</sup> Ertl 1996.

<sup>8</sup> Ertl 2014.

<sup>9</sup> Ertl 2014, 107.

<sup>10</sup> Pavlović 2005, 92.

<sup>11</sup> Iskra-Janošić 1966.

<sup>12</sup> Ochsen-schlager 1971.

<sup>13</sup> Tudor 1976.

<sup>14</sup> Ertl 1996.

the chronic lack of a stratigraphic context for these monuments, we are in a position that points us towards an analytical approach to the iconographic content. However, in this paper, the theoretical consideration of the phenomenon of the cult will be left aside.

## REVIEW OF TYPOLOGIES

R. Ertl was the last to suggest a typology,<sup>7</sup> including finds from the area around Carnuntum<sup>8</sup> into his consideration of the cult. His typology somewhat refers to Tudor's. R. Ertl also believes that horsemen are not the central deity of the cult, instead suggesting Epona as the main deity.<sup>9</sup> I. Pavlović is the last of the Croatian authors who wrote on this topic, addressing the issue of the cult's attribution, referring to a work by Lj. Zotović.<sup>10</sup>

In this paper, three fragments of such plaques are reviewed and published. They are reconstructed and interpreted, their type determined by the content and shape using existing typologies by I. Iskra-Janošić<sup>11</sup> (plaques 1 and 3), E. Ochsen-schlager<sup>12</sup> (plaques 1, 2, and 3), D. Tudor<sup>13</sup> (plaques 1, 2, and 3), and R. Ertl<sup>14</sup> (plaques 1, 2, and 3).

## FRAGMENT 1

A-18512 (Fig. 1)

### Description

A fragment of the first plaque was found in the Archaeological Museum in Zagreb during the revision of the Greek and Roman material. The signature on the back is "Petrovci 27", which leads to an assumption that the location where the object was acquired is Petrovci near Ruma (*Bassianae*).

<sup>7</sup> Ertl 1996.

<sup>8</sup> Ertl 2014.

<sup>9</sup> Ertl 2014, 107.

<sup>10</sup> Pavlović 2005, 92.

<sup>11</sup> Iskra-Janošić 1966.

<sup>12</sup> Ochsen-schlager 1971.

<sup>13</sup> Tudor 1976.

<sup>14</sup> Ertl 1996.



Slika / Figure 1. Ulomak 1 / Fragment 1 (snimio / photo by I. Krajcar, Arheološki muzej u Zagrebu / Archaeological Museum in Zagreb).

Fragment je očuvan u dimenzijama visine 58 mm, širine 63 mm, debljine 0,2 – 0,4 cm. Površina ulomka zahvaća prikaz od polovine prve zone, veći dio druge i treće zone, samo gornji djelić centralnog prikaza četvrte zone te krajnji desni rub pločice. Sa stražnje strane, u središnjem dijelu fragmenta, udubljena je i oštećena pravokutnim urezom pod kutom, čija pukotina djelomično izvire na središnji dio prednje strane pločice. Poznati su primjeri fragmenata pločica ovog tipa za koje se može pretpostaviti da su mogli služiti kao rupe za privjes i biti nošeni kao amajlije oko vrata,<sup>15</sup> ali ovdje je riječ o recentnom oštećenju.

U prvoj zoni, koja se očuvala samo u donjoj desnoj polovini, vidimo noge jednog konja u trku.

U drugoj zoni razabire se centralni lik božanstva u dugom, potpisanom hitonu i uz tijelo raširenih ruku. S lijeve i desne strane prilaze mu po jedan konjanik u trku. Lijevom konjaniku naziru se samo obrisi, ali je desni dobro vidljiv. Odjeven je u kratki hiton, a oko vrata mu je pričvršćen kratak plašt, čiji skuti vijore preko lijevog ramena.

U sredini treće zone nalazimo prikaz triju osoba koje blaguju za stolom. Uslijed istrošenosti i oštećenja, lijevoj je osobi očuvana samo glava. Osoba na središnjoj poziciji i ona desno od stola relativno su dobro oču-

<sup>15</sup> Crnobrnja, Plemić 2015, kat. br. 5.

The fragment's preserved height is 58 mm, the width 63 mm, and its thickness is 2 – 4 mm. The preserved surface covers half of the first zone, most of the second and third zone, the upper part of the central image in the fourth zone, and the right edge of the plaque. On the back side, in the central part of the fragment, there is a dent and a rectangular notch at an angle, which partially protrudes into the central part on the front side of the plaque. There are examples of this type of plaque fragment, which were possibly used as amulets worn around the neck,<sup>15</sup> but in this case the damage is recent.

In the first zone, preserved only in the lower right half, the leg of a galloping horse can be seen.

In the second zone, a central deity with open arms, wearing a long, belted chiton, can be made out. From the sides, she is approached by galloping horsemen. Only contours of the left horseman can be seen, but the right is clearly visible. He is wearing a short chiton, with a short cloak around his neck flying over his left shoulder.

In the middle of the third zone there is an image of three people eating at the table. Due to wear and damage, only the head of the left person is preserved. The figure in the central position and the one to the right are relatively well preserved, pointing their right hands at the contents on the table. The contents of the table are not visible, but, analogous to other plaques

<sup>15</sup> Crnobrnja, Plemić 2015, cat. no. 5.



vane pa se može razabrati kako desnom rukom upiru u sadržaj na stolu. Sam sadržaj stola nije vidljiv, ali analogno pločicama ovog tipa, vjerojatno je riječ o jednoj ribi u plitkoj posudi ili na tanjuru. Konture su stola slabo vidljive, ali na temelju resa, koje vise s njegove donje strane, zaključujem da je prekriven nekakvom dekorativnom tkaninom. Desno od stola dvije su potpuno nage osobe čije kretnje kao da naglašavaju kako osobe, držeći se za ruke, prilaze stolu.

Pri samom izbočenju, u sredini donjeg dijela očuvanog fragmenta, nazire se vrh prikaza iz centralnog dijela četvrte zone koji, nažalost, nije vidljiv ni prepoznatljiv.

#### Rekonstrukcija i interpretacija 1

Iako djelomično očuvana, patinirana i izlizana, pločica, tj. njezin ulomak, ipak je podložan rekonstrukciji, interpretaciji i tipološkom određenju.

Nema sumnje kako je riječ o pločici tipa Dalj, varijanta B prema I. Iskri-Janošić,<sup>16</sup> tipu I varijanti C prema E. Ochsenschlageru,<sup>17</sup> tipu B d prema D. Tudoru,<sup>18</sup> odnosno tipu Ertl B 03 prema R. Ertlu.<sup>19</sup> Razmještaj i način prikaza figura druge i treće zone smještaju pločicu u navedeni tip prema Ertlu, odnosno u daljski tip prema I. Iskri-Janošić. Vidljivi ostatak tordiranog stupa dodatno diferencira daljski tip, kao varijantu B daljskog tipa. Shodno tomu, moguće je analogijom rekonstruirati čitavu pločicu i upustiti se u analizu sadržaja prikaza.

Pločica ovog tipa do sada je pronađen znatan broj, a premda se razlikuju u pojedinim detaljima (razmještaj figura u četvrtoj zoni,<sup>20</sup> zaglađenost lijevog stupa),<sup>21</sup> tipološka odrednica ostaje ista. Navedene su razlike vjerojatno rezultat izrade u različitim kalupima i različitim radionicama Donje Panonije.<sup>22</sup>

<sup>16</sup> Iskri-Janošić 1966, 52.

<sup>17</sup> Ochsenschlager 1971, 53.

<sup>18</sup> Tudor 1976, 97.

<sup>19</sup> Ertl 1996, 47–48.

<sup>20</sup> Iskri-Janošić 1996, 50.

<sup>21</sup> Ertl 2014, sl. 5.

<sup>22</sup> Popović 1986, 119–120; 1988, 114.

of this type, they are probably a fish in a shallow bowl or on a plate. The contours of the table are faint, but based on the fringe hanging from its underside, it can be concluded that it is covered with some kind of a decorative cloth. To the right of the table there are two completely naked figures whose gestures emphasize that they are approaching the table, holding hands.

At the protrusion in the middle of the lower part of the preserved fragment, the outlines of the upper part of the image in the central part of the fourth zone can be seen, but unfortunately it is not enough to be identified.

#### Reconstruction and interpretation 1

Although it is only partially preserved, patinaed, and worn, the fragment of the plaque is still subject to reconstruction, interpretation, and typological identification.

There is no doubt that this plaque belongs to the plaque type Dalj, variant B according to I. Iskra-Janošić,<sup>16</sup> type I variant C according to E. Ochsenschlager,<sup>17</sup> type B d according to Tudor,<sup>18</sup> or type Ertl B 03 according to R. Ertl.<sup>19</sup> The arrangement and display of figures in the second and third zone determine the plaque's type as the mentioned Ertl type, or as type Dalj according to I. Iskra-Janošić. Visible parts of a twisted pillar further differentiate type Dalj as variant B. Accordingly, it is possible to reconstruct, based on analogy, the entire plaque and interpret the content of the image.

A considerable number of plaques of this type has been found, and though they differ in certain details (position of the figures in the fourth zone,<sup>20</sup> smoothness of the left column),<sup>21</sup> the typological determinants remain the same. These differences are probably the result of production in different moulds and workshops in Pannonia Inferior.<sup>22</sup>

<sup>16</sup> Iskra-Janošić 1966, 52.

<sup>17</sup> Ochsenschlager 1971, 53.

<sup>18</sup> Tudor 1976, 97.

<sup>19</sup> Ertl 1996, 47–48.

<sup>20</sup> Iskra-Janošić 1996, 50.

<sup>21</sup> Ertl 2014, Fig. 5.

<sup>22</sup> Popović 1986, 119–120; 1988, 114.

Pločica je pravokutnog oblika, a četiri zone smještene su unutar polukružno nadsvođene edikule, na tordiranim korintskim stupovima, ukrašene astragalom. Desni je stup tordiran, a lijevi može biti tordiran ili zaglađen, ovisno o radionici ili kalupu za lijevanje unutar iste radionice u razdoblju 2. – 4. stoljeća.<sup>23</sup> Unutar su edikule jasno raščlanjene 4 horizontalne zone. Izvan edikule, u gornjim uglovima nalazi se po jedna zmija. Poimanje zmije u antičkom svijetu bilo je raznorodno (teofanija demonskih sila, profilaktički karakter, simbol zemlje, mitraizam i sl.). Znakovito je, ipak, postavljanje zmije izvan edikule, čime je prostorno jasno odijeljena od sadržaja unutar edikule, a stilski se razlikuje (povijenost tijela, duljina repa, otvorena čeljust, položaj glave) od prikaza zmije u najdonjem registru, gdje simbolizira element zemlje.

U prvoj je zoni Sol na kvadrigi, okrunjen krunom od 6 zraka. Odjeven je u tuniku i hlamidu, pričvršćenu na desnom ramenu. U lijevoj mu je ruci kugla, a desnu je uzdigao na pozdrav svijetu. Kvadrigu vuku dva para konja. Oba su para prikazana u profilu, jedan gleda nalijevo, drugi nadesno (sl. 2). Lijevo i desno od Solove glave nalazi se po jedna osmerokraka zvijezda. Uz klasično poimanje Sola, kao božanstva koje u kvadrigi putuje nebeskim svodom, svakako treba razmotriti i težnju s početka 3. stoljeća, da se različiti sustavi vjerovanja objedine u službenu religiju, usko vezanu uz carski kult, čije bi centralno božanstvo bio Sol, što posebno dolazi do izražaja za vladavine Elagabala (218. – 222. godine), a očituje se na aureima<sup>24</sup> i denarima<sup>25</sup> kovanima za vladavine toga cara, gdje je na reversu prikazana kvadriga s kamenom iz Emese i orlom, uz natpis SANCTO DEO SOLI, ELAGABAL.

<sup>23</sup> Popović 1986, 120.

<sup>24</sup> RIC IV/2, 37, No. 143, 43, No. 196A.

<sup>25</sup> RIC IV/2 37, No. 142, 43, No. 196.

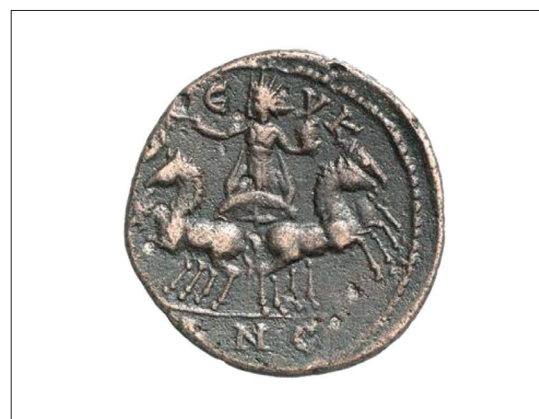
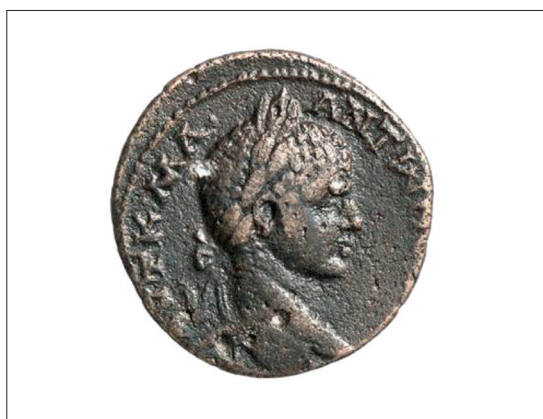
The plaque has a rectangular shape and four zones are located within a semi-circular arched aedicule supported by twisted Corinthian columns and decorated with an astragal. The right column is twisted, while the left can be twisted or smooth, depending on the workshop or the mould used for casting, in the period from the 2<sup>nd</sup> to the 4<sup>th</sup> century.<sup>23</sup> The four horizontal zones are clearly articulated within the aedicule. In the upper corners on the outer side of the aedicule there is a snake. In the ancient world, the snake had various meanings (theophany of demonic forces, prophylactic character, a symbol of the earth, Mithraism etc.). However, the position of the snakes outside of the aedicule is significant, clearly separating them from the content within the aedicule. The snakes also differ in style (curvature of the body, tail length, open jaw, position of the head) from the snake in the lowest zone, where the snake symbolizes the element of earth.

In the first zone, god Sol in a quadriga, crowned with a crown of six rays can be identified. He is wearing a tunic and a chlamys clasped at his right shoulder. In his left hand he holds an orb, while his right hand is raised in salute to the world. The quadriga is pulled by two pairs of horses. Both pairs are shown in profile, one pair looking to the left, the other to the right (Fig. 2). To the left and right of Sol's head there is an eight-pointed star. In addition to the classic notion of Sol as a deity travelling across the heavens in a quadriga, the tendency of combining different systems of belief in the official religion in the early 3<sup>rd</sup> century closely associated with the imperial cult whose central deity was Sol should be considered. This is especially pronounced during the reign of Elagabalus (AD 218 – AD 222), evident from aurei<sup>24</sup> and denarii<sup>25</sup> minted in this period, where the reverse shows a quadriga with a stone from Emesa and an eagle, along with the inscription SANCTO DEO SOLI, ELAGABAL.

<sup>23</sup> Popović 1986, 120.

<sup>24</sup> RIC IV/2, 37, No. 143, 43, No. 196A.

<sup>25</sup> RIC IV/2 37, No. 142, 43, No. 196.



Slika 2 / Figure 2. Prikaz Sola u kvadrigi na reversu Elagabalova novca / Depiction of Sol in a quadriga on the reverse of a coin of Elagabalus (Fritz Rudolf Künker 2007, 261, lot 9329).

Centralnu figuru druge zone predstavlja ženska osoba u dugom, potpisanom hitonu. U rukama u visini pasa, zadigla je himatij u kojem su nekakvi plodovi. Različita su mišljenja o tome što je u naramku i usko su vezana uz odnos konjanici – ženska osoba, koji čini esenciju kulta. A. Jovanović smatra kako se ikonografska poveznica može povući s novcem cara Proba kovanim u Sisku. Na tom je antoninijanu, na aversu, glava cara Proba i natpis IMP C M AVR PROBVS P AVG, a na reversu je ženska osoba ispod koje se vide dva stilizirana vala (simboli rijeka Kupe i Save, na kojima leži grad Siscia), do ženske osobe sjede dvije muške osobe s frigijskim kapama na glavi. Natpis na reversu glasi SISCIA PROBI AVG.<sup>26</sup> Ženska je osoba rastegnula maramu u kojoj drži bogatu ljetinu i personizira grad Sisak. Prema Jovanovićevu mišljenju, ova je ikonografska veza posredna, ali može pridonijeti istraživanju kulta podunavskog konjanika.<sup>27</sup> Poznato je da su među kultovima u Panoniji riječna božanstva igrala važnu ulogu,<sup>28</sup> međutim, nisam sklon mišljenju da centralno božanstvo kulta ima ikakve veze sa štovanjem tekućica ili njihovom personifikacijom, tim više što opisani novac prezentira Sisciju, a proizvodni centar pločica ovog tipa jest

The central figure in the second zone is represented by a woman wearing a long, belted chiton. She lifted her himation with her arms, and in it she is holding fruits. Opinions on what she is holding are various and closely related to the relationship between the horsemen and the female figure which is the essence of the cult. A. Jovanović claims that an iconographic link can be made with a coin of Emperor Probus that was minted in Sisak. The obverse of an antoninianus from Siscia depicts a portrait of Emperor Probus and the inscription IMP C M AVR PROBVS P AVG, while the reverse portrays a female figure. Under the female figure, two waves can be seen (symbolizing the Kupa and Sava rivers flowing through Siscia), while next to her two seated male figures wearing Phrygian caps are depicted. The inscription on the reverse reads SISCIA PROBI AVG.<sup>26</sup> The female figure is spreading a scarf that holds a rich harvest. The figure is a personification of Siscia. According to A. Jovanović, this iconographic connection is indirect, but it can contribute to the study of the cult of the Danube horsemen.<sup>27</sup> It is well known that river deities played an important role in Pannonian cults.<sup>28</sup> However, we are not inclined to think that the central deity of the cult is connected to the worship of rivers or that it is their personification, especially because the above

<sup>26</sup> RIC V/2, 100, No. 766; Dukat 2004, 289, kat. br. 82.

<sup>27</sup> Jovanović 1998, 21–22.

<sup>28</sup> Rendić-Miočević, Šegvić 1998, 9; Rendić-Miočević 2012, 300, sl. 11.

<sup>26</sup> RIC V/2, 100, No. 766; Dukat 2004, 289, cat. no. 82.

<sup>27</sup> Jovanović 1998, 21–22.

<sup>28</sup> Rendić-Miočević, Šegvić 1998, 9; Rendić-Miočević 2012, 300, Fig. 11.

Sirmij. Ertl pak smatra kako je u naramku hrana za konje, a ženska osoba predstavlja „jednu božicu (Eponu?)“.<sup>29</sup> Također, primjećuje kako je frizura žene karakteristična za prvu polovinu 3. stoljeća.<sup>30</sup> Raniji su autori boginju interpretirali kao oranticu, Helenu, Kibelu, Lunu, Anatis. Većina današnjih autora slaže se kako je riječ Eponi, s čime se osobno slažem, ali napominjem kako stilске varijante u njezinu prikazu mogu biti posljedica vremenskog i nadasve lokalnog konteksta proizvodnje.<sup>31</sup> Prihvatimo li tezu da je centralno božanstvo prikaza Epona ili božanstvo formirano prema uzoru na Eponu, to svakako podrazumijeva snažan utjecaj keltske tradicije u formiranju ovog kulta. Taj se utjecaj s vanjskih granica Dakije i Mezije proširio Dunavom do Donje Panonije. Prisutnost ovog kulta s istim ikonografskim odlikama na području jugoistočnog Norika i Gornje Panonije vjerojatno je rezultat utjecaja iz Cisaplinske Galije.<sup>32</sup> Očite stilске razlike u prikazima Epone, poput pojave konjanika na konjima, položaja ruku spram konjskih glava te sama činjenica da božica stoji, valjalo bi pripisati prostornim i vremenskim razlikama i, već ranije naglašenim, orijentalnim utjecajima u jeku kulturnog sinkretizma. Spomenici na kojima Epona stoji, a s bokova joj prilazi po jedan konj, ikonografski odgovaraju razdoblju prve polovine 3. stoljeća.<sup>33</sup>

Lijevo i desno od božice po jedan je konjanik koji joj prilazi. Svojom visinom božica nadvisuje konjanike i njihove konje, a često je prikazana kako stoji na svojevrsnom pijedestalu, što dodatno govori u prilog tezi da su konjanici podređeni božici, kao centralnoj figuri kulta. Lijevi konj stoji na ribi, a desni na polegnutom muškom tijelu. Lijevi je konjanik gologlav, dok desni nosi frigijsku kapu. Obojica su odjevena u tuniku i plašt koji vijori na vjetru. Konjanici su prikazani

coin depicts Siscia, while the manufacturing centre for plaques of this type was Sirmium. R. Ertl suggests that the bundle contains food for horses, while the female figure would represent “one goddess (Epona?)”.<sup>29</sup> He also notices that her hairstyle is characteristic for the first half of the 3<sup>rd</sup> century.<sup>30</sup> Earlier authors interpreted the goddess as an orant, Helen, Cybele, Luna, or Anaitis. Most contemporary authors agree that she is Epona, with which the author of this paper also agrees, but we have to note that stylistic variations in her depiction can be the result of the time and local context of production.<sup>31</sup> If we accept the thesis that the central deity is Epona, or a similar deity, that would certainly imply a strong Celtic influence on the formation of this cult. This influence spread along the Danube, from the outer borders of Dacia and Moesia to Pannonia Inferior. The presence of this cult with the same iconographic elements in the area of south-eastern Noricum and Pannonia Superior is probably a result of influences from Cisalpine Gaul.<sup>32</sup> The obvious stylistic differences in depictions of Epona, such as the appearance of horsemen, the position of hands in relation to the horses’ heads, and the fact that she is standing, should be attributed to geographic and period variations, and previously mentioned oriental influences in the midst of cult syncretism. Monuments depicting a standing Epona, with two horses flanking her, correspond to the iconography of the first half of the 3<sup>rd</sup> century.<sup>33</sup>

To the left and right of the goddess, a horseman approaches. She is higher than the horsemen and their horses, and is often depicted standing on a pedestal, which further confirms the thesis that the horsemen are her subordinates and that she is the central figure of the cult. The left horse is standing on a fish, while the right one is standing on a lying male body. The left horseman is bareheaded, while the right wears a Phrygian cap. Both horsemen are wearing a tunic and a cloak fluttering in the wind. They

<sup>29</sup> Ertl 2014, 120.

<sup>30</sup> Ertl 2014, 120.

<sup>31</sup> Detaljnije o Eponi u Euskirchen 1994, 607–838; Cermanović, Srejšević 1996, 133.

<sup>32</sup> Plemić 2013, 68–69.

<sup>33</sup> Euskirchen 1994, 675.

<sup>29</sup> Ertl 2014, 120.

<sup>30</sup> Ertl 2014, 120.

<sup>31</sup> For more details on Epona see Euskirchen 1994, 607–838; Cermanović, Srejšević 1996, 133.

<sup>32</sup> Plemić 2013, 68–69.

<sup>33</sup> Euskirchen 1994, 675.



u profilu, prilaze centralnoj figuri i pozdravljaju je uzdignutom desnicom, ispruženog dlana. Do lijevog jahača, uz sam rub edikule, smješten je muškarac s kacigom, kopljem i štitom,<sup>34</sup> a uz desnog konja ženska osoba u dugom hitonu, oslonjena o koplje i s okruglim predmetom (krunom ili vijencem) koji uzdiže prema glavi konjanika.<sup>35</sup> Prema Tudorovu mišljenju, prikaz ovih ratnih božanstava ide u prilog vojnom karakteru kulta.<sup>36</sup> O ulozi Viktorije, kao htonskog božanstva koje polaganjem vijenca (krune) na glavu neke osobe (u konkretnom slučaju, desnog konjanika) simbolički predstavlja trijumf nad smrću, saznajemo iz brojnih izvora<sup>37</sup> te htonski karakter ovog božanstva svakako treba imati na umu pri interpretaciji kulta, tim više što gotovo svi autori ovu zonu nazivaju centralnom i smatraju je okosnicom interpretacije prikaza, posljedično i kulta.<sup>38</sup> Kako god interpretirali čitavu zonu, nema sumnje da je Viktorija (ili Nemeza) s jedne, a Mars s druge strane, očit ikonografski dokaz prisutnosti rimskog panteona i u ovoj zoni.

Sredinom treće zone dominira scena objeda. Za stolom prekrivenim tkaninom ukrašenom dugim resama sjede 3 osobe obrijanih glava i blaguju ribu iz iste posude. S desne strane stola prilaze im dvije nage osobe, držeći se za ruke. Lijevo od stola scena je žrtvovanja goveda. Mlad muškarac s pregačom vadi utrobu govedu obješenom o drvo, a uz rub edikule scenu promatra muškarac u tuniki i s govedskom maskom na glavi. Čin blagovanja ribe sugerira sirijski utjecaj na ikonografiju ovih pločica. U kultu sirijske božice Astaragatis riba je smatrana svetom životinjom i konzumirala se isključivo prilikom žrtvenih obreda, i to je bilo dopušteno

are shown in profile as they approach the central figure, saluting her with outstretched right arms. Next to the left rider, near the edge of the aedicule, there is a man wearing a helmet and carrying a spear and a shield,<sup>34</sup> while next to the right horseman there is a female figure wearing a long chiton, leaning on a spear and raising a circular object (crown or a wreath) towards the horseman's head.<sup>35</sup> According to Tudor, the depiction of these deities of war is in favour of the military character of the cult.<sup>36</sup> Many authors have discussed about the chthonic character of Victoria. By putting a wreath (crown) on someone's head (in this case the right horseman), she symbolises the triumph over death.<sup>37</sup> This should be kept in mind when interpreting the cult, especially because all authors consider this zone to be the central, most important for interpreting the entire scene and the cult.<sup>38</sup> However this zone is interpreted, there is no doubt that Victoria (or Nemesis) on the one hand, and Mars on the other, are clear iconographic signs of the Roman pantheon in this zone.

The middle of the third zone is dominated by a banquet scene. Three people with shaved heads sit at the table covered in a cloth decorated with long fringes, eating fish from the same bowl. Two naked figures holding hands approach the table from the right side. Left of the table a scene of bovine animal sacrifice can be seen. A young man wearing an apron is disemboweling a bovine animal that is hanging from a tree. The scene is being watched by a man wearing a tunic and a bovine mask. The act of eating fish suggests a Syrian influence on the iconography of these plaques. Fish is considered a sacred animal in the cult of Syrian goddess Atargatis, and was consumed exclusively by priests during sacrificial rites.<sup>39</sup> Tudor previously stressed that there are no clear iconographic connections of

<sup>34</sup> Ikonografski odgovara Marsu (Simon, Bauchhens 1984).

<sup>35</sup> Ikonografski odgovara Nemezi ili Viktoriji (Linant de Bellefonds 1992; Vollkommer 1997).

<sup>36</sup> Tudor 1976, 123.

<sup>37</sup> Primjerice, slikane grčke vaze, novac i medaljoni Antonina Pija (Gnecchi 1912, T. 45; RIC IV/2, 36, 111b; Boardman 1990).

<sup>38</sup> Zotović 1998; Jovanović 1998; Pavlović 2005; Plemić 2013; Ertl 2014.

<sup>34</sup> Iconography matches the god Mars (Simon, Bauchhens 1984).

<sup>35</sup> Iconography matches the goddess Nemesis or Victoria (Linant de Bellefonds 1992; Vollkommer 1997).

<sup>36</sup> Tudor 1976, 123.

<sup>37</sup> For example, painted Greek vases, coins, and medallions of Antoninus Pio (Gnecchi 1912, T. 45; RIC IV/2, 36, 111b; Boardman 1990).

<sup>38</sup> Zotović 1998; Jovanović 1998; Pavlović 2005; Plemić 2013; Ertl 2014.

<sup>39</sup> Plemić 2013, 60.

samo svećenicama.<sup>39</sup> Tudor je ranije naglasio kako nema jasnih ikonografskih poveznica ribe s Eponom i kako sama božica Epona u načinu prikaza na olovnim pločicama odudara od svih poznatih prikaza gdje božica stoji okružena s više konja ili jaše na konju.<sup>40</sup> Unatoč tomu, smatram da je utjecaj kulta Epone na pločice ovog tipa neosporan, utjecaj orijentalnih kultova vjerojatan i definitivno govorimo o kulturnom sinkretizmu koji se očituje i u ikonografiji kulta, ako takav, prema Tatchevoj, uopće postoji.

U četvrtoj zoni javlja se (s lijeva na desno) tronožac s ribom, lav, kantaros, zmija i pijetao. Zmija i lav mogu mijenjati svoj položaj.<sup>41</sup> Smatram da raspored figura unutar četvrte zone ne mora nužno biti vezan uz ikonografski narativ, već može biti rezultat proizvodnje različitih radionica ili lijevanja u novoizrađenim kalupima. Riba, lav, zmija i pijetao predstavljaju 4 elementa: vodu, vatru, zemlju i zrak. Kantaros, kao simbol vode, ponekad može biti zamijenjen ribom, a zmija govedom.<sup>42</sup> Ovi su elementi vezani uz najdonju, zemaljsku zonu i u jasnom su antipodu s najgornjim, nebeskim registrom. Dvije zone između predstavljaju advokaturu podunavskog konjanika između zemaljskog i nebeskog svijeta.<sup>43</sup>

Imajući u vidu novopovučenu analogiju na novcu Elagabala, sličnosti frizura s onima Julije Domne i Julije Meze te koncentraciju nalaza na prostoru Srijema i zapadne Srbije, smatram kako pojavu pločica ovog tipa treba smjestiti u radioničke centre u blizini ili u samom Sirmiju (*Sirmium*), na kraj 2. ili tijekom 3. desetljeća 3. stoljeća.

<sup>39</sup> Plemić 2013, 60.

<sup>40</sup> Tudor 1976, 144.

<sup>41</sup> Iskra-Janošić 1966, 50.

<sup>42</sup> Bojović 1982, T. 1.

<sup>43</sup> Ertl 2014, 109.

fish with Epona, and she is displayed differently than in all other images, where she stands surrounded by several horses or she is riding one.<sup>40</sup> Nevertheless, I think that the influence of the cult of Epona on these plaques is undisputed, the influence of oriental cults is plausible, and we can definitely consider cult syncretism that is reflected in the iconography of the cult if, according to Tatcheva, such a cult even exists.

In the fourth zone, depictions of (from left to right) a tripod with a fish, a lion, a kantharos, a snake, and a rooster can be distinguished. The snake and the lion may change their position.<sup>41</sup> I think that the layout of figures in the fourth zone is not necessarily connected to the iconographic narrative. It can be a result of production in various workshops or casting in new moulds. The fish, the lion, the snake, and the rooster represent the four elements: water, fire, earth, and air. The kantharos, symbolising water, can sometimes be replaced by a fish, and the snake can be replaced by a bovine animal.<sup>42</sup> These elements are connected to the lowest, earthly zone and are an antipode to the heavenly register. The two zones in between represent the advocacy of the Danube horsemen between the earthly and heavenly domains.<sup>43</sup>

Keeping in mind the new analogy with the coin of Elagabalus, similarities in hairstyles between Julia Domna and Julia Maesa, as well as the concentration of finds in the Srijem and western Serbia region, I believe that the emergence of this type of plaques should be placed in workshop centres near or in Sirmium, at the end of the second or third decade of the 3<sup>rd</sup> century.

<sup>40</sup> Tudor 1976, 144.

<sup>41</sup> Iskra-Janošić 1966, 50.

<sup>42</sup> Bojović 1982, T. 1.

<sup>43</sup> Ertl 2014, 109.



Slika 3 / Figure 3. Ulomak 2 / Fragment 2 (snimio / photo by I. Krajcar, Arheološki muzej u Zagrebu / Archaeological Museum in Zagreb)

## ULOMAK 2

A-17033 (sl. 3)

### Opis

Pločicu je Muzeju 1985. godine darovao Marko Šarinić iz Siska. Kako nema podataka o mjestu nalaza, već samo o mjestu nabave (Sisak), smatram je nalazom izvan arheološkog konteksta, s upitnom vjerojatnošću Siska (*Siscia*), kao mjesta nalaska ili nastanka na temelju činjenica da su jedine dvije do sada objavljene pločice ovog tipa pronađene u okolici Srijemske Mitrovice, odnosno Hrtkovaca.<sup>44</sup>

Ulomak je dimenzija 95 x 7,5/5,8 mm, debljine 1 – 1,5 mm. Nedostaje donja polovina, s prikazima treće i četvrte zone i neznatan djelić donjega desnog dijela druge zone.

Zahvaljujući dobroj očuvanosti prve i druge zone, pločica je podložna rekonstrukciji.

Četvrtastog je oblika s jasno označenim gornjim rubom pa isključujem mogućnost postojanja zabata i akroterija.

U objavi pločice iz Hrtkovaca, identičnoj ovoj, Ochsenschlager je spomenuti obrub interpretirao kao „dvije duge zmije, savinute u uglovima, čije su glave heraldički postavljene pri vrhu“.<sup>45</sup>

<sup>44</sup> Ochsenschlager 1971, 55, T. 5: 9; Ertl 1996, 31, T. 18: A 05-001, A 05-002.

<sup>45</sup> Ochsenschlager 1971, 55.

## FRAGMENT 2

A-17033 (Fig. 3)

### Description

The plaque was donated to the Museum in 1985 by Marko Šarinić from Sisak. As there is no data on where it was found, only the place it was acquired (Sisak), I regard it as a find outside the archaeological context, with questionable probability of the city of Sisak (*Siscia*) as the site where it was found, or made, based on the fact that the only two plaques of this type published so far were found near Srijemska Mitrovica, i.e. Hrtkovci.<sup>44</sup>

The dimensions of the fragment are 95 x 7.5/5.8 mm, with a thickness of 1 – 1.5 mm. The bottom half with the third and fourth zones is missing, along with a negligible part of the lower right portion of the second zone.

Because the first and second zones of the plaque are well preserved, it can be reconstructed.

The plaque is square in shape with a well-defined upper edge which excludes the possibility of pediments and acroteria.

When the plaque from Hrtkovci, identical to this one, was published, Ochsenschlager interpreted the border as “two long snakes bent in the corners with heads heraldically set near the top.”<sup>45</sup>

<sup>44</sup> Ochsenschlager 1971, 55, T. 5: 9; Ertl 1996, 31, T. 18: A 05-001, A 05-002.

<sup>45</sup> Ochsenschlager 1971, 55.

Centralna je figura prve zone ptica raširenih krila i repa postavljenog ulijevo. Glavu s dugim povijenim kljunom okrenula je također nalijevo. Lijevo od ptice bista je Lune i šesterokraka zvijezda, a s desne je strane bista Sola sa zrakastom krunom na glavi i šesterokraka zvijezda. Na sačuvanom je ulomku jasno vidljivo da je središnji prikaz prve zone ptica orao, a ne, kao što se to uslijed oštećenja i potpuno opravdano učinilo Ochsenschlageru, *kantharos*.<sup>46</sup> Tudor primjećuje kako se orao u najvišem, nebeskom registru javlja uz biste Sola i Lune (što je slučaj i na ovom ulomku), raširenih krila i spreman za uzlet. Nalazi se na centralnome mjestu zone koju inače zauzima Sol pa ga u tome kontekstu možemo smatrati glasnikom Sola koji prenosi duše do nebeskog svijeta. Rimljani su ga, zbog njegovih iznimnih letačkih sposobnosti, smatrali pticom koja zajedno s Jupiterom nastanjuje nebesa. Nadalje, orla možemo smatrati glasnikom nebeskih božanstava, čija je uloga prenijeti dušu pokojnika u nebeski svijet. Rimski su vojnici orla smatrali simbolom pobjede i borbenog duha. Stoga, zaključuje Tudor, široka atribucija orla (simbol Sola, prenašatelj duše, simbol pobjede) i kasnija pojava na spomenicima podunavskih konjanika, tek na B tipu spomenika, upućuje da je riječ o utjecaju s mitraičkih reljefa.<sup>47</sup> Kao što je slučaj sa ženskim božanstvom i flankirajućim konjanicima, i ovdje valja biti dosljedan i primijetiti kako centralna i superordinirana pozicija orla u odnosu na biste Sola i Lune upućuje na to da je on dominantna pojava prve zone i u tom kontekstu radije prikaz božanstva višeg reda nego službenik Sola.

U drugoj je zoni centralna figura ženska osoba u dugom potpasanom hitonu koji seže do gležnjeva, ruke je spustila uz tijelo i savila u laktovima. Čini se kao da stoji na nekakvom postamentu. S lijeve i desne strane prilaze joj po jedan jahač, čiji konji glave spuštaju prema dlanovima žene pa se stječe dojam kao da centralna figura hrani ili pridržava konjske uzde. Svojim stasom

<sup>46</sup> Ochsenschlager 1971, 55.

<sup>47</sup> Tudor 1976, 199–201.

The central figure in the first zone is a bird with spread wings and a tail towards the left. The head with a long curved beak is also turned to the left. On the left side of the bird is a bust of Luna and a six-pointed star, and on the right side is a bust of Sol with a radian crown on his head and a six-pointed star. The fragment clearly shows that the central figure in the first zone is an eagle, and not, as it seemed to Ochsenschlager because of the damage to the plaque, a *kantharos*.<sup>46</sup> Tudor notes that the eagle appears in the highest, heavenly register next to the busts of Sol and Luna (as is also the case on this fragment), with spread wings and ready to fly. The eagle is in the centre of the zone, a place usually reserved for Sol, so, in this context, we can see him as Sol's messenger who carries the souls into heaven. Because of its exceptional flying capabilities, Romans considered it a bird that, together with Jupiter, inhabits the heavens. Furthermore, the eagle can be seen as a messenger of the celestial deities, the role of which is to carry the souls of the deceased into heaven. Among Roman soldiers, the eagle was considered a symbol of victory and fighting spirit. Therefore, according to Tudor, broad attribution of the eagle (symbol of Sol, the one that carries the soul, a symbol of victory) and the subsequent emergence of the bird on monuments of the Danube horsemen, but only on the B type monuments, suggests that it is the influence of Mithraic reliefs.<sup>47</sup> As is the case with the female deity and flanking horsemen, we must also be consistent and notice how the central and superordinate position of the eagle, with respect to Sol and Luna, indicates that it is the dominant figure in the first zone and, in this context, a representation of a higher order divinity, rather than Sol's servant.

The central figure in the second zone is a woman in a long, belted chiton that reaches her ankles, and her arms are next to her body, bent at the elbows. It seems as if she is standing on some kind of a pedestal. On both sides, she is approached by a rider and the heads of the horses are bent towards the palms of the woman, so one gets the impression that the central figure is feeding them or holding their reins. The central deity is taller than the horsemen. The rid-

<sup>46</sup> Ochsenschlager 1971, 55.

<sup>47</sup> Tudor 1976, 199–201.



centralno božanstvo nadvisuje konjanike. Jahači su odjeveni u tunike i kratke plašteve koji vijore. Lijevi jahač na glavi ima kacigu ili govedsku masku ili, vjerojatnije, frigijsku kapu, a u desnoj ruci drži dvostruku sjekiricu. Desni jahač na glavi nosi frigijsku kapu, a pozdravlja uzdignutom ljevicom. Konjske grive i noge izvedene su tankim linijama i svijaju se pod neprirodnim kutovima, a doima se kao da žele stupiti na postament na kojem stoji ženska figura. Obojica konjanika stoje na nagim tijelima koja predstavljaju poražene protivnike. Do lijevog je konjanika gologlava osoba s lijevom rukom uzdignutom na pozdrav (*salus Romana*) u kojoj drži okrugao predmet, moguće pateru ili vijenac.

#### Rekonstrukcija i interpretacija 2

Pločice su ovakvog tipa vrlo rijetke i do sada su objavljene samo dvije: gotovo u cjelosti sačuvana, pronađena 1966. godine u Hrtkovcima (danas u Muzeju Srema, inv. br. 420)<sup>48</sup> i fragmentalno sačuvana, također iz okolice Srijemske Mitrovice, a otkupom je dospjela u Zbirku R. F. Ertla u Beču.<sup>49</sup>

Pločica je četvrtastog oblika, a uokviruju je dvije zmije u heraldičkom položaju. Sačuvana je samo do dna druge zone, ali kako su prikazi i stilske karakteristike na fragmentu identični onima na pločici iz Hrtkovaca, može se pretpostaviti kako ove dvije pločice potječu iz istog kalupa, stoga se rekonstrukcija pločice temelji na opisu spomenutog nalaza.

Prema tipologiji I. Iskre-Janošić, analogija nema. Ulomak iz Hrtkovaca E. Ochsenschlager je tipološki odredio kao Tip IV.<sup>50</sup> Ertl navedenom ulomku pridružuje onaj iz vlastite zbirke, a tipološki ih određuje kao tip A 5. Prema Tudorovoj klasifikaciji, ista pločica pripada kategoriji B d, a produkt je panonskih radionica u razdoblju od dinastije Severa do 2. polovine 3. stoljeća.<sup>51</sup>

<sup>48</sup> Ochsenschlager 1971, T. 5, sl. 9; Tudor 1976, T. 2, sl. 146.

<sup>49</sup> Ertl 1996, 31.

<sup>50</sup> Ochsenschlager 1971, 55, T. 5: 9.

<sup>51</sup> Tudor 1976, 97, kat. br. 146.

ers are dressed in tunics and short cloaks that are fluttering. The left rider is wearing a helmet or a bovine mask or, more probably, a Phrygian cap, and in his right hand he is holding a double axe. The right rider is wearing a Phrygian cap and is saluting with his raised left hand. The manes and legs of the horses are created using thin lines and are awkwardly bent, and it seems as if they are trying to step on the pedestal the female figure is standing on. Both horsemen are standing on naked bodies representing their defeated enemies. Next to the left horseman is a bareheaded person whose left hand, in which he is holding a round object, possibly a patera or a wreath, is raised in greeting (*salus Romana*).

#### Reconstruction and interpretation 2

Plaques of this type are extremely rare and only two were published: one is almost completely preserved, found in 1966 in Hrtkovci (now kept in the Museum of Srem, inv. No. 420),<sup>48</sup> while the second one is partially preserved, also found near Srijemska Mitrovica, bought for the R. F. Ertl Collection in Vienna.<sup>49</sup>

The plaque is square in shape, framed by two snakes in a heraldic position. Only the first and the second zone are preserved, but since the images and the style of the fragment are similar to the plaque from Hrtkovci, it can be assumed that the two plaques were cast from the same mould. Because of that, the reconstruction of this plaque is based on the description of the aforementioned find.

According to the typology by I. Iskra-Janošić, there are no parallels. E. Ochsenschlager defined the fragment from Hrtkovci as Type IV.<sup>50</sup> R. Ertl connects the find with a fragment from his own collection, defining them as type A 5. In consonance with Tudor's classification, the Hrtkovci fragment belongs to category B d, and was produced in Pannonian workshops in the period from the Severan dynasty to the second half to the 3<sup>rd</sup> century.<sup>51</sup>

<sup>48</sup> Ochsenschlager 1971, T. 5, sl. 9; Tudor 1976, T. 2, sl. 146.

<sup>49</sup> Ertl 1996, 31.

<sup>50</sup> Ochsenschlager 1971, 55, T. 5: 9.

<sup>51</sup> Tudor 1976, 97, cat. no. 146.

Prva i druga zona dobro su vidljive i opisane ranije.

Pretpostavlja se da je centralna figura treće zone muškarac s kopljem u desnoj ruci, okrenut nadesno prema nagom muškarcu koji promatra trećeg muškarca kako vadi utrobu govedu obješenom o drvo. Lijevo od centralne figure s kopljem nalazi se stol na tri noge na kojem je velika riba i do njega visok svijećnjak.

U četvrtoj zoni s lijeva nadesno vidimo dva svijećnjaka, govedo, ponovno jedan svijećnjak, amforu kao centralni prikaz, zatim lava, vodoravno položenu lopaticu za žar s tri uljanice iznad nje i pijetla u profilu, okrenutog nalijevo. Primjećujemo kako predmeti prikazani u ovoj zoni odudaraju od ustaljene simbolike četiriju elemenata (*principium vitae*),<sup>52</sup> kao na pločici 1. Dominiraju uljanica, svijećnjak i lopatica za žar, kao predmeti koji prije svega služe za rasvjetu. Mišljenje da je njihova namjena isključivo utilitarna, odnosno da se kult prakticirao na tamnim mjestima, iznio je još Tudor.<sup>53</sup> Crnobrnja i Plemić u svome radu sa stručnog skupa o antičkim svjetiljkama argumentirano opovrgavaju Tudorovu pretpostavku. Autori smatraju da se uljanice u najdonjoj zoni ne mogu tumačiti samo kao puka rasvjetna tijela već da moraju imati neku drugu, za sam obred vezanu namjenu. Autori posebno naglašavaju simboliku broja 3. Među ostalim, referiraju se i na do sada jedini objavljeni nalaz ovog tipa iz Hrtkovaca, gdje naglašavaju da je stol u trećoj zoni na tri noge, da u četvrtoj zoni vidimo tri svijećnjaka s lijeve strane i tri uljanice s desne strane. Ikonografsku simboliku povezuju s grobnim i zagrobnim običajima i definitivno zauzimaju stav da uljanice i rasvjetna tijela na pločicama sinkretističkog kulta nemaju isključivo utilitarnu namjenu, nego su predmeti kulturnog karaktera s ulogom u kultu i pratećem obredu.<sup>54</sup>

<sup>52</sup> Preuzeto iz Ertl 2014, 109.

<sup>53</sup> Tudor 1976, 265.

<sup>54</sup> Crnobrnja, Plemić 2013.

The first and second zones are clearly visible and have been described above.

It can be assumed that the central figure in the third zone is a man holding a spear in his right hand, and is turned to the right towards the naked man who is observing a third man who is disembowelling a bovine animal that is hanging from a tree. Left of the central figure holding a spear is a table with three legs and on it a large fish, while next to it is a large candelabrum.

In the fourth zone, from left to right, we can observe two candelabras, a bovine animal, a candelabrum again, an amphora as a central object, followed by two lions, a horizontal fire iron with three oil lamps above it, and a rooster in profile looking to the left. It can be noted that objects displayed in this area stand out from the usual symbolism of the four elements (*principium vitae*)<sup>52</sup> that is found on plaque 1. This zone is dominated by an oil lamp, a candelabrum, and a fire iron, objects primarily used for illumination. The idea that their function is purely utilitarian, i.e. that the cult was practiced in dark places, was stated by Tudor.<sup>53</sup> Crnobrnja and Plemić, in their paper from a conference on ancient lamps, dismiss Tudor's hypothesis. They state that the oil lamps in the lowest zone cannot be interpreted as mere light fixtures; they have to have another, ritual function. The authors emphasize the symbolism of the number 3. They also refer to the only completely preserved and published find of this type from Hrtkovci, stressing the table on three legs in the third zone, and the three candelabras on the left side and three oil lamps on the right side in the fourth zone. They connect the iconography to funeral rites and the afterlife, clearly stating that the oil lamps and other light fixtures depicted on plaques of a syncretistic cult do not have a utilitarian function only, but that they are also cult objects.<sup>54</sup>

I believe that the confirmation of the central figure in the highest register as an eagle (instead of a *kantharos*) will be useful to other authors in further interpretations.

<sup>52</sup> From Ertl 2014, 109.

<sup>53</sup> Tudor 1976, 265.

<sup>54</sup> Crnobrnja, Plemić 2013.

Vjerujem kako će činjenica da je sada prvi put jasno vidljivo kako je središnja figura najgornjeg registra orao, a ne *kantharos*, biti od koristi u daljnjim interpretacijama i ostalim autorima.

Stilizirani, gotovo shematski izvedeni prikazi i slaba kvaliteta izrade sugeriraju da je riječ o kronološki posljednjem tipu ovih pločica koje treba datirati nakon početka 4. stoljeća. O radioničkim centrima na temelju tek tri poznata spomenika, od kojih je jedan prvi put ovdje objavljen, nije mudro govoriti.

### ULOMAK 3

A-11503 (sl. 4)

#### Opis

Ulomak kružne pločice, debljine 3 mm, visine 3,2 cm i širine 2 cm u njezinu najširem dijelu, na temelju vidljiva ikonografskog sadržaja, pouzdano se može odrediti kao tip Popinci, tip III prema Ochsenschlageru, tip B f prema Tudoru, odnosno tip H-02 prema Ertlu.

U Muzej dospio iz Surduka (*Rittium*).

Na očuvanom ulomku vidljiv je kružni rub pločice. Vanjski je rub ukrašen astragalom, a unutarnji sitnim kuglicama. Vidljiva je osoba u ležećem položaju, odjevena u kratki potpasani hiton – ikonografski sadržaj

The stylized, almost schematic quality of the image and the poor quality of the piece suggest that chronologically this is the last type of these plaques, and it should be dated after the beginning of the 4<sup>th</sup> century. It is not prudent to discuss possible workshops, based only on the three known plaques, one of which is published here for the first time.

### FRAGMENT 3

A-11503 (Fig. 4)

#### Description

A fragment of a circular plaque, 3 mm thick, 3.2 cm long and 2 cm wide at its widest point. Based on the visible iconographic ornament, it belongs to the Popinci type, type III according to Ochsenschlager, type B f according to Tudor, and type H-02 according to Ertl.

It came to the Museum from Surduk (*Rittium*).

The circular edge of the plaque can be discerned on the fragment. The outer edge is decorated with an astragal and the inner edge with small orbs. We can see a person lying down and wearing a short, belted chiton - iconographic content characteristic of the far-left edge of the second



Slika 4 / Figure 4. Ulomak 3 / Fragment 3 (snimio / photo by I. Krajcar, Arheološki muzej u Zagrebu / Archaeological Museum in Zagreb).

karakterističan za krajnji lijevi rub druge zone. Iako je riječ samo o detaljima cjelokupnoga ikonografskog sadržaja, sasvim su dostatni da se spomenuti fragment odredi kao tip Popinci i shodno tomu rekonstruira čitava pločica.

### Rekonstrukcija i interpretacija 3

Središnju figuru predstavlja božica u dugom, potpasanom hitonu koji pridrži rukama, tvoreći središnji umbo. O eventualnom sadržaju umba (hrani ili ljetini), kao što sam i ranije napomenuo, uvelike bi ovisili uloga i određenje ovog božanstva kao Epone, lunarne božice ili pak personifikacije plodnosti. Uz njezinu glavu, s lijeve i desne strane nalazi se po jedna zvijezda te biste Sola i Lune, a prikaz uokviruju dvije zmije u heraldičkom položaju. S lijeve i desne strane božici prilaze konjanici koje ona, i na ovom tipu prikaza, nadvisuje svojim stasom. Konjanici su odjeveni u kratke hitone, s frigijskim kapama na glavama, a svaki konj stoji povrh trupla odjevenog također u kratak hiton i frigijsku kapu. Ispred božice, djelomično joj zaklanjajući noge, nalazi se tronožni stol i na njemu riba, lijevo od njega ovan<sup>55</sup> ili lav,<sup>56</sup> a desno pijetao. Ispod stola vidljive su tri kružnice koje, poslužimo li se analogijom prisustva ikonografskih simbola blagovanja, mogu predstavljati kruščiće, kako je to interpretirao i Hoffiler.<sup>57</sup> Cijelu duljinu ruba uokviruje dvostruki rub, unutarnji ukrašen sitnim krugovima, a vanjski astragalom.

Ikonografska razlika u odnosu na prethodne tipove pravokutnih pločica očituje se prije svega kružnom formom i manjom površinom, ali unatoč tomu sadržaj nije reduciran te u drugoj zoni, gdje konjanici koji običavaju stajati povrh golih tijela, sada stoje na tijelima odjevenim u kratke, potpasane tunike. Ovdje je, prema Tudurovoj interpretaciji, uistinu riječ o stilskoj varijanti prikaza pokorenog neprijatelja.<sup>58</sup>

<sup>55</sup> Ertl 1996, 105.

<sup>56</sup> Iskra-Janošić 1966, 58.

<sup>57</sup> Hoffiler 1935, 63.

<sup>58</sup> Tudor 1976, 119–120.

zone. Although we only have details of the iconographic content, they are quite sufficient to define the fragment as type Popinci, and reconstruct the whole plaque.

### Reconstruction and interpretation 3

The central figure is a goddess in a long, belted chiton which she is holding in her hands, forming the central umbo. The possible content of the umbo (food or crops), as I mentioned before, depends on the role and classification of this deity as Epona, the lunar goddess, or a personification of fertility. On both sides of her head there is a star, as well as busts of Sol and Luna, and the scene is framed by two snakes in a heraldic position. The goddess is approached from both sides by horsemen, and she is taller than them. The horsemen are dressed in short chitons, with Phrygian caps on their heads, and each horse is standing on a corpse also dressed in a short chiton and a Phrygian cap. In front of the goddess, partially obscuring her legs, there is a three-legged table with a fish. On the left side of the table there is a ram<sup>55</sup> or a lion,<sup>56</sup> and a rooster on the right side. Three circles are visible under the table, and if we use the analogy of the presence of iconographic symbols of dining, they can represent bread, as it was interpreted by V. Hoffiler.<sup>57</sup> The entire length of the edge is framed by a double border; the inner one is decorated with tiny circles, and the outer one with an astragal.

Iconographic differences, with regard to previous types of square plaques, are primarily reflected in the circular shape and a smaller surface, but in spite of this, the content is not reduced. Also, in the second zone, where the horsemen tend to stand on top of naked bodies, they are now standing on the bodies dressed in short, belted tunics. Here, according to Tudor's interpretation, we truly have a stylistic variant of the scene showing subjugated enemies.<sup>58</sup>

<sup>55</sup> Ertl 1996, 105.

<sup>56</sup> Iskra-Janošić 1966, 58.

<sup>57</sup> Hoffiler 1935, 63.

<sup>58</sup> Tudor 1976, 119–120.



## PROSTORNA I VREMENSKA KONTEKSTUALIZACIJA

Nalazi su pločica s ovakvim prikazima koncentrirani na područje dunavskog limesa (ponajprije u provincijama Mezija, Dakija, Panonija, rjeđe u Dalmaciji i Noriku) stoga, zaključuje Iskra-Janošić, nije dvojbeno da se radi o kultu čiji je nosilac bila rimska vojska, prije svega legije VIII Augusta, od 45. do 69. godine smještena u Novama u Meziji, a potom do kraja 3. / početka 4. stoljeća u Argentoratu,<sup>59</sup> i XV Apollinaris koja se nakon 63. godine, judejskog rata i osvajanja Jeruzalema, 71. godine vratila u Karnunt te sudjelovala u Dakijskim i Germanskim ratovima, da bi 114. godine napustila Karnunt.<sup>60</sup> Obje su legije tijekom druge polovine 1. stoljeća bile u doticaju s istočnjačkom tradicijom i mogle su prenijeti utjecaj na prostore Mezije, odnosno Panonije. Iskra-Janošić stoga datira aktualnost ovog kulta na području Mezije i Panonije u 2. i 3. stoljeće.<sup>61</sup>

Međutim, kako spomenute legije ne borave u neposrednoj blizini Srijemske Mitrovice, kao mjesta s najgušćom koncentracijom ovih nalaza, a tim više što ikonografski gledano aktualnost kulta ne bismo smjeli tražiti prije početka 3. stoljeća, mišljenja sam da su nositelji kulta vjerojatno bili doseljenici na prostore Panonije od kraja 2. stoljeća, ponajprije oni iz istočnih dijelova Carstva (Male Azije, Sirije i Grčke). Dataciju kulta u vrijeme nakon 2. stoljeća dodatno osnažuje i činjenica da je posljednje objavljeni nalaz, koji iako izveden u bronci, ikonografski odgovara spomenutom kultu, pronađen u arheološkim istraživanjima u Đelilovcu u Bosni i Hercegovini i datiran u 3. stoljeće.<sup>62</sup> Također, statistički podaci o kontekstu nalaza ovih spomenika<sup>63</sup> podupiru pretpostavku da vojska, unatoč etnički heterogenom

<sup>59</sup> Ritterling 1925, 1653.

<sup>60</sup> Ritterling 1925, 1749; Wheeler 2000, 259–260; Mosser 2003, 14.

<sup>61</sup> Iskra-Janošić 1996, 60.

<sup>62</sup> Vajzović 2015, 107.

<sup>63</sup> Crnobrnja, Plemić 2015, 181, sl. 4.

## SPATIAL AND TEMPORAL CONTEXTUALIZATION

Plaques with this type of ornament were mainly found along the Danube Limes (primarily in the Moesia, Dacia, Pannonia, and more rarely in the Dalmatia and Noricum provinces). Therefore, according to Iskra-Janošić, there is no doubt this is a Roman army cult, or more specifically a cult practiced by the VIII Augusta and the XV Apollinaris legions. VIII Augusta was in Novae in Moesia from 45 to 69 AD, and then in Argentoratum from the end of the 3<sup>rd</sup> / beginning of the 4<sup>th</sup> century.<sup>59</sup> XV Apollinaris, after the Jewish-Roman wars and the conquest of Jerusalem, went back to Carnuntum in 71 AD. It took part in the Dacian and Germanic wars, and then left Carnuntum in 114 AD.<sup>60</sup> During the second half of the 1<sup>st</sup> century, both legions had contact with Eastern traditions and could have passed on their influence to Moesia and Pannonia. Therefore, Iskra-Janošić dates this cult in Moesia and Pannonia in the 2<sup>nd</sup> and 3<sup>rd</sup> century.<sup>61</sup>

However, as the aforementioned legions did not reside in the vicinity of Srijemska Mitrovica, the place with the densest concentration of these finds, and since based on the iconography we should not expect to see the cult before the beginning of the 3<sup>rd</sup> century, I believe that the cult belonged to the settlers (especially people from the eastern parts of the Roman Empire - Asia Minor, Syria, and Greece) who lived in Pannonia from the end of the 2<sup>nd</sup> century. Dating the cult after the end of the 2<sup>nd</sup> century is additionally reinforced by the fact that the iconography of the last published find (although it was made out of bronze) corresponds to this cult. The find is dated to the 3<sup>rd</sup> century, and it was found during archaeological excavations in Đelilovac in Bosnia and Herzegovina.<sup>62</sup> Also, statistical data about the context of these finds,<sup>63</sup> supports the notion that the army, despite its heterogeneous

<sup>59</sup> Ritterling 1925, 1653.

<sup>60</sup> Ritterling 1925, 1749; Wheeler 2000, 259–260; Mosser 2003, 14.

<sup>61</sup> Iskra-Janošić 1996, 60.

<sup>62</sup> Vajzović 2015, 107.

<sup>63</sup> Crnobrnja, Plemić 2015, 181, Fig. 4.

sastavu pogodnom za implementaciju raznih oblika vjerovanja i tradicija, nema primarnu ulogu u širenju i prakticiranju ovog kulta.

Utjecaj je orijentalnih kultova nedvojben, a povezan sa službenom i lokalnom/provincijskom vjerskom, religijskom i ikonografskom tradicijom ovom kultu daje sinkretističko značenje, s neodoljivim prizvukom svojevrsnog ekumenizma.

Centar za proizvodnju pločica tip Dalj, varijanta B, s obzirom na sadržaj prikaza i najgušću koncentraciju nalaza (Srijem, Baranja, istočna Slavonija, zapadna Srbija), trebao bi biti u okolici ili u samoj Srijemskoj Mitrovici. Sitne stilske i izvedbene razlike unutar spomenutog tipa, kao što su razmjestaj figura u četvrtoj zoni, zaglađenost stupova edikule, kanelure na stupovima i sl., vjerojatno su rezultat proizvodnje u različitim kalupima koji su uslijed istrošenosti zamjenjivani novima. Nije isključena mogućnost da su u Srijemu proizvođeni samo kalupi, dok su pločice lijevane u drugim dijelovima Carstva, ali geografska koncentracija nalaza ne govori u prilog toj tezi.<sup>64</sup> Ikonografski, ali i zahvaljujući paralelama na novcu Elagabala te općem povijesno-političkom stanju, vjerojatno je vrijeme njihove izrade krajem 2. desetljeća 3. stoljeća.

Pločice Tipa IV prema Ochsenchlageru relativno su rijetke i poznata su samo dva njihova primjerka, jedan u Muzeju Srema, drugi u privatnoj Zbirci Ertl. Nažalost, oba su nalaza izvan stratigrafskoga konteksta, a pronađena su u okolici Srijemske Mitrovice. Njezinom objavom u ovom radu želio sam pridonijeti razumijevanju sadržaja prve zone, s obzirom na to da je uslijed oštećenja, pogrešno, ali sasvim opravdano, umjesto prikaza orla, Ochsenchlager zamijetio *kantharos*. Prva zona pločice iz Zbirke Ertl uopće se nije sačuvala. Shematizirani prikazi i disproporcionalnost prikazanih figura odredile bi ovaj spomenik kao provincijalni rad iz prve polovine 4. stoljeća.

<sup>64</sup> Popović 1986, 120.

ethnic composition suitable for the implementation of various forms of beliefs and traditions, had no primary role in spreading and practicing this cult.

We cannot deny the influence of the Oriental cults, and connected with the official and local/provincial religious and iconographic tradition, it gives this cult a syncretistic meaning, with an irresistible hint of some kind of ecumenism.

The centre for making the Dalj type variant B plaques, considering the content of the ornament and the densest concentration of finds (Srijem, Baranja, eastern Slavonia, western Serbia), should be in Srijemska Mitrovica or its vicinity. Small differences in the style or the way they were made, such as the placement of the figures in the fourth zone, smoothness of the pillars of the aedicule, or the fluting on the columns are probably the result of using different moulds because, due to wear, old moulds would be replaced with new ones. We cannot disregard the possibility that only moulds were made in Srijem, while the plaques were made in other parts of the Roman Empire, but the geographic concentration of the finds does not support this idea.<sup>64</sup> Based on iconography, and the parallels with coins of Elagabalus and the general historical and political situation, we can date them at the end of the second decade of the 3<sup>rd</sup> century.

Ochsenchlager's Type IV plaques are relatively rare and there are only two known examples: one in the Museum of Srem, and the other in the private Ertl Collection. Unfortunately, both were found outside the stratigraphic context, and they were discovered in the vicinity of Srijemska Mitrovica. By writing about it in this paper, I wanted to contribute to a better understanding of the content of the first zone, considering that, due to the damage to the plaque, Ochsenchlager was quite justified, but still wrong, when he stated that it has an *kantharos* instead of an eagle. The first zone of the plaque from the Ertl Collection is completely gone. The schematic representations and disproportionality of the figures indicate it is a provincial product from the first half of the 4<sup>th</sup> century.

<sup>64</sup> Popović 1986, 120.

Što se pak pločica tipa Popinci tiče, njihovi su nalazi najgušće koncentrirani u području Vojvodine, odnosno na teritoriju Donje Panonije. Kako je uglavnom riječ o nalazima izvan arheološkog konteksta, koji su u muzeje dospjeli kao donacije ili otkupi, ponovno je teško sa sigurnošću tvrditi, ali se pretpostavlja, kako je radionički centar svoje mjesto našao na ovome teritoriju. Ikonografija i kvaliteta izrade sugeriraju početak 4. stoljeća kao vrijeme njihove izrade.

### ZAKLJUČNO

Fragment pločice 1 upotpunjuje dosadašnje brojne objave pločica ovog tipa, a zahvaljujući njihovoj brojnosti, analogijom je moguće rekonstruirati pločicu u cjelosti. S obzirom na ikonografsku identičnost, očito je da pločice takvog tipa potječu iz istog kalupa.

Fragment pločice 2 tek je treći objavljeni primjer ovoga tipa i na njemu je prvi put jasno vidljivo da centralni prikaz prve zone nije *kantharos*, kako je to uslijed oštećenja pogrešno ali sasvim opravdano zaključio E. Ochsenschlager, već orao koji ikonografski treba biti u nebeskoj zoni, bilo kao teofanija Jupitera, simbol Sola, carske moći ili prenositelja duša. Iako nedostaju donje dvije zone, s velikom se sigurnošću pretpostavlja kako je riječ o ulomku pločice identične onima iz Srijemske Mitrovice i Hrtkovaca.

Prezentirani ulomak pločice 3 nadopunjuje fundus nalaza pločica ovog tipa, koji je karakterističan za Srijem i neposrednu okolicu, pa je vjerojatno kako je isto područje moralo imati radionički centar.

Uzimajući u obzir dosadašnju tipologiju i brojne objave pločica ovog kulta, mišljenja sam kako je za bolju preglednost, tipološku usuglašenost, a posljedično i razumijevanje sadržaja prikaza i čitavog kulta sa svim njegovim prostornim i vremenskim inačicama te na kraju konsenzus oko naziva kulta, potrebno revidirati dosadašnje objave i načiniti nov, cjelovit korpus s pratećom tipologijom. Postojanje takvog korpusa omogućilo

As for the Popinci type plaques, they were mostly found in Vojvodina, and Lower Pannonia. Most of them were found outside the archaeological context, and were either donated, or bought by the museum so we cannot say for sure, even though we can assume that the workshop was in that area. The iconography and workmanship suggest they were made at the beginning of the 4<sup>th</sup> century.

### CONCLUSION

The Plaque 1 fragment complements previous publications of this type, and because so many have been found, it is possible to reconstruct the complete plaque. Given the iconographic identity, it is evident that plaques belonging to this type come from the same mould.

The Plaque 2 fragment is only the third published example of this type, and for the first time we can clearly see that the central ornament in the first zone is not a *kantharos*, a wrong conclusion made by E. Ochsenschlager because of the damage to the plaque, but an eagle that, based on iconography, should be in the heavenly zone, either as theophany of Jupiter, the symbol of Sol, imperial power, or transferor of souls. Although the bottom two zones are missing, we can assume, with great certainty, that it is a fragment of a plaque identical to those found in Srijemska Mitrovica and Hrtkovci.

The plaque fragment presented in the paper is a good addition to the collection of this type of plaques characteristic of Srijem and the surrounding area, and it is therefore likely there was a workshop nearby.

In view of current typology and numerous publications of this type of plaques, it is my opinion that for better transparency, consistent typology, and therefore a better understanding of the ornament content, as well as the entire cult with all its spatial and temporal variations along with a consensus on its name, it is necessary to revise current publications and make a new, comprehensive corpus with a new typology. This would

bi preglednost i dostupnost nalaza i jedinstvenu tipološku podjelu čitavog ansambla koji bi uključivao i novije objave.

Unatoč nepostojanju usuglašenosti oko nazivlja, očito je da svojom genezom i raznorodnim ikonografskim elementima ovi artefakti sjedinjuju („kultna fuzija“)<sup>65</sup> orijentalne i keltske utjecaje sa službenom rimskom religijom, u jeku kulturnog sinkretizma (2. i 3. stoljeće), a rasprostranjenost je ovih nalaza najgušća na području srednjeg i donjeg toka Dunava (provincije Norik, u Panoniji, Dakiji i Meziji).

Što se interpretacije prikaza, a time i razumijevanja kulta tiče, sklon sam čitav narativ sagledati naopako. Ako bismo prvu zonu sagledali kao četvrtu, drugu kao treću itd., čitav bi se prikaz mogao tumačiti kao životni ciklus konjanika / pripadnika kulta. Iz prve zone (simboli četiriju elemenata) rađa se život, u drugoj zoni inicijacijom (blagovanjem ribe, žrtvovanjem goveda) pristupa se (konjaničkom) kultu, u trećoj zoni konjanik pobjeđuje neprijatelje / biva primljen u kult, štuje konjaničko božanstvo (Epona?), a iz četvrte zone sve nadgleda orao (teofanija Jupitera) ili vječno, nepobjedivo sunce (personifikacija carskog kulta?) kojem konjanik teži i na kraju života ulazi u njegov svijet.

Sadržajna šarolikost i kombinacija elemenata raznih provincijskih tradicija i vjerovanja, pod okriljem simbola službene rimske religije (*Sol Invictus*, orao) mogla bi upućivati na svojevrstan neslužbeno ekumenski značaj ovih spomenika, bez opstruiranja regionalnih kultova i tradicijskih vjerovanja, u turbulentnom 3. stoljeću.

<sup>65</sup> Imamović 1977, 245.

ensure transparency and availability of finds and a singular typology for the whole collection that would also include recent publications.

Even though there is no consistent terminology, it is evident that the genesis and diverse iconographic elements of these artefacts unite (“cult fusion”)<sup>65</sup> the Oriental and Celtic influences with the official Roman religion at the height of the cult syncretism (2<sup>nd</sup> and 3<sup>rd</sup> century), and most of them were found in the central and lower Danube regions (Noricum, Pannonia, Dacia, and Moesia provinces).

To interpret the ornament, and get a better understanding of the cult, I am inclined to look at the whole scene upside down. If we look at the first zone as the fourth, the second as the third, etc., the entire ornament could be interpreted as a life cycle of horsemen / members of the cult. Life is born in the first zone (symbols of the four elements), and the initiation (eating fish, sacrificing cattle) into the (horse) cult is shown in the second zone. In the third zone, the horseman defeats his enemies / is inducted into the cult, and worships the horse deity (Epona?). In the fourth zone, the entire scene is overseen by an eagle (theophany of Jupiter) or an eternal, invincible Sun (the personification of the imperial cult?). This is what the horseman strives for; at the end of his life, he enters its world.

Content diversity and a combination of various provincial traditions and beliefs, under the auspices of the symbols of the official Roman religion (*Sol Invictus*, eagle), could indicate a kind of informal ecumenical nature of these monuments without impeding regional cults and traditional beliefs during the turbulent 3<sup>rd</sup> century.

<sup>65</sup> Imamović 1977, 245.



## KRATICE / ABBREVIATIONS

RIC IV/2 = H. Mattingly, E. Sydenham, C. Sutherland, *The Roman Imperial Coinage IV/2*, London, Spink, 1968.

RIC V/2 = H. Mattingly, E. Sydenham, P. H. Webb, *The Roman Imperial Coinage V/2*, London, Spink, 1968.

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# Vinkovačko blago: rezultati preliminarne analize kasnoantičke ostave srebrnih predmeta

## The Vinkovci treasure: results of the preliminary analysis of a hoard of silver items from late antiquity

UDK / UDC: 904: 739.1(497.5 Vinkovci)“652”

Izvorni znanstveni rad / Original scientific paper

*U radu se objavljuju rezultati preliminarne analize kasnoantičke ostave srebrnih predmeta, nazvane Vinkovačko blago. Nalaz je pronađen 23. ožujka 2012. godine tijekom provođenja zaštitnih arheoloških istraživanja na lokalitetu Duga ulica 26, u Vinkovcima (antičke Cibalae). Ostava se sastoji od 45 srebrnih predmeta i poludragog kamena. Srebrni servis čine pladnjevi, vrčevi, zdjele, čaše, žlice, cjediljka, kutija za parfem, svijećnjak i dr. Ukupna masa srebrnih predmeta iznosi oko 38 kg. Najreprezentativniji su nalazi triju luksuznih predmeta ukrašenih figuralnim prikazima izvedenim tehnikama niella i pozlate. Riječ je o velikom pladnju s pastoralnom scenom, manjem pladnju sa scenom lova i ukrasnoj zdjelici s figuricom Tantalusa, natpisom i frizom s prikazima iz grčke mitologije. Na ovoj posudi nalazi se ugravirano ime majstora Antonina iz Akvileje. Većina se predmeta može na osnovi oblika i načina*

*The paper is a report on the results of the preliminary analysis of a hoard of silver items from the late classical period, dubbed the Vinkovci Treasure. The hoard was discovered on March 23<sup>rd</sup> 2012 during rescue excavations at the site Duga ulica 26 in Vinkovci (known as Cibalae in classical antiquity). The hoard consists of 45 silver items and semiprecious stones. The silverware set consists of platters, pitchers, bowls, glasses, spoons, a strainer, perfume box, candelabrum, etc. The total weight of the silver items is 38 kilograms (84 lbs.). The most prominent finds are three luxurious items adorned with figural decorations inlaid with niello and gilding: a large platter depicting a pastoral scene, a smaller platter with a hunting scene, and a decorative bowl with a figurine of Tantalus, an inscription, and a frieze depicting scenes from Greek mythology. The last bears the engraved name of Master Antoninus of Aquileia. On the basis of their shape and form of decoration, most of the items can be approxi-*

*ukrašavanja okvirno datirati u razdoblje oko sredine 4. stoljeća po Kristu. Nastanak ostave vezuje se uz nemirno razdoblje zadnje četvrtine 4. stoljeća, kada su nakon pobjede kod Hadrianopola 378. godine, razne barbarske skupine poharale gradove na području južne Panonije.*

*Ključne riječi: kasnoantička ostava, srebrno posuđe, pladnjevi, Cibale, Druga Panonija, Akvileja, Valentinijan I*

*mately dated to the middle of the 4<sup>th</sup> century AD. The hoard is most likely linked to the hectic final quarter of the 4<sup>th</sup> century, when various barbarian hordes sacked cities in southern Pannonia after the Battle of Hadrianapolis in 378.*

*Key words: Late Antique hoard, silverware, platters, Cibalae, Pannonia Secunda, Aquileia, Valentinian I.*

## UVOD

Zaštitna arheološka istraživanja na lokalitetu Duga ulica 26, u Vinkovcima, provedena su u razdoblju od 15. ožujka do 30. svibnja 2012. godine. Istraživanja je provela tvrtka Geoarheo d. o. o. iz Zagreba, voditelj istraživanja bio je dipl. arheolog Šime Vrkić. Istraživanja su prethodila nadogradnji trgovačkog centra i financirana su od privatnog investitora.

Dana 23. ožujka 2012. godine pronađen je senzacionalni arheološki nalaz kasnoantičke ostave srebrnog posuđa i pribora za jelo, kasnije nazvan Vinkovačko blago ili Blago Cibala. Zbog velike vrijednosti pronađenih nalaza, obaviještene su sve nadležne službe. Tijekom dana nalazi su pod policijskom pratnjom prevezeni i pohranjeni u trezoru Gradskog muzeja u Vinkovcima. Dana 28. ožujka 2012. godine nalaz je predstavljen javnosti. Tom je prigodom u muzejskim prostorijama bio izložen veći broj predmeta iz ostave. Istoga su dana nalazi pod oružanom pratnjom prevezeni u Zagreb, gdje su kratkotrajno bili pohranjeni u Muzeju Mimara. Nedugo potom prebačeni su u Muzej za umjetnost i obrt, gdje je zbog velikog interesa javnosti, organizirana posebna izložba na kojoj je bila izložena većina predmeta

## INTRODUCTION

Rescue excavations at the site Duga ulica 26 in Vinkovci were carried out from March 15<sup>th</sup> to May 30<sup>th</sup> of 2012. The excavations were conducted by the company Geoarheo Ltd. from Zagreb, under the supervision of archaeologist Šime Vrkić. The excavations preceded upgrades for a shopping mall and were funded by a private investor.

On March 23<sup>rd</sup> 2012, a sensational archaeological find was discovered; a Late Antique hoard of silver tableware and eating utensils, later dubbed the Vinkovci or Cibalae Treasure. Because of the great value of the find, all proper authorities were notified. During the same day, the finds were transported with a police escort to the Vinkovci City Museum, where they were safely stored in the museum's vault. On March 28<sup>th</sup> 2012, the find was presented to the public. On this occasion, most of the items from the hoard were put on display at the museum. On the same day, the find was accompanied by an armed escort to Zagreb, where it was briefly stored in the Mimara Museum. Shortly afterward, the treasure was relocated to Zagreb's Museum of Arts and Crafts, where a special exhibition was organised because of the great interest of the public, showcasing most of the items from the hoard. After the close of the ex-



iz ostave. Nakon završetka izložbe, nalazi su prevezeni i pohranjeni u trezor Arheološkog muzeja u Zagrebu, gdje se trenutno obavlja njihova dugotrajna konzervatorsko-restauratorska obrada.<sup>1</sup>

Popis nalaza i preliminarna analiza izvršeni su dok je nalaz bio kratkotrajno pohranjen u trezoru Gradskog muzeja u Vinkovcima. Kraća je analiza provedena u Arheološkome muzeju u Zagrebu početkom 2013. godine. Tom su prigodom snimljene fotografije nerestauriranih predmeta koje se objavljuju u ovom radu.<sup>2</sup> Važno je napomenuti da, zbog oštećenosti predmeta, najčešće nije bilo moguće odrediti njihovu točnu masu i dimenzije pa objavljene podatke treba prihvatiti sa zadržkom. Isto vrijedi za figuralne prikaze i natpise koji su u sadašnjem stanju uglavnom slabo vidljivi ili nečitki. Detaljna mjerenja i analize moći će se izvršiti tek nakon završetka višegodišnjih konzervatorsko-restauratorskih radova, nakon čega će biti moguća kvalitetnija znanstvena obrada i objava cjelokupne ostave.<sup>3</sup>

Cilj je rada detaljno opisati arheološki kontekst u kojemu je ostava pronađena i pokušati utvrditi okolnosti pod kojima je mogla nastati. Zatim, dati kratku analizu sadržaja ostave i nalaze usporediti s najvažnijim kanoantičkim ostavama srebrnog posuđa, kao što su Seusovo blago, Blago iz Mildenhalla i Blago iz Kaiseraugsta. Na kraju rada u kataloškom pregledu donosimo kratak opis i osnovne podatke o svakom pojedinom predmetu iz ostave.

<sup>1</sup> Voditelj konzervatorskih radova je Damir Doračić, viši restaurator iz Arheološkog muzeja u Zagrebu. Radovi i analize objavljuju se u suradnji s Römisch-Germanisches Zentralmuseum iz Mainza i British Museum iz Londona te više drugih institucija u Hrvatskoj i Europi.

<sup>2</sup> Izlomljene je posude sastavio i pripremio za fotografiranje inž. Neven Lete, restaurator u tvrtci Geoarheo d.o.o., bez čije pomoći preliminarna analiza srebrnih predmeta ne bi bila moguća. Većinu objavljenih fotografija snimila je dipl. arheolog Vesna Žarak, a obradio ih je dipl. arheolog Šime Vrkić, oboje tadašnji zaposlenici tvrtke Geoarheo d.o.o.

<sup>3</sup> Prvi značajniji osvrt na pronalazak vinkovačke ostave u Milinović 2012, 67–77.

hibition, the find was transported and stored in the vault of the Archaeological Museum in Zagreb, where the treasure is currently going through the long-term process of restoration and conservation.<sup>1</sup>

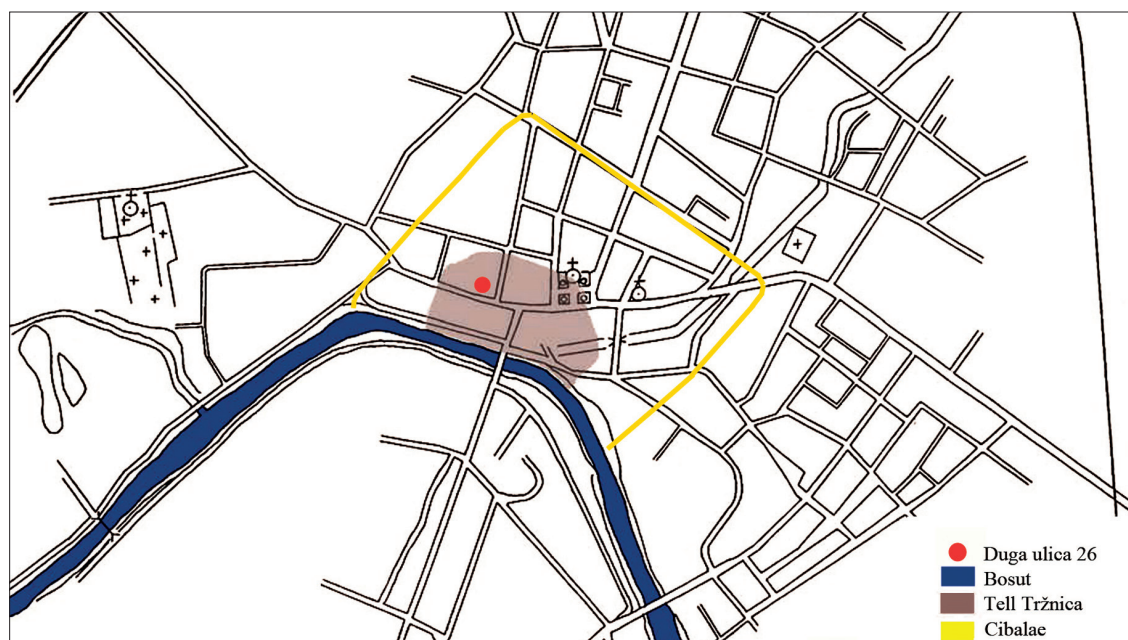
A list of the artefacts was made and a preliminary analysis conducted while the find was briefly stored in the vault of the Vinkovci City Museum. A brief analysis was also conducted in the Archaeological Museum in Zagreb at the beginning of 2013. During the analysis, photographs of the unrestored items were taken, published in this paper.<sup>2</sup> It is important to note that the damage on the items prevented exact measurements for mass and size, which should be taken into account when considering the data published in this paper. The same is true for the figural motifs and inscriptions, which are hardly visible and illegible in their current state. Detailed measurements and analyses will be possible after the long process of conservation and restoration, which will take several years, and after which a better scientific study and the publishing of the full inventory of the hoard will be possible.<sup>3</sup>

The goal of this paper is to describe the archaeological context in which the hoard was found and try to determine the circumstances under which it was buried. Furthermore, to give a brief analysis of the contents of the hoard and compare the find with the most important hoards of silver tableware from the late classical period, such as the Seuso Treasure, the Mildenhall Treasure, and the Kaiseraugst Treasure. Finally, the paper ends with brief descriptions and general information about each item from the hoard.

<sup>1</sup> The conservation process is headed by Damir Doračić, senior restorer at the Archaeological Museum in Zagreb. Papers and analyses are published in collaboration with the Römisch-Germanisches Zentralmuseum in Mainz, the British Museum in London, and other Croatian and European institutions.

<sup>2</sup> The fragmented vessels were put back together and prepped for photography by Neven Lete, Eng., restorer at Geoarheo Ltd., without whom the preliminary analysis of the silver items would not have been possible. Most of the published photographs were taken by archaeologist Vesna Žarak, and were digitally processed by archaeologist Šime Vrkić, both of whom worked for Geoarheo Ltd. at the time.

<sup>3</sup> For the first significant paper on the Vinkovci hoard, see Milinović 2012, 67–77.



Slika / Figure 1. Mjesto pronalaska ostave u Vinkovcima / Position of the hoard in Vinkovci (Kalafatić 2006, 20).

## ARHEOLOŠKI KONTEKST

Istraženi lokalitet nalazi se na adresi Duga ulica 26, u središtu Vinkovaca, na glavnoj gradskoj prometnici. To je područje dobro poznato u arheološkoj literaturi jer se nalazi na prostoru višeslojnoga prapovijesnoga naselja, koje se u arheološkoj literaturi najčešće naziva *tell* Trznica i unutar bedema antičkoga grada Cibala (sl. 1). Istraženi je lokalitet otprije poznat u arheološkoj literaturi pod nazivom Na-Ma jer su na tome mjestu 1976. – 1977. godine provedena veća zaštitna arheološka istraživanja koja su prethodila izgradnji istoimene robne kuće.<sup>4</sup> Pri izgradnji, uz istočnu stranu robne kuće, na mjestu porušenih starijih objekata, uređen je manji prostor koji je do nedavne nadogradnje služio kao vanjska terasa okolnih ugostiteljskih objekata. Godine 2012. odlučeno je da se taj prostor nadgradi zbog čega su provedena manja zaštitna arheološka istraživanja koja su obuhvatila površinu približnih dimenzija 12 x 25 m. Nakon pronalaska ostave srebrnih predmeta, iskopno je polje minimalno prošireno tako da je na kraju istražena površina iznosila 306 m<sup>2</sup>.<sup>5</sup>

<sup>4</sup> Iskra-Janošić 1977, 70–71; 1993, 68–69; 2001, 98–99.

<sup>5</sup> Podaci o istraživanju nalaze se u neobjavljenom stručnom izvješću (Vrkić 2012, 1–75).

## ARCHAEOLOGICAL CONTEXT

The excavated site is located at the address Duga ulica 26 in the centre of Vinkovci, on the main road of the city. The area is well-known in archaeological literature because it is situated in the middle of a multi-layered prehistoric settlement, which is most often called the Trznica Tell, and inside the rampart of the Roman town of Cibalae (fig. 1). The excavated site is known in the literature as Na-Ma, because major excavations were conducted there from 1976 to 1977, preceding the construction of a department store bearing the same name.<sup>4</sup> During construction, on the eastern side of the department store, old buildings were cleared for a small space the coffee shops and restaurants used for outside seating until very recently. In 2012, it was decided that the space would be used to upgrade the former department store, which required small-scale rescue excavations encompassing an approximate surface of 12 x 25 m. After the discovery of the silver items, the area of research was minimally expanded, and the final excavated surface was 306 m<sup>2</sup>.<sup>5</sup>

<sup>4</sup> Iskra-Janošić 1977, 70–71; 1993, 68–69; 2001, 98–99.

<sup>5</sup> The unpublished expert report contains the data for the excavations (Vrkić 2012, 1–75).



Slika / Figure 2. Lokalitet Duga ulica 26, u Vinkovcima, tijekom zaštitnih arheoloških istraživanja 2012. godine / The site Duga ulica 26 in Vinkovci during the rescue excavations of 2012 (snimio / photo by T. Lozančić).

Stratigrafski su odnosi bili ujednačeni na cijeloj površini lokaliteta s prosječnom debljinom sloja oko 2,5 m i nalazima koji potječu iz razdoblja od neolitika do 20. stoljeća. Recentni slojevi, debljine oko 1 m, zabilježeni su na samom vrhu iskopa, ali i unutar ukopa dvaju podrumskih objekata i drenažnog kanala, čija je izgradnja uništila znatan dio starijih arheoloških ostataka (sl. 2). Starije su slojeve uništili i duboki ukopi iz novoga i srednjega vijeka.<sup>6</sup> Rimskom je razdoblju pripadao sloj prosječne debljine 0,5 m s pokretnim nalazima iz razdoblja od 1. do 4. stoljeća. Unutar ovog sloja istraženo je više otpadnih jama, bunara i ostataka arhitekture. Na samome dnu nalazio se prapovijesni sloj prosječne debljine 0,30 m.<sup>7</sup>

Ostava Vinkovačko blago pronađena je na samom početku zaštitnih arheoloških istraživanja, kada još nisu bili definirani arheološki slojevi i objekti. Naime, nakon strojnog uklanjanja betonskih podnica i slojeva šute, započelo je raščišćavanje i ručno iskopavanje otvorene površine. Već 21. ožujka 2012.

<sup>6</sup> Iz razdoblja novog vijeka potječu dva bunara koja su zatrpana početkom 19. stoljeća. Iz razdoblja kasnoga srednjeg vijeka potječu dvije veće otpadne jame i ostaci manje peći.

<sup>7</sup> U ovome su sloju pronađeni ostaci naselja iz srednjeg i kasnoga brončanog doba (belegiš kultura), nekoliko manjih otpadnih jama iz ranoga brončanog doba (vinkovačka kultura) i ostaci neolitičkog naselja (starčevačka kultura).

The stratigraphic relations were uniform across the whole site, with the average layer thickness of 2.5 m and finds ranging from the Neolithic up to the 20<sup>th</sup> century. Recent layers, approximately 1 m thick, were noted at the very top of the dig, but also inside two basements and a drainage canal, the construction of which destroyed a significant portion of the older archaeological finds (fig. 2). The older layers were also disturbed by deep interventions dating from the Modern Age and the Middle Ages.<sup>6</sup> The Roman layer was 0.5 m thick on average, with artefacts from the 1<sup>st</sup> to the 4<sup>th</sup> century. In this layer, several middens, wells and architectural remains were excavated. At the very bottom of the dig, there was a prehistoric layer, with an average thickness of 0.3 m.<sup>7</sup>

The Vinkovci Treasure hoard was discovered at the very beginning of the rescue excavations, when the archaeological layers and structures were not yet clearly defined. After mechanically clearing the concrete floor and layers of rubble, the workers started to clear the exca-

<sup>6</sup> Two wells, filled in during the 19th century, are from the Modern Age. Two larger middens and the remains of a smaller stove were dated to the Middle Ages.

<sup>7</sup> The layer contained the remains of a settlement from the middle and late Bronze Age (the Belegiš Culture), several small middens from the early Bronze Age (the Vinkovci Culture), and the remains of a Neolithic settlement (the Starčevo Culture).





Slika / Figure 3. Ostava srebrnih predmeta neposredno prije pronalaska / Some of the silver items shortly after the hoard was discovered (snimio / photo by Š. Vrkić).

godine u profilu u sjevernom kutu iskopskog polja bili su vidljivi dijelovi triju velikih srebrnih pladnjeva (sl. 3). U tom trenutku činilo se da je riječ o odbačenim recentnim predmetima jer se pretpostavljalo da su zapadni i sjeverni rub lokaliteta uništeni prilikom gradnje temelja robne kuće. Osim toga, neposredno iznad nalaza, za koje će se tek ispostaviti da je riječ o ostavi srebrnih predmeta, bila je ukopana recentna cijev za otpadne vode, dok je uz istočnu stranu bio izgrađen veliki betonski šaht. Zbog svega je toga bilo teško na tome mjestu očekivati ne-taknuti arheološki sloj s tako važnim nalazima. Dana 23. ožujka 2012. godine uređeni su profili iskopskog polja. Tom su prigodom radnici nekontrolirano izvadili sve predmete iz ostave, pri čemu su ih teško oštetili.<sup>8</sup> Nakon vađenja nalaza, postalo je očito da nije riječ o odbačenim recentnim predmetima, već da se radi o ostavi, odnosno namjerno

<sup>8</sup> Nalazi su oštećeni tako što je jedan od radnika krampom probio pladnjeve i izvukao ih iz profila iskopskog polja. Od nekoliko snažnih udaraca ispucali su brojni predmeti koji su se nalazili ispod, posebno oni koji su imali tanke, istrošene stijenke (zdjelice) i koji su zbog izravne izloženosti u zemlji bili jako korodirani (vrčevi, posuda za parfem, svijećnjak i dr.).

vation area by hand. On 21<sup>st</sup> March 2012, parts of three large silver platters were visible in the northern profile of the dig (fig. 3). The items seemed like discarded modern objects at the time, because it was assumed that the western and northern parts of the site were destroyed during the laying of the foundations for the department store. In addition, just above the finds which were yet to be identified as a hoard of silver items, there was a waste water pipe, while it was flanked by a large concrete manhole to the east. That is why it was difficult to expect an intact archaeological layer in this part of the dig with such important finds. On March 23<sup>rd</sup> 2012, the profiles of the excavated area were cleared of any excess dirt. On this occasion, the workers removed all the items from the hoard without supervision, damaging them significantly.<sup>8</sup> After the items were removed from the profile, it became apparent that they had not been discarded recently, but that it was indeed a hoard, i.e. deliberately buried items, soon identified as silver tableware from the late classical period according to the shape of certain items.

A small expansion of the dig site revealed the pit in which the hoard was buried. The pit had an irregular oval shape, 0.9 m in diameter and with a depth of 0.8 m. Four bricks arranged in a quadrangle were at the bottom (fig. 4). The pit went through the entire Roman layer, which confirms that the hoard was buried at the very end of the Roman period in Cibalae. The lower part of the pit was dug into an older Roman midden, because of which two of the bricks sunk into the loose soil toward the south-west, further damaging some of the silver items.

Based on the imprints that certain items left on one another and the field photographs taken before the hoard was discovered, the approximate positions of the items inside the pit were reconstructed (fig. 5). At the very bottom, on the brick base, there was a wide vessel with lion heads and rings (cat. no. 5). The vessel con-

<sup>8</sup> One of the workers punctured the platters with a pickaxe and removed them from the profile of the dig. Several strong blows damaged the many items that were below the platters, especially those with thin, worn walls (bowls) and those which were heavily corroded due to direct contact with earth (pitchers, perfume box, candelabrum etc.)



skrivenom posuđu, koje je uskoro na osnovi oblika pojedinih predmeta prepoznato kao srebrno posuđe iz kasnoantičkog razdoblja.

Manjim proširenjem iskopnog polja definiran je ukop u kojemu je ostava bila pohranjena. Ukop je imao nepravilni zaobljeni oblik, promjera oko 0,90 m i dubine oko 0,80 m. Na dnu su se nalazile četiri opeke, posložene u obliku četverokuta (sl. 4). Ukop je presjekao cijeli rimski sloj, što potvrđuje da je nastao na samome kraju rimskog razdoblja u Cibalama. Donji je dio bio djelomično ukopan u stariju rimsku otpadnu jamu, zbog čega su dvije opeke utonule u rahlu zemlju i nagnule se na jugozapadnu stranu, a to je dodatno pridonijelo oštećenju nekih srebrnih predmeta.

Na osnovi otisaka, koje su pojedini predmeti ostavili jedni na drugima i terenskih fotografija snimljenih prije pronalaska ostave, približno je rekonstruiran način na koji su predmeti bili posloženi u ukopu (sl. 5). Na samome dnu, na podlozi od opeka, nalazila se široka posuda s lavljim glavama i alkama (kat. br. 7). U nju je bila položena velika kanelirana zdjela (kat. br. 6), čija joj je prstenasta noga ostavila kružni otisak. Unutar kanelirane zdjele bila je posložena većina manjih predmeta (zdjelice, mali pladnjevi, čaše, žlice, cjediljka i dr.). Manje su posude bile posložene jedne u druge, što je omogućilo da sve stane u veliku zdjelu i da se na većini njih sačuva izvorni srebrni sjaj. To se najbolje vidi na primjeru čaša jer su u onu korodiranu (kat. br. 24) bile umetnute preostale dvije čaše (kat. br. 25–26), koje su na taj način bile potpuno zaštićene od vanjskih utjecaja, zbog čega se na njima sačuvalo izvorni srebrni sjaj. Na fotografijama, snimljenim prije vađenja nalaza, vidljiv je vrč polean izvan velike narebrene zdjele. Čini se da je na isti način bilo posloženo svih pet vrčeva (kat. br. 8–12), svijećnjak (kat. br. 31) i kutija za parfeme (kat. br. 13). Ovi su predmeti bili preveliki da bi mogli stati u veliku narebrenu zdjelu, zbog čega su posloženi uokolo nje, na što upućuje i činjenica da svi imaju jaku srebrnu koroziju, čiji je nastanak posljedica izravne izloženosti vanjskim



Slika / Figure 4. Ostaci ukopa s podnicom od tegula / Emptied pit with tegulae at the bottom (snimio / photo by Š. Vrkić).

tained a large fluted bowl (cat. no. 6), the ring base of which left a round imprint. Most of the smaller items were arranged within the fluted bowl (bowls, small platters, glasses, spoons, a strainer, etc.). The smaller vessels were stacked so that they could fit inside the large bowl, which also allowed them to keep their original silver sheen. The glasses are the best example of this, because the remaining two glasses (cat. no. 25–26) were stacked on the corroded one (cat. no. 24). The two top glasses were therefore protected from external influence and kept their original silver sheen. On the photographs taken before the finds were removed from the pit, a pitcher can be seen lying outside the large fluted bowl. It seems that all five pitchers were arranged in the same manner (cat. no. 8–12), along with the candelabrum (cat. no. 31) and the perfume box (cat. no. 13). These items were too large to fit into the large fluted bowl, so they were arranged around it, which is also confirmed by the fact that all of them display strong silver corrosion, which is a result of external influences. Inside the perfume box, there was a small cylindrical box (cat. no. 32), an amphorisk (cat. no. 33), and a perforated stand (cat. no. 37), together forming a set for storing and using perfume. None of these three items was corroded because they

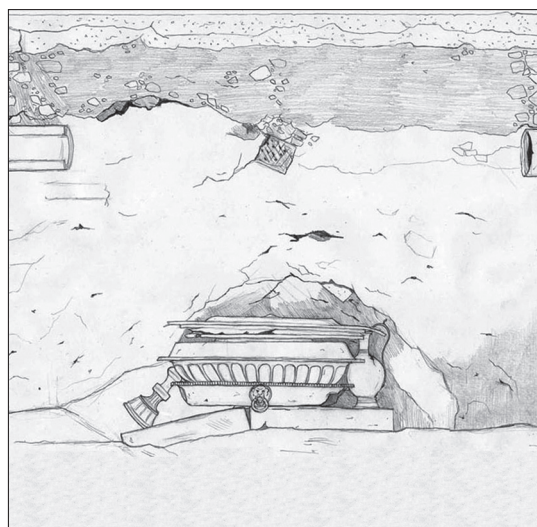
utjecajima. Unutar kutije za parfem nalazili su se cilindrična kutijica (kat. br. 32), amforisk (kat. br. 33) i perforirani nosač (kat. br. 37), a zajedno su činili set za čuvanje i upotrebu parfema. Nijedan od ovih triju predmeta nije korodirao jer su bili zaštićeni unutar kutije s poklopcem. Pretpostavljamo da je iznad velike narebrene posude i predmeta uokolo nje bio postavljen velik pladanj s prikazom pastoralne scene (kat. br. 3). Ovaj je duboki pladanj najvjerojatnije bio okrenut otvorom prema dolje, što je omogućilo da se ispod dobije veći prostor za pohranu manjih predmeta. Da je pladanj bio izvrnut, potvrđuje otisak kod centralnog medaljona, koji promjerom najviše odgovara prstenastoj nozi plitke zdjele (kat. br. 27) koja se nalazila ispod. Ova je posuda također bila okrenuta otvorom prema dolje, što potvrđuje oštećenje na njezinoj nozi, nastalo od udarca koji se dogodio tijekom pronalaska ostave. Na samom vrhu nalazila su se tri velika pladnja, koja su bila djelomično vidljiva prije nego što je ostava izvađena iz profila iskopsnog polja. Dva su donja pladnja očuvana relativno dobro, sa sačuvanim srebrnim sjajem na unutrašnjem dijelu (kat. br. 1–2). Pladanj, koji se nalazio na samom vrhu (kat. br. 4), potpuno je izlomljen, a neki su ulomci izgubljeni prije nego što je ostava izvađena iz zemlje (kat. br. 4).

Prema svemu sudeći, srebrno posuđe nije bilo zakopano u drvenom sanduku, što se može zaključiti po načinu na koji su predmeti bili posloženi. Osim toga, u zapuni ukopa nisu pronađeni metalni dijelovi koji bi pripadali drvenom sanduku. Na sličan su način bili posloženi i srebrni predmeti iz ostave Blago iz Mildenhalla, gdje također nije bilo drvenog sanduka.<sup>9</sup> Predmeti iz najvećih ostava kasnoantičkoga srebrnog posuđa, Blago iz Kaiseraugsta i Seusovo blago, bili su posloženi na nešto drugačiji način, jer su u zemlji bili pohranjeni u drvenom sanduku,<sup>10</sup> odnosno brončanom kotlu.<sup>11</sup> Blago iz Hoxne također je bilo zakopano u

<sup>9</sup> Hobbs 2008, 389, sl. 9.

<sup>10</sup> Guggisberg 2003, 36, sl. 2.

<sup>11</sup> Mundell Mango, Bennett 1994, 25, sl. A-6.



Slika / Figure 5. Skica mogućeg položaja srebrnih predmeta u ostavi / Sketch of the silver items in the hoard (izradio / drawn by D. Voda).

were protected by the larger box sealed with a lid. We assume that the large platter with the pastoral scene (cat. no. 3) was placed on top of the large fluted bowl and the items around it. The deep platter was turned upside down to provide more space for the smaller items below. The fact that the platter was upside down is also confirmed by the imprint on its central medallion, the radius of which coincides with the ring base of a shallow bowl (cat. no. 27) placed underneath. The shallow bowl was also turned upside down, which is confirmed by the damage on its base, caused by the impact of the pickaxe when the hoard was discovered. Three large pitchers were at the very top, partially visible before the hoard was removed from the profile of the dig site. The two bottom platters are in a relatively good state, with a silver sheen on the inside (cat. no. 1–2). The top platter (cat. no. 4) was completely fragmented, and several fragments were lost before the hoard was fully excavated (cat. no. 4).

All things considered, it seems that the silver tableware was not buried in a wooden crate, which is confirmed by the arrangement of the items within the pit. In addition, no metal pieces were found in the dirt of the pit that would belong to a wooden crate or chest. The items of the hoard of the Mildenhall Treasure were arranged in a similar fashion, and no kind of wooden chest was found there either.<sup>9</sup>

<sup>9</sup> Hobbs 2008, 389, fig. 9.

drvenom sanduku. Detaljnim je istraživanjem utvrđeno da su zlatni i srebrni predmeti bili iznimno pažljivo posloženi.<sup>12</sup>

Prije zatrpavanja zemljom, srebrno je posuđe zasigurno bilo zaštićeno nekim organskim materijalom, a pojedini predmeti mogli su biti obloženi tekstilom, kao što je to bio slučaj u srebrnih predmeta iz ostava Blago iz Rethela, Blago iz Hoxne i Seusovo blago.<sup>13</sup> Potvrdu toga mogla bi dati analiza organskog materijala ako se uspio očuvati na stijenkama pojedinih predmetima. Izgled i mjesto ukopa upućuje na zaključak da skrivanje srebra nije izvršeno stihijski i neplanirano. Zakapanje je najvjerojatnije obavio vlasnik ili njegova uža obitelj, na što upućuje činjenica da su predmeti bili pažljivo posloženi u ukop. Postavljanjem opeka na dno ukopa, željelo se spriječiti moguće oštećenje srebrnog posuđa, ali najvjerojatnije nije planirano da ono duže vremena ostane zakopano pod zemljom, nego da se nakon prolaska opasnosti, predmeti ponovno iskopaju i upotrebljavaju u istu svrhu kao i do tada.

Ipak, točne okolnosti pod kojima je blago zakopano vjerojatno se nikada neće moći do kraja utvrditi jer postoji više mogućih verzija događaja koji su mogli dovesti do zakopavanja srebra, a koje nije moguće pouzdano potvrditi. Na osnovi do sada poznatih podataka, smatramo da je najizglednije kako je srebrne predmete zakopao vlasnik ili njegova obitelj unutar ili u neposrednoj blizini svoje gradske kuće. Tome u prilog ide činjenica što je nalaz pronađen između središta i zapadnih bedema Cibala, u dijelu grada koji se, na temelju dosadašnjih arheoloških istraživanja, smatra stambenim područjem. Osim toga, na ovome su lokalitetu pronađeni ostaci stambene arhitekture koji bi se mogli dovesti u vezu s nalazom ostave.

<sup>12</sup> Bland, Johns 1995, 12.

<sup>13</sup> Mundell Mango, Bennett 1994, 21.

The items from the largest hoards of silver tableware from the late classical period, the Kaiseraugst Treasure and the Seuso Treasure, were arranged in a different manner because they were buried in a wooden crate,<sup>10</sup> and a bronze cauldron.<sup>11</sup> The Hoxne Hoard was also buried in a wooden chest or box. Detailed research showed that the golden and silver items were very carefully arranged.<sup>12</sup>

The silver tableware was surely protected with some kind of organic material before being buried and individual items could have been wrapped in a cloth, as was the case with the silver items from the Rethel Treasure, the Hoxne Hoard, and the Seuso Treasure.<sup>13</sup> This could be confirmed by an organic material analysis if the material was preserved on the walls of certain items. The form and location of the hoard indicate that the silver was not hidden hastily and without planning. The silver was probably buried by the owner or members of their immediate family, an indication of which is the careful arrangement of the items in the pit. The bricks at the bottom of the pit were meant to prevent possible damage to the silver tableware, but it was most likely not intended for the hoard to stay underground for a longer period of time. After the danger passed, the items were meant to be dug up and used as before.

However, the exact circumstances under which the treasure was buried will never be completely clear because there are several possible versions of events that could have led to the silver being buried, which cannot be confirmed with complete certainty. On the basis of the current data, we believe that it is most likely that the silver items were buried by the owner or their family inside or in the immediate vicinity of their townhouse. This is supported by the fact that the hoard was discovered between the centre and the western rampart of Cibalae, in the part of town that is considered to be a residential area according to previous excavations. In addition, remains of residential architecture were found at the site that can be linked to the silver hoard.

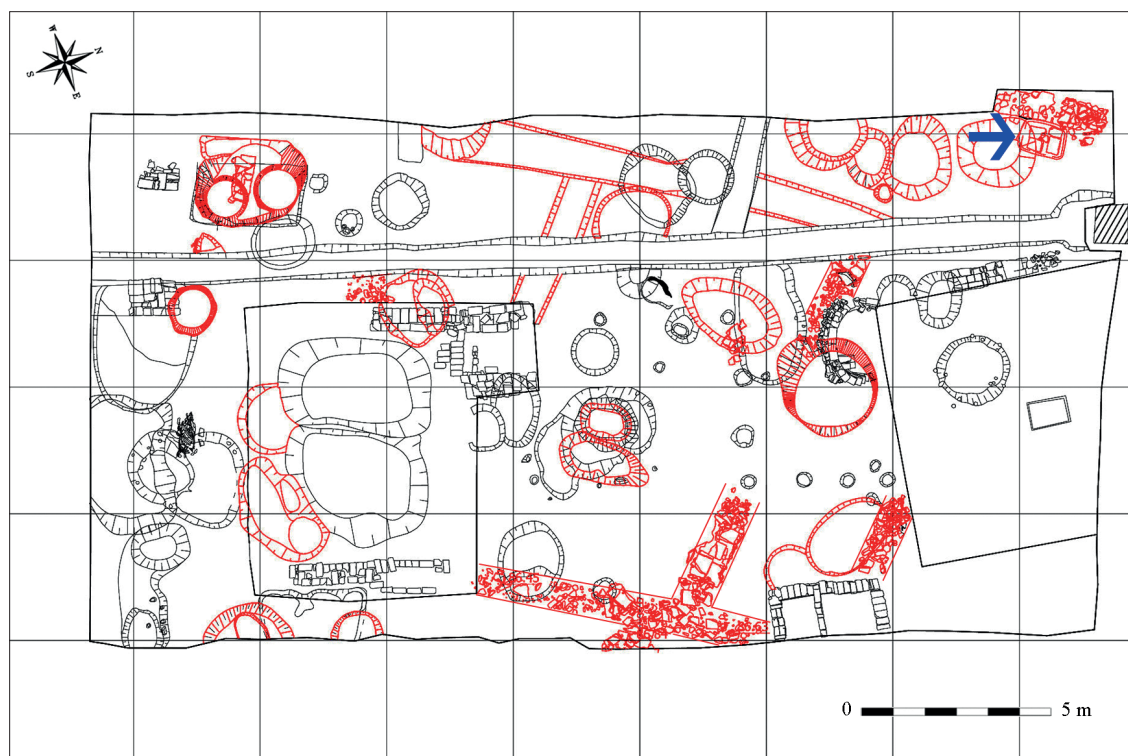
<sup>10</sup> Guggisberg 2003, 36, fig. 2.

<sup>11</sup> Mundell Mango, Bennett 1994, 25, fig. A-6.

<sup>12</sup> Bland, Johns 1995, 12.

<sup>13</sup> Mundell Mango, Bennett 1994, 21.





Slika / Figure 6. Ostaci rimskih objekata i mjesto nalaza ostave na lokalitetu Duga ulica 26, u Vinkovcima / Remains of roman objects with the marked location of the hoard found on the site Duga ulica 26 in Vinkovci (izradili / made by T. Lozančić, T. Lopandić).

U istraživanjima 2012. godine pronađeni su skromni ostaci rimske arhitekture, od koje se izdvajaju ostaci pravokutnog objekta, orijentiranog u smjeru sjeverozapad – jugoistok, koji ne možemo dovesti u izravnu vezu s nalazom ostave jer potječe iz razdoblja prije 4. stoljeća<sup>14</sup> (sl. 6). Posebno je značajan nalaz baze stupa, odnosno njezinih temelja, smještenih u neposrednoj blizini ostave. Riječ je o četvrtastom ukopu zaobljenih rubova ispunjenom ulomcima opeka, tegula i kamenjem. Na vrhu se nalazio sloj žbuke na kojemu su pronađeni nepovezani ulomci opeka (sl. 7). Pretpostavljamo da se na podlozi od žbuke uzdizao četvrtasti stub koji je bio izgrađen od velikih opeka koje se nisu sačuvale. Uz jugozapadnu stranu nala-

<sup>14</sup> Ostaci zida od velikih opeka sačuvani su samo na jednome mjestu, ostalo su ukopi temelja, ispunjeni lomljenim opekama, tegulama i kamenjem, a na pojedinim su mjestima sačuvani samo ukopi temelja iz kojih je ispražnjen građevinski materijal, možda već u kasnoantičko vrijeme. Na jednome mjestu unutrašnji je zid objekta oštećen ukopom bunara (SJ 80) koji je na osnovi nalaza novca datiran u prvu polovicu 4. stoljeća, što je sam objekt datiralo u još starije razdoblje.

The excavation campaign in 2012 yielded modest remains of Roman architecture, among which the remains of a rectangular structure extending from the north-west to the south-east stand out, but which cannot be directly linked to the hoard because it is dated to the period before the 4<sup>th</sup> century AD<sup>14</sup> (fig. 6). Especially important is the find of a column base, or rather its foundations, located in the immediate vicinity of the hoard. A quadrangle pit with rounded edges was filled with fragmented bricks, tegulae, and stone. A layer of mortar covered the rubble, containing unrelated brick fragments (fig. 7). We are of the opinion that a quadrangle pillar was erected on top of the mortar, built out of large bricks that were not preserved. The remains of paving were found

<sup>14</sup> The remains of a wall made of large bricks were found on one location, while the rest were trenches for foundations, filled with brick fragments, tegulae, and stone. Several foundations had the rubble material removed, maybe even during the late classical period. One part of the interior wall was damaged by a well (SJ 80), which was dated to the 4<sup>th</sup> century AD based on a coin found inside, so the building surely belongs to a previous time period.



zio se ostatak popločenja koje je zasigurno pripadalo istoj kasnoantičkoj građevini. Ovi skromni ostaci i njihovi stratigrafski odnosi potvrđuju da je ostava bila ukopana u neposrednoj blizini, ili čak unutar građevine koja je na ovom lokalitetu postojala pri kraju rimskog razdoblja u Cibalama.

Ovi skromni ostaci mogli bi se dovesti u vezu s objektom pronađenim prilikom zaštitnih arheoloških istraživanja provedenih 1976. – 1977. godine. Tada je na južnom dijelu lokaliteta Na-Ma pronađen stambeni objekt koji je imao dvorišni trijem sa stubovima.<sup>15</sup> Međutim, na objavljenom tlocrtu nije naznačen položaj istraženih ostataka u odnosu na današnji trgovački centar, zbog čega ne možemo s potpunom sigurnošću tvrditi da je riječ o ostacima istog objekta (sl. 8).<sup>16</sup> Osim toga, objavljeni su samo preliminarni rezultati starijih istraživanja u kojima su nalazi iz rimskog razdoblja široko datirani u razdoblje od 1. do 5. stoljeća.<sup>17</sup> Zanimljivo je da najmlađi nalazi novca pripadaju carevima Gracijanu (375. – 383.) i Valentinijanu II. (375. – 395.), što se podudara s rezultatima istraživanja iz 2012. godine, u kojima su također najmlađi novci potjecali iz zadnje četvrtine 4. stoljeća.<sup>18</sup> Iz toga bi se moglo zaključiti da je objekt, koji je na ovome mjestu postojao u vrijeme zakopavanja ostave, najvjerojatnije stradao već u prvim barbarskim upadima oko 380. godine. Ipak, treba imati na umu da je nakon tih događaja došlo do osjetnog pada cirkulacije novca pa bi takve dokaze trebalo uzimati s određenom zadržkom. No, bez obzira na to je li objekt stradao odmah ili je postojao još neko vrijeme, smatramo da je do nastanka ostave, odnosno zakopavanja srebra, došlo neposredno nakon bitke kod Hadrianopola 378. godine.

<sup>15</sup> Iskra-Janošić 1977, 70–71; 2001, 98–99.

<sup>16</sup> Iskra-Janošić 2001, 87. U Gradskome muzeju u Vinkovcima čuva se originalan nacrt ostataka antičke arhitekture istražene na lokalitetu Na-Ma u kampanji 1976. – 1977. godine. Na nacrtu je prikazan nešto veći broj antičkih ostataka nego na onomu objavljenom 2001. godine. Osim toga, njihova je orijentacija drugačije naznačena. Ovim se putem zahvaljujemo dipl. arheologu Hrvoju Vuliću, kustosu Gradskog muzeja Vinkovci, na ustupljenoj dokumentaciji.

<sup>17</sup> Iskra-Janošić 1977, 70–71; 2001, 98–99.

<sup>18</sup> Rezultati detaljne analize novca bit će objavljeni na drugome mjestu.

along its south-west side, undoubtedly belonging to the same building from Late Antiquity. These modest finds and their stratigraphic relations confirm that the hoard was buried in the immediate vicinity or even inside a building, which stood at this site at the end of the Roman period in Cibalaе.

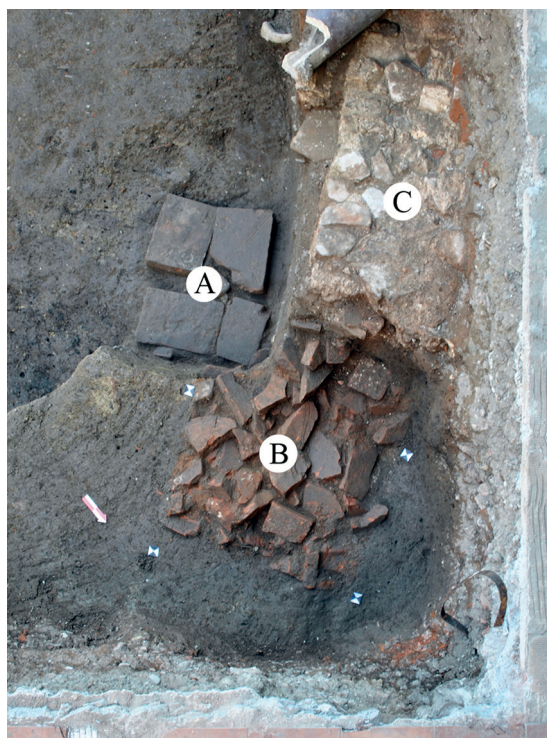
The modest remains of architecture can be linked to the structure discovered during the rescue excavations conducted from 1976 to 1977, when a building with an inside portico containing pillars was found on the southern part of the site Na-Ma.<sup>15</sup> However, the published layout of the building does not show its relation to the department store, because of which we cannot claim with certainty that it is in fact the same building (fig. 8).<sup>16</sup> In addition, only preliminary reports of the previous excavations were published, which dated the Roman finds in a long time span between the 1<sup>st</sup> and 5<sup>th</sup> centuries AD.<sup>17</sup> It is interesting that the youngest coins found at the site belong to emperors Gratian (AD 375 – 383) and Valentinian II (AD 375 – 395), which coincides with the results of the excavations conducted in 2012, during which the youngest coins found were dated to the last quarter of the 4<sup>th</sup> century AD.<sup>18</sup> This leads us to the conclusion that the building, which existed at this location at the time the hoard was buried, was most probably damaged or sacked during the first barbarian incursions around AD 380. Still, one should keep in mind that the events prompted a decline in money circulation, so this kind of evidence should be taken with a grain of salt. However, regardless of whether the building was damaged right away or whether it continued to exist for some time, we think that the hoard of silver was buried immediately after the Battle of Hadrianopolis in AD 378.

<sup>15</sup> Iskra-Janošić 1977, 70–71; 2001, 98–99.

<sup>16</sup> Iskra-Janošić 2001, 87. The Vinkovci City Museum holds the original layout of the architectural remains from the classical period found at the site Na-Ma during the 1976 – 1977 campaign. The layout shows more architectural remains than the one published in 2001. Furthermore, the orientation of the buildings is different. We would like to thank archaeologist Hrvoje Vulić, curator at the Vinkovci City Museum, for granting us access to the documents.

<sup>17</sup> Iskra-Janošić 1977, 70–71; 2001, 98–99.

<sup>18</sup> The results of the detailed analysis of the coins will be published in another paper.



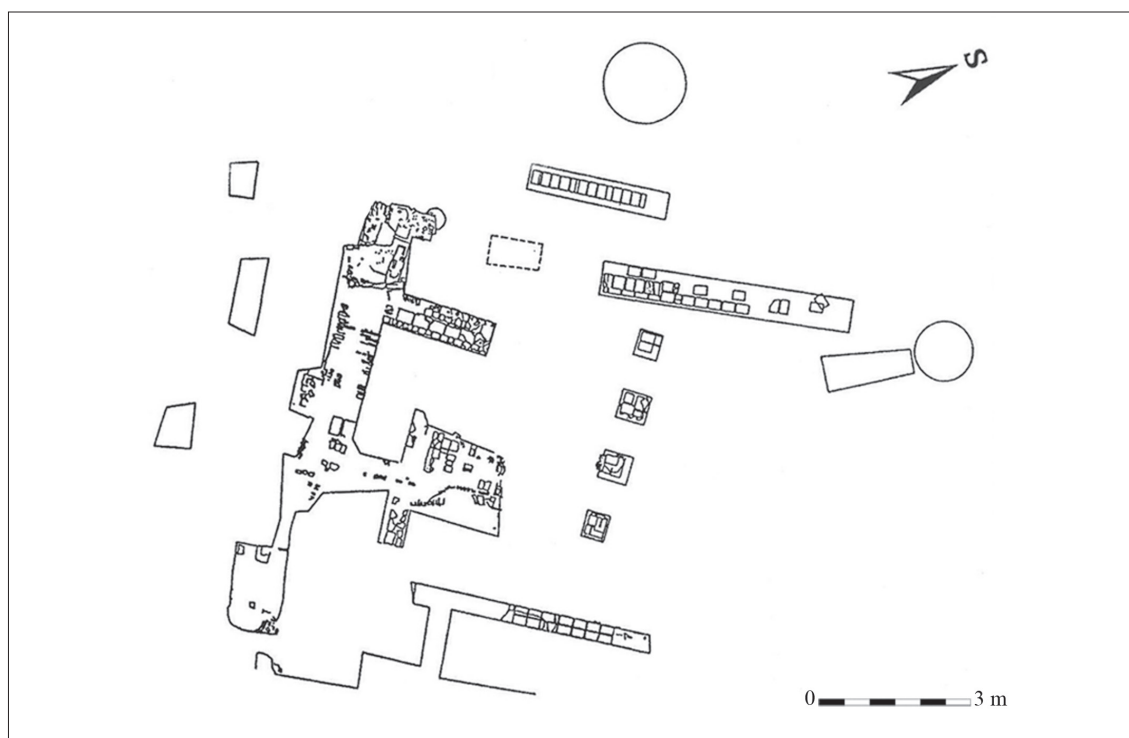
Slika / Figure 7. Ostaci ukopa ostave (A), kasnoantičkog objekta – baza stuba (B), i popločenja (C) / Remains of the hoard pit (A), the structure from Late Antiquity – pillar base (B), and paving (C) (snimila / photo by B. Maljković).

Even though the results of the excavations during the 1970s were published as preliminary reports and not in full, and even though the remains of Roman architecture are in a poor state of preservation, it seems that it is justified to ask: Is the discovered building luxurious enough to be linked with the owner of the expensive silverware set? A similar problem arose with the Mildenhall Treasure, which was also found in the vicinity of a common, unluxurious Roman building.<sup>19</sup> In the case of the Vinkovci Treasure, one should not dismiss the possibility that the hoard was transported from the owner's estate on the countryside into the city and buried next to his townhouse, which did not necessarily have to be a luxurious building. Even though this is just an assumption, the scenario is not at all impossible since it was common for the wealthiest class to have luxurious estates outside cities in Late Antiquity.

<sup>19</sup> Hobbs 2008, 376–420.

Iako su rezultati istraživanja iz 1970-ih objavljeni samo preliminarno i nepotpuno, a ostaci antičke arhitekture sačuvani vrlo loše, čini se da je opravdano zapitati se je li pronađeni objekt bio dovoljno luksuzan da ga možemo povezati s vlasnikom skupocjenoga srebrnog servisa? Sličan je problem vezan uz Blago iz Mildenhalla koje je također pronađeno u blizini skromnijega antičkog zdanja.<sup>19</sup> U vinkovačkom slučaju ne treba zanemariti mogućnost da je srebrno posuđe preneseno u grad s vlasnikova posjeda u okolici i zakopano pored njegove gradske kuće koja nije nužno morala biti neko luksuzno zdanje. Iako je riječ o pretpostavci, koju će biti teško potvrditi, ovakav scenarij nije previše nevjerojatan jer je u kasnoj antici bilo uobičajeno da najbogatiji pojedinci imaju luksuzne posjede izvan gradskih centara.

<sup>19</sup> Hobbs 2008, 376–420.



Slika / Figure 8. Ostaci rimskog objekta pronađeni 1976. – 1977. godine na južnom dijelu lokaliteta Na-Ma / Remains of the Roman structure on the southern section of the site Na-Ma, discovered in 1976 – 1977 (Iskra-Janošić 2001, 87).

## POVIJESNE OKOLNOSTI NASTANKA OSTAVE

Rimski grad Cibale izgrađen je na izrazito strateškom položaju, na povišenoj, lijevoj obali rijeke Bosut (*Basuntius*), na mjestu gdje tok rijeke naglo skreće od zapada prema jugu. Na tome su području osnivana naselja u gotovo svim razdobljima tijekom zadnjih 8000 godina.<sup>20</sup> Tu se nalazilo i starije domorodačko naselje, središte za narode Breuke i Skordiske, od kojega je rimski grad baštinio ime Cibale (*Colonia Aurelia Cibalae*).<sup>21</sup> Grad je imao oblik izduženog četverokuta, s jugozapadne je strane bio zaštićen koritom rijeke Bosut, dok su na tri preostale strane bili izgrađeni zemljani bedemi.

<sup>20</sup> Mnogobrojna arheološka istraživanja na području grada otkrila su ostatke naselja iz gotovo svih razdoblja. Zbog toga se Vinkovci zadnjih nekoliko godina promoviraju kao najstariji grad u Europi, a kontinuitet naseljenosti grada posljednjih 8000 godina pokušao je dokazati prof. dr. sc. Aleksandar Durman (Durman 2013).

<sup>21</sup> O Cibalama više u opsežnijim djelima: Brunšmid 1902, 55–104; Dimitrijević 1979, 148–188; Iskra-Janošić 2001.

## THE HISTORICAL CIRCUMSTANCES OF THE CREATION OF THE HOARD

The Roman town of Cibalae was built on a markedly strategic location, on the raised, left bank of the Bosut River (*Basuntius*), at a place where the river sharply turns south from its previous westward course. Settlements were founded in this area in nearly all periods during the last 8000 years.<sup>20</sup> An older indigenous settlement was previously here as well, a centre for the Breuci and Scordisci peoples, from which the Roman town inherited its name Cibalae (*Colonia Aurelia Cibalae*).<sup>21</sup> The town had the shape of an elongated quadrangle, and was protected by the flow of the Bosut River on the south side, while the remaining three sides

<sup>20</sup> Many archaeological excavations in the town's area have unearthed the remains of settlements from nearly all periods. This is why the town of Vinkovci has, in the last several years, been hailed as the oldest town in Europe, and Aleksandar Durman, PhD, has tried to prove the continuity of the town's settlement over the last 8000 years (Durman 2013).

<sup>21</sup> More extensive sources on Cibalae: Brunšmid 1902, 55–104; Dimitrijević 1979, 148–188; Iskra-Janošić 2001.

Procjenjuje se da je u mlađoj fazi površina grada unutar bedema iznosila oko 5,68 ha.<sup>22</sup>

Razvoju grada pridonio je njegov važan položaj na kopnenim i riječnim trgovačkim putovima, povoljan smještaj u zaleđu limeša, plodno zemljište i bogate šume u okolici. Osim trgovine, bio je razvijen obrt, što su potvrdila dosadašnja arheološka istraživanja na osnovu kojih su Cibale prepoznate kao važno keramičarsko središte.<sup>23</sup> Do sada se smatralo da je grad svoj uspon doživio u 2. i 3. stoljeću, ali novija arheološka istraživanja sve više ukazuju na 4. stoljeće, čemu su nesumnjivo morali pridonijeti carevi Valentinijan I. (364. – 375.) i Valent (364. – 378.), obojica rođeni Cibaličani.<sup>24</sup> Unatoč brojnim zaštitnim arheološkim istraživanjima, još uvijek se malo zna o izgledu Cibala, za što su glavni razlozi iznimno loša očuvanost rimske arhitekture, ali i nedovoljno objavljivanje dosad provedenih arheoloških iskopavanja.

Cibale su, nakon glavnoga grada Sirmija (*Sirmium*), bile jedan od važnijih gradova u provinciji Drugoj Panoniji (*Pannonia Secunda*) i značajno urbano središte u okvirima cijele rimske Panonije. Ranije se smatralo da je grad bio spaljen i uništen u jednom trenutku, ali je vjerojatnije da su pljačkaški upadi barbarskih naroda započeli proces ubrzanog propadanja i postupno doveli do njegove propasti. Prvi značajniji upad barbara dogodio se 374. godine, kada su germanski Kvadi opustošili područje provincije i opsjedali glavni grad Sirmij.<sup>25</sup> Znatno važniji događaj zbio se 378. godine, kada je u bitci kod Hadrianopola rimska vojska doživjela poraz uz pogiblju cara Valenta. Može se reći da je careva smrt nagovijestila sudbinu njegova rodnog grada, ali i cijele rimske Panonije, jer upravo je ta pobjeda omogućila raznim barbarskim skupinama da

had earthen walls. It is estimated that the surface area of the town within the walls was, at an early stage, around 5.68 ha.<sup>22</sup>

The development of the town was bolstered by its important location on land and river trade routes, its position behind the limes, the fertile soil, and the rich forests surrounding it. Along with developed trade, the town had advanced crafts, which has been confirmed by archaeological research, on the basis of which Cibalae have been recognized as an important centre for ceramics.<sup>23</sup> It was thought, until recently, that the town flourished in the 2<sup>nd</sup> and 3<sup>rd</sup> centuries AD, but newer archaeological research increasingly point to the 4<sup>th</sup> century AD, which undoubtedly suggests contributions from emperors Valentinian I (AD 364 – 375) and Valens (AD 364 – 378), both of whom were born in Cibalae.<sup>24</sup> Despite many rescue excavations, little is known about how Cibalae actually looked, the main reasons being the extremely poor state of preservation of the Roman architecture, and also the insufficient publication of the archaeological research conducted thus far.

Cibalae were, after the capital Sirmium, one of the more important towns in the province of Pannonia Secunda, and a significant urban centre in the context of the whole of Roman Pannonia. It has previously been thought that the town was at one point burned and razed to the ground, but it is more probable that barbarian raids started the process of its accelerated decay, and gradually brought about its ruin. The first significant barbarian incursion occurred in AD 374, when the Germanic Quadi laid waste to the province and besieged Sirmium, the capital.<sup>25</sup> A much more important event took place in AD 378, when the Roman army was defeated at the Battle of Adrianople and the emperor Valens was killed. It might be said that the emperor's death foreshadowed the fate of his birth place, and of the entire Roman Pan-

<sup>22</sup> Iskra-Janošić 2001, 41.

<sup>23</sup> Iskra-Janošić 2001.

<sup>24</sup> Najnoviji pregled arheoloških ostataka iz 4. stoljeća u Rapan Papeša 2011, 189–224 i Gračanin, Rapan Papeša 2011, 13–16. Najnovije istraživanje lokaliteta Kamenica, najvažnijega kasnoantičkog lokaliteta u okolici Cibala u Vulić 2012, 62–66; 2014, 201–209.

<sup>25</sup> Andrić 2002, 130.

<sup>22</sup> Iskra-Janošić 2001, 41.

<sup>23</sup> Iskra-Janošić 2001.

<sup>24</sup> For the most recent overview of the archaeological remains from the 4<sup>th</sup> century AD, see Rapan Papeša 2011, 189–224 and Gračanin, Rapan Papeša 2011, 13–16. For the most recent study of the Kamenica site, the most important Late Antique site near Cibalae, see Vulić 2012, 62–66; 2014, 201–209.

<sup>25</sup> Andrić 2002, 130.



pod gotskim vodstvom u iduće dvije godine pljačkaju područje Panonije, pri čemu su stradali mnogi gradovi.<sup>26</sup> Uskoro je mnogim barbarskim skupinama dopušteno da se kao carski federati nasele u Panoniji, a dio je bio naseljen i u provinciji Drugoj Panoniji.<sup>27</sup> Prisutnost je naoružanih skupina i raznih naroda pridonosila nesigurnosti gradskog stanovništva jer su zabilježene njihove pobune i pljačke, a dogodili su se i upadi novih barbarskih skupina, što je u idućim desetljećima oslabilo rimsku vlast u Panoniji, pokrenulo iseljavanje stanovništva i ubrzano dovelo do njezine potpune propasti.

Nije poznato što se konkretno dogodilo s Cibalama jer o tome nema pouzdanih povijesnih zapisa. Grad se zasigurno našao na udaru pljačkaških pohoda budući da su preko njega vodile važne prometnice prema zapadu. Dosadašnja arheološka istraživanja nisu potvrdila da je grad u barbarskim napadima bio potpuno uništen ili razoren.<sup>28</sup> Međutim, sigurno je znatno stradalo gradsko stanovništvo, posebno imućniji sloj, koji je bio najčešća meta pljačke, ubojstava i zarobljavanja radi otkupnine.<sup>29</sup> Što se u takvim okolnostima dogodilo s najbogatijim stanovnicima Cibala, kao što su vlasnik srebrnog servisa i njegova obitelj, možemo samo pretpostaviti, ali činjenica da su skupocjeni srebrni predmeti ostali zakopani u zemlji, ponajprije upućuje na njihov tragični kraj, a manje na mogućnost da su izbjegli s područja provincije i da se nisu mogli vratiti po zakopano blago.

Zakopavanje srebrnog posuđa, najvjerojatnije kod gradske kuće u zapadnom dijelu Cibala, nije jedini arheološki dokaz dramatičnih zbivanja koja su se odvijala u gradu zadnjih desetljeća 4. stoljeća. Posebno su zanimljiva još dva arheološka nalaza koja svjedoče o strahu i nasilju koji su vladali u gradu. Prvi je nalaz ostava novca pronađena 1909. godine na predjelu Krnjaš, zapadno od gradskog bedema. Na osnovi

nonia, because it was that exact victory that allowed the various barbarian groups to, under Gothic leadership, plunder Pannonia in the next two years, during which time many towns were sacked.<sup>26</sup> Soon, many barbarian groups were allowed to settle in Pannonia as imperial foederati, and part of them settled in Pannonia Secunda.<sup>27</sup> The presence of armed groups and different nations contributed to the sense of insecurity of the urban population and there were some documented uprisings and cases of looting, as well as incursions of new barbarian groups, which, in the coming decades, weakened the Roman rule in Pannonia, initiated the emigration of the populace, and quickly brought about its complete ruin.

It is not known what exactly happened with Cibalae, seeing as there are no reliable historical documents. The town must have been the target of raids, since it was an important hub for communication with the west. Archaeological excavations have not, thus far, confirmed whether the town was completely destroyed or razed in the barbarian attacks.<sup>28</sup> However, the town's population must have suffered significant harm, especially the wealthier citizens, who were the most common target for robbery, murder, and imprisonment with intent to ransom.<sup>29</sup> What happened under such circumstances to the wealthiest citizens of Cibalae, such as the owner of the silver tableware and their family, we can only guess, but the fact that the precious silver items stayed buried underground suggests that they most likely met a tragic end, and less likely that they escaped from the area of the province and were not able to come back for the buried treasure.

The burying of the silver vessels, most likely at a townhouse in the western part of Cibalae, is not the only evidence of dramatic events which took place in the town in the last decades of the 4<sup>th</sup> century AD. Of special interest are two other archaeological finds which speak of the fear and violence which overtook the town. The first finds is a hoard of coins found in 1909 in

<sup>26</sup> Andrić 2002, 130; Gračanin 2006, 85.

<sup>27</sup> Andrić 2002, 130; Gračanin 2006, 85.

<sup>28</sup> Gračanin, Rapan Papeša 2011, 17.

<sup>29</sup> Bratož 2002, 74–75 (prema Gračanin 2006, 85).

<sup>26</sup> Andrić 2002, 130; Gračanin 2006, 85.

<sup>27</sup> Andrić 2002, 130; Gračanin 2006, 85.

<sup>28</sup> Gračanin, Rapan Papeša 2011, 17.

<sup>29</sup> Bratož 2002, 74–75 (after Gračanin 2006, 85).

najmlađeg novca, koji pripada carevima Gracijanu (375. – 383.) i Valentinijanu II. (375. – 395.), nastanak je ostave datiran u razdoblje između 376. i 379. godine.<sup>30</sup> Drugi je nalaz kostur pronađen u antičkom bunaru tijekom zaštitnih arheoloških istraživanja 2011. godine. Najvjerojatnije je riječ o ženi koja je počinila samoubojstvo tijekom zadnje četvrtine 4. stoljeća, na što upućuju nalazi dvaju zlatnika careva Valentinijana I. (364. – 375.) i Valenta (364. – 378.), obojice rođenih u Cibalama.<sup>31</sup> Smatramo da su navedeni nalazi materijalni dokazi da su grad i njegovo stanovništvo teško stradali već u vrijeme prvih barbarskih napada i da se vjerojatno nisu oporavili do kraja rimske vlasti u Panoniji.

#### DOSADAŠNJI NALAZI KASNOANTIČKIH SREBRNIH PREDMETA NA PODRUČJU HRVATSKE

Izuzmu li se nalazi novca i nakita, može se ustvrditi da su sve donedavno nalazi rimskog srebra bili vrlo rijetki na području Hrvatske. Na to je najviše utjecala činjenica da na području Hrvatske nisu postojali antički rudnici srebra, a nije potvrđeno ni postojanje radionice srebrnog posuđa.

Do sada su u Hrvatskoj bile otkrivene dvije ostave rimskog novca koje su sadržavale po tri srebrne posude. Prva je ostava srebrnog novca s pladnjem, vrčem i situlom pronađena u Sisku 1953. godine.<sup>32</sup> Druga je velika ostava novca i triju srebrnih tanjura slučajno pronađena u Petrijancu kod Varaždina 2005. godine.<sup>33</sup> Obje su ostave na osnovi najmlađeg pronađenog novca datirane na kraj 3. stoljeća. Ostali poznati srebrni predmeti uglavnom su pojedinačni nalazi kasnoantičkih žlica, većinom prona-

<sup>30</sup> O ostavi su pisali Brunšmid 1912, 272–284 i Mirnik 1981, 83.

<sup>31</sup> Ovi su nalazi pronađeni prilikom zaštitnih arheoloških istraživanja koja je vodio Gradski muzej Vinkovci na lokalitetu Hrvatski dom, na rubnom dijelu antičkih Cibala. Rezultati istraživanja nisu objavljeni, a podatci su preuzeti iz novinskog članka (tportal.hr/Hina 2011).

<sup>32</sup> Jeločnik 1961, 87–88.

<sup>33</sup> Šiša-Vivek, Leleković, Kalafatić 2005, 231–245.

Krnjaš, west of the town walls. On the basis of the youngest coins, which belong to emperors Gratian (AD 375 – 383) and Valentinian II (AD 375 – 395), the creation of the hoard has been dated to the period between AD 376 and 379.<sup>30</sup> The second find is a skeleton discovered in an ancient well during rescue excavations in 2011. It most likely belonged to a woman who committed suicide during the last quarter of the 4<sup>th</sup> century AD, which is evidenced by the find of two gold coins of the emperors Valentinian I (AD 364 – 375) and Valens (AD 364 – 378), both of whom were born in Cibalae.<sup>31</sup> We are of the opinion that these finds are material evidence for the claim that the town and its inhabitants suffered great harm by the very first barbarian raids and that they most likely did not recover by the end of the Roman rule in Pannonia.

#### PREVIOUS FINDS OF LATE ANTIQUE SILVER ITEMS ON THE TERRITORY OF CROATIA

With the exception of finds of coins and jewellery, we can say that, until recently, finds of Roman silver on the territory of Croatia have been very rare. This is mostly due to the fact that the territory did not contain ancient silver mines, and neither has the existence of a silver vessel workshop been confirmed thus far.

Two hoards of Roman coins have been discovered in Croatia thus far, both of which contained three silver vessels. The first hoard of silver coins with a platter, a pitcher and a situla was discovered in Sisak in 1953.<sup>32</sup> The second large hoard of coins and three silver plates was accidentally found in Petrijanec, near Varaždin, in 2005.<sup>33</sup> Both hoards were, on the basis of the youngest discovered coins, dated to the very end of the 3<sup>rd</sup> century AD. The other known silver items were mostly individual finds of Late Antique spoons, mostly discovered un-

<sup>30</sup> For more on the hoard, see Brunšmid 1912, 272–284 and Mirnik 1981, 83.

<sup>31</sup> These finds were discovered during rescue excavations conducted by the Vinkovci City Museum at the Hrvatski dom site, in the outer area of ancient Cibalae. The results of the excavations have not been published, and the data referenced comes from the newspaper article (tportal.hr/Hina 2011).

<sup>32</sup> Jeločnik 1961, 87–88.

<sup>33</sup> Šiša-Vivek, Leleković, Kalafatić 2005, 231–245.

đeni pod nepoznatim okolnostima na području antičkih naselja u Solinu (*Salona*)<sup>34</sup> i Sisku (*Siscia*),<sup>35</sup> a jedna je žlica pronađena u grobnom kontekstu u Vinkovcima.<sup>36</sup> Polaganje srebrnih žlica u grobove zabilježeno je diljem Rimskog Carstva, što je jedan od glavnih razloga veće zastupljenosti ovih predmeta. S područja Hrvatske potječe i nekoliko srebrnih starokršćanskih relikvijara od kojih se posebno ističu dvije poligonalne pikside datirane u 4. i 5. stoljeće.<sup>37</sup>

Godina 2012. bila je iznimno značajna za nalaze rimskoga srebrnog posuđa u Hrvatskoj. Naime, te je godine, osim pronalaska ostave u Vinkovcima, objavljen i zanimljivi povijesni dokument iz 1493. godine, koji svjedoči o pronalasku ostave srebrnog posuđa kod tadašnjeg sela Prosik, nedaleko od Solina (*Salona*).<sup>38</sup> To je prvi dokument o pronalasku blaga na području Hrvatske, o kojemu se, na žalost, sačuvao samo kratak opis iz kojega doznajemo da je riječ o manjoj ostavi, najvjerojatnije rimskoga srebrnog posuđa, koja se sastojala od tri vatrom oštećene posude i poklopca.<sup>39</sup>

Zanimljivo je kako je i prije navedenih otkrića u hrvatskoj stručnoj i široj javnosti postojao velik interes za ovakvim nalazima, a razlog za to bila je pojava Seusova blaga, najluksuznije ostave rimskoga srebrnog posuđa. Naime, nakon što je aukcijska kuća Sotheby's najavila njegovu prodaju 1990. godine, Hrvatska (tada još u sastavu bivše Jugoslavije) je bila jedna od zemalja koje su pokušale dokazati vlasništvo nad tim senzacionalnim arheološkim nalazom. Mađarska, Hrvatska i Libanon tvrdili su da je blago pronađeno i ilegalno izneseno upravo iz njihove zemlje. Godine 1993. sud u New Yorku je odbacio sve navedene zahtjeve i blago je ostalo u posjedu tadašnjega engleskog vlasnika lorda Northamptona.<sup>40</sup> Nakon

der unknown circumstances in the area of ancient settlements in Solin (*Salona*)<sup>34</sup> and Sisak (*Siscia*),<sup>35</sup> while one spoon was discovered in a burial context in Vinkovci.<sup>36</sup> The interment of silver spoons into graves has been documented all across the Roman Empire, which is one of the main reasons for the greater presence of these items. The territory of Croatia has also yielded several silver Early Christian reliquaries, among which two polygonal *pyxides*, dated to the 4<sup>th</sup> and 5<sup>th</sup> century AD, stand out.<sup>37</sup>

The year 2012 was extremely important for finds of Roman silver vessels in Croatia. It is in 2012 that, along with the discovery of the hoard in Vinkovci, an interesting historical document from 1493 was published, which speaks of the discovery of a hoard of silver vessels in the village of Prosik, not far from Solin (*Salona*).<sup>38</sup> This is the first document recording the discovery of treasure on the territory of Croatia, of which, unfortunately, only a short description has been preserved; the description states that it was a smaller hoard, most likely of Roman silver vessels, which consisted of three vessels and lids that had been damaged by fire.<sup>39</sup>

It is interesting that there was already a great interest in Croatian academic circles and the general public for these finds even before these discoveries had been made, the reason for this being the appearance of the Seuso Treasure, the most opulent hoard of Roman silver vessels. After the auction house Sotheby's announced its sale in 1990, Croatia (at the time still a part of the former Yugoslavia) was one of the countries that attempted to prove their ownership of this sensational archaeological find. Hungary, Croatia, and Lebanon all claimed that the treasure had been discovered in their country and then been illegally taken out of it. In 1993, a court in New York dismissed all of these claims and the treasure remained in the possession of

<sup>34</sup> Simoni 1988, 79, bilj. 1.

<sup>35</sup> Simoni 1988, 79–86. Autorica navodi da postoji još nekoliko neobjavljenih antičkih žlica iz Siska koje se čuvaju u Arheološkome muzeju u Zagrebu (Simoni 1988, 81, bilj. 15).

<sup>36</sup> Brunšmid 1902, 156, 158, sl. 88.

<sup>37</sup> Cambi 2002, 306.

<sup>38</sup> Belamarić 2012, 53–62.

<sup>39</sup> Belamarić 2012, 54.

<sup>40</sup> Mundell Mango, Bennett 1994, 8.

<sup>34</sup> Simoni 1988, 79, n. 1.

<sup>35</sup> Simoni 1988, 79–86. The author states that there are still several unpublished ancient Roman spoons from Sisak, which are being kept in the Archaeological Museum in Zagreb (Simoni 1988, 81, note 15).

<sup>36</sup> Brunšmid 1902, 156, 158, fig. 88.

<sup>37</sup> Cambi 2002, 306.

<sup>38</sup> Belamarić 2012, 53–62.

<sup>39</sup> Belamarić 2012, 54.

toga, Hrvatska, za razliku od Mađarske, nije poduzimala neke ozbiljnije napore u dokazivanju podrijetla blaga, vjerojatno zbog toga što su nedostajali konkretni dokazi. Jedino su u medijima povremeno objavljivane različite priče i navodni svjedoci, a ponovno je veći interes oživio nakon pronalaska ostave u Vinkovcima 2012. godine. Nakon što je mađarska Vlada 2014. godine kupila polovicu predmeta iz ostave Seusovo blago, postalo je izvjesno da je cijela priča okončana u njihovu korist. Unatoč tomu, u Hrvatskoj je još uvijek široko rašireno mišljenje o hrvatskom podrijetlu Seusova blaga.<sup>41</sup>

#### ANALIZA SADRŽAJA OSTAVE

Ostava se sastoji od 45 srebrnih predmeta i jednoga poludragog kamena (sl. 9).<sup>42</sup> Ukupna masa srebrnih predmeta iznosi nešto manje od 38 kg. Po broju i masi predmeta ostava iz Vinkovaca među najznačajnijim je nalazima kasnoantičkog srebrnog posuđa. Masa njezina srebra ekvivalent je masi zlata od oko 2 kg, na osnovi čega se ova ostava svrstava na peto mjesto svih ostava s kasnoantičkim srebrnim posuđem dosad pronađenim na teritoriju Rimskog Carstva.<sup>43</sup>

Ostava se sastoji od srebrnog servisa koji čine četiri velika (kat. br. 1–4) i jedan manji pladanj (kat. br. 5), velika kanelirana zdjela za vodu (kat. br. 6), široka posuda s lavljim

<sup>41</sup> Kao mjesto pronalaska Seusova blaga u Hrvatskoj, redovito se navodi Istra, točnije lokaliteti Barbariga i Brijuni kod Pule (antička *Pola*), a teorije o pronalasku i krijumčarenju najčešće se povezuju s bivšom JNA, a ponekad sa samim vojnim i političkim vrhom Jugoslavije. Ipak, dosad se još nije pojavio nijedan konkretan dokaz na osnovi kojeg bi se moglo tvrditi da je Seusovo blago pronađeno u Hrvatskoj. Informacije o mogućoj vezi Seusovog blaga i Hrvatske vidi u Milinović 2016.

<sup>42</sup> Iako će nalazi biti objavljeni pod 48 kataloških brojeva, što je popis nastao nekoliko dana nakon pronalaska ostave i vjerojatno se neće mijenjati do završetka konzervatorsko-restauratorskih radova, može se smatrati da srebrnih predmeta ima ukupno 45. Naime, kutija za parfem (kat. br. 13) i perforirani nosač (kat. br. 37) mogu se smatrati dijelovima jednog predmeta, a isto može vrijediti i za toaletnu zdjelicu (kat. br. 16) i ogledalo, koje je imalo funkciju njezina poklopca (kat. br. 34). Uz to, jedan predmet (poludragi kamen) nije izrađen od srebra (kat. br. 46).

<sup>43</sup> Mráv, Dági 2014, 5, T. 1.

its British owner at the time, Lord Northampton.<sup>40</sup> After that, Croatia, unlike Hungary, did not make a serious effort to prove the origin of the treasure, likely because there was not any real evidence. The media continued to publish various stories and present alleged witnesses from time to time, and the interest in the matter sparked again after the discovery of the hoard in Vinkovci in 2012. After the Hungarian government bought half of the items from the Seuso Treasure hoard in 2014, it became apparent that the whole affair had been closed in their favour. Despite this, it is still widely believed in Croatia that the Seuso Treasure originated from its territory.<sup>41</sup>

#### ANALYSIS OF THE CONTENTS OF THE HOARD

The hoard consists of 45 silver items and one semi-precious gemstone (fig. 9).<sup>42</sup> The total mass of the silver items amounts to somewhat less than 38 kg (84 lbs.). By the number and mass of the items, the hoard from Vinkovci numbers among the most important finds of Late Antique silver vessels. The mass of its silver is equivalent to the mass of gold of approximately 2 kg, on the basis of which this hoard earns fifth place among all hoards with Late Antique silver vessels that have thus far been discovered on the territory of the Roman Empire.<sup>43</sup>

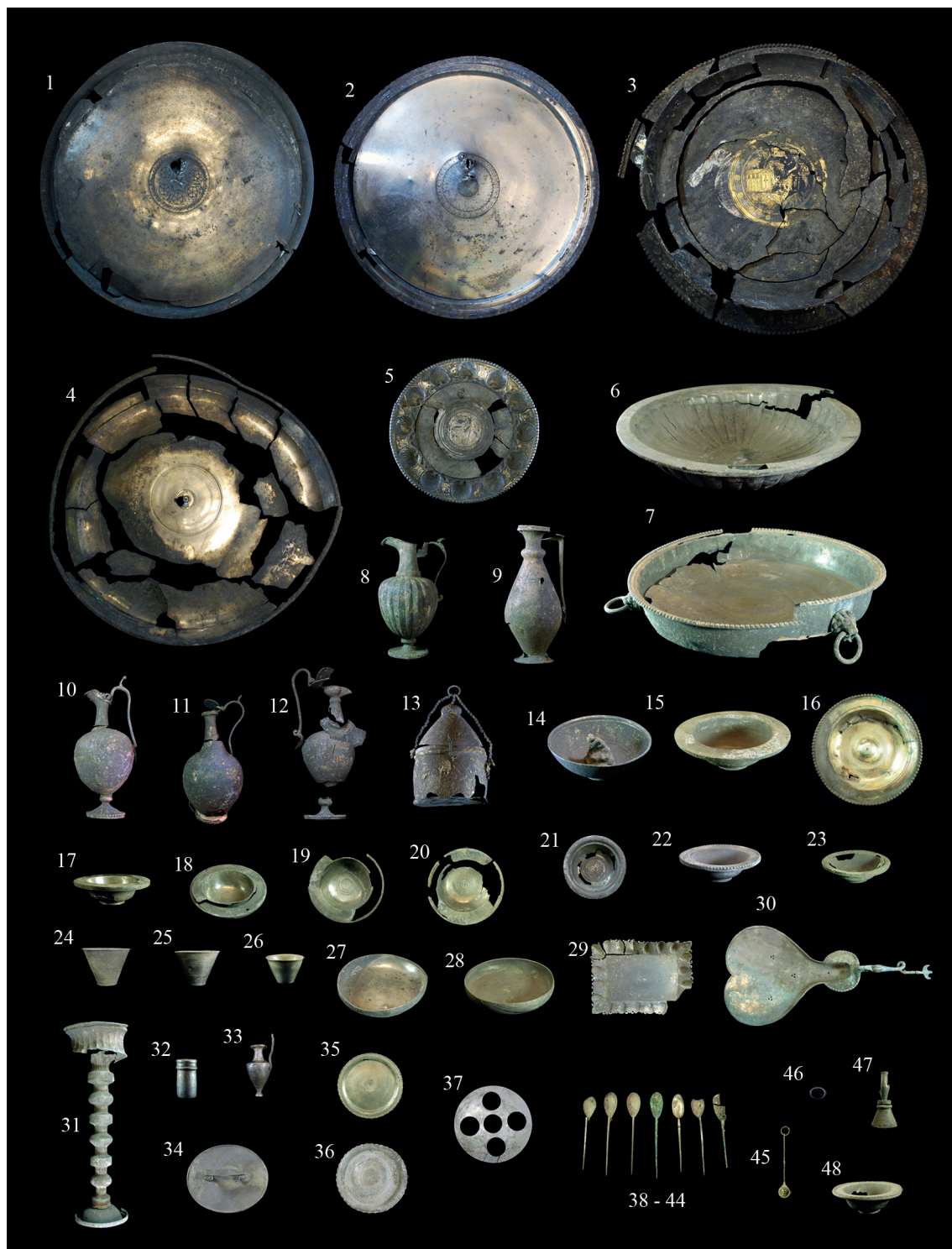
<sup>40</sup> Mundell Mango, Bennett 1994, 8.

<sup>41</sup> Istra is often named as the place of discovery of the Seuso Treasure in Croatia, more precisely the Barbariga and Brijuni sites near Pula (ancient Roman *Pola*), while the theories about the discovery and the smuggling are most often connected to the former Yugoslav People's Army, and sometimes with the top military and state leadership of Yugoslavia itself. Nevertheless, no real evidenced has surfaced thus far which could be used to prove that the Seuso Treasure was discovered in Croatia. Information about the supposed connection between Seuso Treasure and Croatia see in Milinović 2016.

<sup>42</sup> Although the finds will be published as a catalogue with 48 items, which is the list that was created several days after the discovery of the hoard and likely will not be changed by the end of the conservation and restoration process, the total number of silver items can be considered to be 45. This is because the perfume box (cat. no. 13) and the perforated stand (cat. no. 37) can be considered to be part of the same object, and the same applies to the toiletry bowl (cat. no. 16) and the mirror which served as its lid (cat. no. 34). Furthermore, one item (the semi-precious gemstone) was not made of silver (cat. no. 46).

<sup>43</sup> Mráv, Dági 2014, 5, T. 1.





Slika 9. Svi nalazi iz ostave Vinkovačko blago: kat. br. 1–48 / All finds from the Vinkovci Treasure hoard: cat. no. 1–48 (izradio / made by Š. Vrkić).

glavama i alkama za vješanje (kat. br. 7), pet vrčeva (kat. br. 8–12), trinaest raznih zdjelica (kat. br. 14–23, 27–28, 48), tri čaše (kat. br. 24–26), tri mala pladnja (kat. br. 29, 35–36), predmet za vađenje hrane (kat. br. 30),

The hoard consists of a silver tableware set consisting of four large (cat. no. 1–4) and one smaller platter (cat. no. 5), a large, fluted water bowl (cat. no. 6), a wide vessel with lion heads and rings for hanging (cat. no. 7), five pitchers

set za parfem (kat. br. 31, 32–33, 37), sedam žlica (kat. br. 38–44), cjediljka (kat. br. 45), veliki sviječnjak (kat. br. 31) i mali dvodijelni sviječnjak (kat. br. 47). Samo jedan predmet nije od srebra, a riječ je o obrađenom poludragom kamenu, najvjerojatnije oniksu, tamne boje s plavom horizontalnom linijom na sredini. Kamen je pripremljen za završnu izradu geme ili kameje (kat. br. 46).

Već na prvi pogled iz sadržaja ostave može se zaključiti da se radi o srebrnom servisu koji je korišten prilikom svečanih gozbi na kojima je vlasnik pokazivao svoje bogatstvo, moć i društveni status. Veliki i mali pladnjevi korišteni su za serviranje hrane, velika kanelirana zdjela za držanje vode, vrčevi za točenje vode i vina, čaše za piće, zdjelice za jušna jela, umake i vodu za pranje ruku između obroka, cjediljka za pročišćavanja vina, set za parfem koristio se za njegovo čuvanje i upotrebu itd. Dio je predmeta zasigurno pripadao toaletnom i kupaonskom servisu koji se mogao svakodnevno upotrebljavati u kućanstvu, ali i prilikom svečanih gozbi. Nije isključeno ni da su neke manje posude ili pribor za jelo korišteni u svakodnevnoj upotrebi. Tako, na primjer, žlica s istrošenom zdjelicom (kat. br. 41) upućuje na čestu, možda i svakodnevnu upotrebu u kućanstvu. Ipak, za većinu se predmeta može očekivati da su korišteni samo prilikom svečanih gozbi.

Pladnjevi, ukrašeni figuralnim prikazima (kat. br. 3, 5), nisu nužno morali biti korišteni za serviranje hrane, već su tijekom svečanih gozbi mogli biti izloženi pred gostima.<sup>44</sup> Jedinu predmet iz ostave za koji sigurno znamo da je bio korišten isključivo za pokazivanje jest ukrasna posuda s figuricom Tantalusa i pozlaćenim frizom (kat. br. 14). Ovakvi bogato ukrašeni srebrni predmeti mogli su biti stalno izloženi u vlasnikovoj kući.

Samo su tri gore navedena predmeta imala bogate figuralne prikaze izvedene pozlatom i umetanjem *niello* smjese. Riječ je o velikom pladnju s pastoralnom scenom u središ-

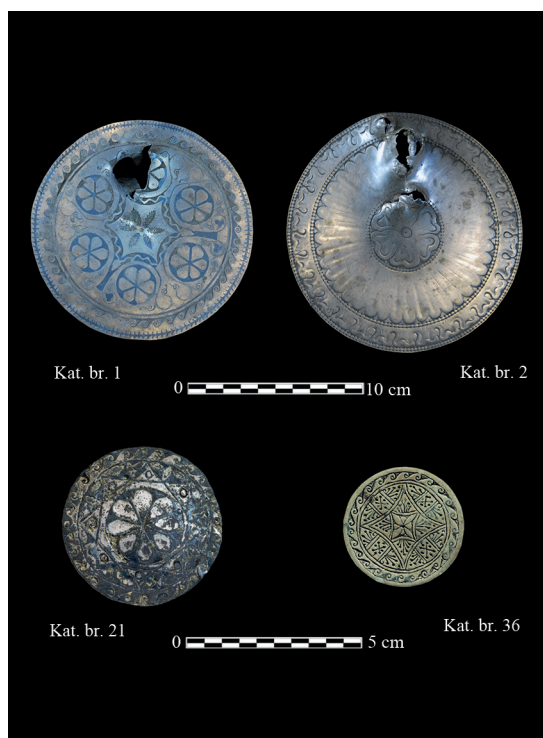
<sup>44</sup> Za najukrašenije pladnjeve iz ostave Seusovo blago smatra se da su imali dvojaku funkciju, odnosno da su korišteni za pokazivanje i serviranje hrane (Mundell Mango, Bennett 1994, 97).

(kat. no. 8–12), thirteen different bowls (cat. no. 14–23, 27–28, 48), three cups (cat. no. 24–26), three small platters (cat. no. 29, 35–36), an item for taking out food from liquids (cat. no. 30), a perfume set (cat. no. 31, 32–33, 37), seven spoons (cat. no. 38–44), a strainer (cat. no. 45), a large candelabrum (cat. no. 31) and a small two-piece candelabrum (cat. no. 47). Only one item is not made from silver: a cut semi-precious gemstone, most likely an onyx, dark in colour and with a blue horizontal line across the middle. The gemstone had been prepared for the final creation of a *gemma* or a cameo (cat. no. 46).

It is obvious at first glance that the contents of the hoard were a silver tableware set that was used for formal banquets at which the owner displayed his wealth, power, and social status. The large and small platters were used to serve food, the large fluted bowl to hold water, the pitchers for pouring water and wine, the cups for drinking, the bowls for broth-like meals, sauces and water for washing one's hands between meals, the strainer for filtering wine, the perfume set was used to store and apply the perfume, etc. Part of the items must have belonged to a toiletry and bathroom set, which might have been used in the household daily, or at formal banquets. It is not unlikely that some of the smaller vessels and eating utensils were in everyday use. For example, the spoon with the cracked bowl (cat. no. 41) suggests that it was frequently used in the household, perhaps even every day. Nevertheless, most of the items can be assumed to have been used only for formal banquets.

The platters with the figural decorations (cat. no. 3, 5) were not necessarily used to serve food, but could have instead, at formal banquets, been displayed before the guests.<sup>44</sup> The only item from the hoard for which we are certain that it was used strictly for displaying is the decorative vessel with the figurine of Tantalus and the gilded frieze (cat. no. 14). Such lavishly decorated silver items could have been on display in the owner's house at all times.

<sup>44</sup> The most heavily decorated platters from the Seuso Treasure hoard are thought to have had a dual function, i.e. that they were used both for displaying and for serving food (Mundell Mango, Bennett 1994, 97).



Slika / Figure 10. Središnji medaljoni ukrašeni biljnim i geometrijskim motivima / Central medallions adorned with plant and geometric motifs (izradio / made by Š. Vrkić).

njem medaljonu i nizom malih medaljona na rubu, u kojima su prikazana poprsja (kat. br. 3, sl. 20, 21), manji pladanj sa scenom lova u središnjem medaljonu i rubom ukrašenim maskama, biljnim i životinjskim motivima (kat. br. 5, sl. 23) i ukrasna zdjelica s figuricom, natpisom i frizom s prikazima iz grčke mitologije (kat. br. 14, sl. 32). Sva su tri predmeta ukrašena pozlatom i umetanjem plavo-sive smjese u urezane ornamente ili natpise, što je tehnika ukrašavanja posebno karakteristična za kasnu antiku. Četiri posude imaju centralne medaljone, ukrašene geometrijskim i cvjetnim motivima (sl. 10). Na trećini je posuda zastupljeno ukrašavanje rubova s bisernim nizom ili kombinacijom manjih okruglih i ovalnih perlica, što je također jedno od glavnih obilježja srebrnog posuđa izrađenog tijekom kasne antike. Dio predmeta nema nikakve ukrase ili imaju jednostavne ukrase izvedene urezivanjem koncentričnih kružnica u unutrašnjosti ili na vanjskim stijenkama.

Only three of the mentioned items had lavish figural decorations of inlaid niello and gilding. These are a large platter with a pastoral scene in the central medallion and a series of smaller medallions on the rim with images of busts (cat. no. 3, fig. 20, 21), a smaller platter with a hunting scene in the central medallion and a rim adorned with masks, and plant and animal motifs (cat. no. 5, fig. 23) and a decorative bowl with a figurine, an inscription, and a frieze with images from Greek mythology (cat. no. 14, fig. 32). All three items were decorated through gilding and inlaying a blue-grey mixture into carved ornaments or inscriptions, a decoration technique especially characteristic of Late Antiquity. Four of the vessels have central medallions adorned with geometrical and floral motifs (fig. 10). A third of the vessels have rims adorned with a series of pearls or a combination of spherical and oval beads, which is also one of the main characteristics of silver vessels made in Late Antiquity. Some of the items do not have any decorations, or have simple decorations made through carving concentric circles on the inner or outer walls.

Most of the items were made through forging out of a single cast piece of silver, which was later finished on a lathe, which is evidenced by the smaller indentation in the centre of many of the items, which was used to centre them on the lathe. After being shaped, the items were decorated and polished. Some smaller pieces, such as the handles, were made through casting or forging, and were subsequently soldered using lead. The first analyses of the metal showed that the vessels are made of silver of a high purity.<sup>45</sup> This was to be expected, seeing as it is usual for silver vessels from Late Antique hoards to contain a high percentage of silver, which most often equals at least 95%.<sup>46</sup> Some items or their parts also contain a rather significant amount of copper, which can be deduced from the green corrosion, which is visible on a smaller number of items, and is especially pronounced on two spoons (cat. no. 39, 42).

<sup>45</sup> Preliminary metal analyses were conducted only on a smaller number of items. The results were presented at a congress held in Madrid in 2015 (D. Doračić, J. Lang, The Cibalae treasure – preliminary technological overview).

<sup>46</sup> Mundell Mango, Bennett 1994, 34.



Većina je predmeta izrađena kovanjem od jednoga izlivenog komada srebra, koji je poslije dorađivan na tokarskom stroju, što potvrđuje manje udubljenje na središtu većeg broja predmeta, koje je služilo za njihovo centriranje na stroju. Nakon oblikovanja predmeti su ukrašavani i polirani. Neki manji dijelovi, na primjer ručke, napravljeni su lijevanjem ili kovanjem i naknadno zalemljeni za tijelo posude pri čemu je korišteno olovo. Prve su analize metala utvrdile da je posude izrađeno od srebra visoke čistoće.<sup>45</sup> To je očekivano jer je uobičajeno da srebrno posude iz kasnoantičkih ostava sadrži visok postotak srebra, koji najčešće nije manji od 95%.<sup>46</sup> Neki predmeti, ili njihovi dijelovi, sadrže i značajniju količinu bakra, što se može zaključiti prema zelenoj koroziji koja je vidljiva na manjem broju predmeta, a posebno je izražena na dvije žlice (kat. br. 39, 42).

Točno je podrijetlo poznato samo za dva srebrna predmeta jer su pri izradi na njima načinjeni natpisi s oznakom radionice u Akvileji. Oba predmeta spadaju među naj-reprezentativnije nalaze iz ostave. Prvi je predmet veliki pladanj s pastoralnom scenom u središnjem medaljonu. Na stražnjoj strani ovog predmeta nalazi se puncirani natpis: (.)XXAQ, kojim je označena težina i radionica u kojoj je predmet izrađen (sl. 11). Drugi je predmet mala ukrasna zdjelica s figuricom i pozlaćenim frizom, na kojoj se nalazi ugravirani natpis ANTONINVS FECIT AQVIL., koji označava ime majstora i radionice u kojoj je predmet izrađen (sl. 12). Iz akvilejske radionice vjerojatno potječu i neki drugi predmeti, ali trenutno za to ne postoje izravni dokazi jer bez natpisa nije moguće odrediti mjesto izrade predmeta, osim njihova okvirnog svrstavanja u zapadne ili istočne radionice Rimskog Carstva. Na nekim su manjim posudama vidljivi urezani znakovi koji bi mogli potjecati iz radionice ili predstavljati oznaku ili ime osobe koja se koristila predmetom (kat. br. 22–23, sl. 41, 43). Međusobna raznolikost predme-

<sup>45</sup> Preliminarne su analize metala napravljene samo na manjem broju predmeta. Rezultati su prezentirani na kongresu održanom u Madridu 2015. godine (D. Doračić, J. Lang, The Cibalae treasure – preliminary technological overview).

<sup>46</sup> Mundell Mango, Bennett 1994, 34.



Slika / Figure 11. Puncirani natpis na velikom pladnju: kat. br. 3 / Hallmarked inscription on the outer side of a platter: cat. no. 3 (snimila / photo by V. Žarak).

The exact origin is known for only two of the items, because the makers imprinted them with the markings of a workshop in Aquileia during manufacture. Both items rank among the most representable finds from the hoard. The first item is a large platter with a pastoral scene in the central medallion. The rear side of this item bears a hallmarked inscription: (.)XXAQ, which indicates the weight and the workshop in which the item was created (fig. 11). The other item is a small decorative bowl with a figurine and a gilded frieze, which bears the engraved inscription ANTONINVS FECIT AQVIL., which indicates the craftsman and the workshop in which the item was created (fig. 12). Some of the other items likely also came from the Aquileia workshop, but there is currently no real evidence for this, seeing as it is not possible to determine the place of manufacture without an inscription, aside from approximately classifying them into western and eastern workshops of the Roman Empire. Some of the smaller vessels have visible carved markings, which might originate from a workshop or represent the mark or name of the person





Slika / Figure 12. Ugravirani natpis na ukrasnoj zdjelici: kat. br. 14 / Engraved inscription on the disk of a decorative vessel: cat. no. 14 (snimila / photo by V. Žarak).

ta iz ostave upućuje na veliku vjerojatnost da su pojedini predmeti izrađeni u nekim drugim radionicama koje su djelovale na različitim područjima Carstva. Osim toga, izgledno je da velike ostave sadrže predmete koji potječu iz različitih radionica, kao što je to slučaj s predmetima iz ostave Blago iz Kaiseraugsta.<sup>47</sup> Pojedini tipovi predmeta, koji su stilski i tipološki međusobno gotovo identični, posebno zdjelice (kat. br. 17–20), čaše (kat. br. 24–25), plitice (kat. br. 27–28) i žlice (kat. br. 38, 40), gotovo sigurno potječu iz istih radionica. Svaki od ovih stilski ujednačenih tipova predmeta mogao je postati dio servisa u sklopu neke jednokratne akvizicije.

Ostava iz Vinkovaca po sadržaju je najsličnija trima velikim ostavama kasnoantičkoga srebrnog posuđa, a to su Seusovo blago, Blago iz Mildenhalla i Blago iz Kaiseraugsta. Seusovo je blago najluksuznija do sada pronađena kasnoantička ostava koja se sastoji od 14 srebrnih posuda i jednoga brončanog kotla.<sup>48</sup> Svi su srebrni predmeti izrađeni luksuzno i bogato ukrašeni, a zajedno teže čak 68,5 kg. Zajednički su predmeti u obje ostave veliki pladnjevi, vrčevi, kanelirana zdjela za vodu i kutija za parfeme, a slično-

who used the item (cat. no. 22–23, sl. 41, 43). The variety of the items from the hoard points to a high probability that certain items were manufactured in some other workshops, which operated in different parts of the Empire. Besides, it is to be expected for large hoards to contain items originating from different workshops, such as the items from the Kaiseraugst Treasure hoard.<sup>47</sup> Certain types of items which are in their style and typology virtually identical, especially the bowls (cat. no. 17–20), cups (cat. no. 24–25), saucers (cat. no. 27–28) and spoons (cat. no. 38, 40), almost certainly come from the same workshops. All of these stylistically homogenous items could have come into the set as part of a single purchase.

The Vinkovci hoard is in its content most similar to three large hoards of Late Antique silver vessels, and those are the Seuso Treasure, the Mildenhall Treasure, and the Kaiseraugst Treasure. The Seuso Treasure is the most opulent Late Antique hoard discovered thus far, and it consists of 14 silver vessels and one copper kettle.<sup>48</sup> All of the silver items are luxuriously made and richly adorned, and together they weigh an impressive 68.5 kg. The items that the two hoards have in common are large platters, pitchers, a water bowl, and a perfume box, and the similarities would surely be even greater if the Seuso Treasure were not missing all smaller items, which originally had to have been part of the set. The Seuso Treasure also contains situlae and an amphora, which are not present in the Vinkovci hoard. The large copper kettle was not part of the silver tableware set, but was only used to hide it.

The hoard is also very similar to the Mildenhall Treasure hoard, which was discovered by accident in England in 1942.<sup>49</sup> This set is somewhat smaller and consists of 34 items, which have a total weight of 26 kg. Both sets contain large platters, a fluted water bowl, smaller bowls and platters, and spoons. The Mildenhall Treasure contains several types of items which are not present in the Vinkovci hoard: small platters on stands, small ladles with handles shaped as dolphins, and a bowl with a lid. There are

<sup>47</sup> Cahn, Kaufmann-Heinimann 1984, 420.

<sup>48</sup> Detaljnu analizu cjelokupne ostave Seusovo blago vidi u Mundell Mango, Bennett 1994.

<sup>47</sup> Cahn, Kaufmann-Heinimann 1984, 420.

<sup>48</sup> Detailed analysis of the entire Seuso Treasure hoard see in Mundell Mango, Bennett 1994.

<sup>49</sup> Painter 1977; Hobbs 2012.

sti bi zasigurno bile i veće da kod Seusova blaga ne nedostaju svi manji predmeti koji su originalno morali biti sastavni dio servisa. U Seusovu blagu zastupljene su situle i amfora, predmeti kojih nema u ostavi iz Vinkovaca. Veliki brončani kotao nije bio dio srebrnog servisa, već je samo iskorišten za njegovo skrivanje.

Velika je sličnost s ostavom Blago iz Mildenhalla koja je slučajno pronađena u Engleskoj 1942. godine.<sup>49</sup> Ovaj je servis nešto manji i sastoji se od 34 predmeta koji ukupno teže 26 kg. U oba su servisa zastupljeni veliki pladnjevi, kanelirana zdjela za vodu, zdjelice, mali pladnjevi i žlice. Blago iz Mildenhalla sadrži i nekoliko tipova predmeta kojih nema u vinkovačkoj ostavi, a to su mali pladnjevi na postolju, male kutlače s ručkama u obliku dupina i zdjela s poklopcem. Značajnije su razlike u tehnikama izrade ukrasa i njihovoj većoj zastupljenosti na predmetima iz Mildenhalla, što sugerira na različito radioničko podrijetlo predmeta iz dviju ostava. Osim toga, sadržaj vinkovačke ostave znatno je raznolikiji i bogatiji.

Najveća sličnost po sadržaju predmeta je sa slučajno pronađenom velikom ostavom iz Kaiseraugsta u Švicarskoj.<sup>50</sup> Ova je ostava skoro dvostruko veća i sadrži 85 srebrnih predmeta koji teže 61,5 kg. Zajednički su predmeti u oba servisa veliki pladnjevi, mali pladnjevi, kanelirana posuda za vodu, svijećnjak, zdjelice, čaše, žlice i cjediljka. Za ovu je ostavu karakterističan velik broj pladnjeva i žlica, što je imalo veze s vlasnikom i namjenom koju je servis imao. Servis sadrži samo četiri čaše, što je relativno malen broj u odnosu na ostale predmete, a isto se može reći i za vinkovačku ostavu koja sadrži tri čaše. Srebrnih čaša nema u drugim ostavama kasnoantičkoga srebrnog posuđa, a i inače su rijetki nalazi na čitavom rimskom području.<sup>51</sup> Maleni broj ovakvih predmeta vjerojatno je posljedica toga što

<sup>49</sup> Painter 1977; Hobbs 2012.

<sup>50</sup> Ostava je slučajno iskopana tijekom građevinskih radova 1961. godine. Dio je nalaza dospio u ruke arheologa tek 1995. godine, a najmanje jedan predmet još nedostaje. Nalazi su detaljno obrađeni i objavljeni u dvije monografije: Cahn, Kaufmann-Heinimann 1984 i Guggisberg 2003.

<sup>51</sup> Cahn, Kaufmann-Heinimann 1984, 152–154.

significant differences in the decoration techniques and their greater representation on the items from Mildenhall, which points to different workshops of origin of the items in the two hoards. Moreover, the contents of the Vinkovci hoard are richer and much more varied.

The contents of the hoard are the most similar to the accidentally discovered large hoard from Kaiseraugst in Switzerland.<sup>50</sup> This hoard is almost twice the size and contains 85 silver items, which weigh 61.5 kg. The items that the hoards have in common are large platters, small platters, a fluted water bowl, a candelabrum, bowls, cups, spoons and a strainer. This hoard is notable for its large number of platters and spoons, which stemmed from the identity of the owner and the function of the tableware set. The set contains only four cups, which is a relatively small number in comparison to other items, and the same can be said of the Vinkovci hoard as well, which contains three cups. Silver cups cannot be found in other hoards of Late Antique silver vessels, and they are in general rare finds in the entire Roman Empire.<sup>51</sup> The small number of these items is likely due to the fact that luxury cups made from other materials were more often used at formal banquets, especially glass cups, which in the 4<sup>th</sup> century AD also numbered among luxury vessels. This large hoard also contains wide spoons (*ligulae*), toothpicks, coins, ingots and a small statue, which are items that cannot be found in the Vinkovci hoard.

The only items that all four hoards have in common are the large platters used to serve food and the large fluted bowls used to hold water for washing one's hands and face. With the exception of the incomplete Seuso Treasure, the common items would also be the small bowls, spoons and small platters, so we can conclude that these items were most likely a part of all larger Late Antique silver tableware sets used at formal banquets.

<sup>50</sup> The hoard was accidentally unearthed during construction work in 1961. Some of the finds did not make their way to archaeologists until 1995, and at least one item is still missing. The finds were examined in detail and published in two monographs: Cahn, Kaufmann-Heinimann 1984 and Guggisberg 2003.

<sup>51</sup> Cahn, Kaufmann-Heinimann 1984, 152–154.

su na svečanim gozbama češće korištene luksuzne čaše od drugih materijala, posebno staklene čaše koje su tijekom 4. stoljeća također spadale u luksuzno posuđe. U ovoj su velikoj ostavi zastupljene široke žlice (*ligulae*), čačkalice, novac, ingoti i mala statua, predmeti kojih nema u ostavi iz Vinkovaca.

Jedini predmeti koji su zajednički u sve četiri ostave jesu veliki pladnjevi, korišteni za serviranje hrane, i velike kanelirane zdjele za držanje vode, korištene za pranje ruku i lica. Ako izuzmemo nepotpuno Seusovo blago, zajednički predmeti bili bi i zdjelice, žlice i mali pladnjevi, pa se može zaključiti da su ti predmeti vjerojatno bili sastavni dio svih većih kasnoantičkih srebrnih servisa korištenih na svečanim gozbama.

Posuda karakteristična samo za vinkovačku ostavu široka je zdjela s lavljim glavama i alkama (kat. br. 7, sl. 25). Tri su lavlje glave bile zalemljene na vanjskim stijenkama posude na pravilnoj međusobnoj razdaljini (sl. 13). Kroz lavlje su čeljusti provučene masivne alke pomoću kojih je posuda bila obješena na stalku koji se nije sačuvao. Stalci od srebra i drugih materijala, koji su služili kao postolje za velike pladnjeve, bili su sastavni dio kasnoantičkih servisa, što potvrđuju brojni prikazi gozbi na kasnoantičkim mozaicima, freskama i srebrnim pladnjevima.<sup>52</sup> Rijetki su sačuvani primjerci, kao što je četveronožni srebrni stalak s lokaliteta Polgárdi u Mađarskoj, koji se najčešće povezuje sa Seusovim blagom.<sup>53</sup> Stalak za posudu iz Vinkovaca zasigurno je bio tronožan, možda sličan nekim poznatim stalcima, kao što je onaj brončani iz Déri Múzeuma u Debrecenu<sup>54</sup>, ili grafički rekonstruirani srebrni stalak čiji su dijelovi pronađeni na lokalitetu Romuliana u Srbiji.<sup>55</sup> Funkcija je ove posude mogla biti da se u nju servira hrana ili, što je vjerojatnije, manje posude s hranom i pićem, možda onako kako je prikazano na često objavljivanom podnom mozaiku iz Antiohije u Turskoj, gdje je prikazana velika plitka posuda u koju je servirano više ma-

The vessel that is characteristic only of the Vinkovci hoard is the wide bowl with lion heads and rings (cat. no. 7, fig. 25). The three lion heads were soldered to the outer walls of the vessel equidistant from one another (fig. 13). Large rings were set through the lions' jaws, with which the vessel could be hanged from a stand, which was not preserved. Stands made of silver and other materials, which served as a base for large platters, were a constituent part of Late Antique tableware sets, which is confirmed by numerous depictions of banquets on Late Antique mosaics, frescos and silver platters.<sup>52</sup> Preserved stands are rare, such as the four-footed silver stand from the Polgárdi site in Hungary, which is most often associated with the Seuso Treasure.<sup>53</sup> The vessel stand from Vinkovci was surely three-footed or tripod, perhaps similar to some known stands, such as the bronze stand from the Déri Múzeum in Debrecen<sup>54</sup> or the graphically reconstructed silver vessel whose pieces were found at the Romuliana site in Serbia.<sup>55</sup> The function of this vessel could have been to serve food or, which is more likely, to hold smaller vessels with food and drink, perhaps in the manner which is depicted on the often published floor mosaic from Antakya in Turkey, which depicts, among other things, a large shallow vessel which holds a number of smaller vessels with food and two large pieces of roasted meat.<sup>56</sup> A similarly shaped vessel, but without the lion heads and rings, can be found in the silver hoard from Water Newton.<sup>57</sup>

The Vinkovci hoard is also notable for the small bowl with a bulge in its central portion (cat. no. 16) and a mirror (cat. no. 34), which served as a lid (fig. 14). Only several such Late Antique silver mirrors have been preserved, but as far as we are aware, none has been preserved together with its accompanying toiletry bowl.<sup>58</sup> This seems to be a woman's toiletry set, that is,

<sup>52</sup> Dumbabin 2003.

<sup>53</sup> Mráv 2012, 80–106.

<sup>54</sup> Mráv 2012, 94, sl. 22a-b.

<sup>55</sup> Popović 2013, 84, sl. 7.14–7.16.

<sup>52</sup> Dumbabin 2003.

<sup>53</sup> Mráv 2012, 80–106.

<sup>54</sup> Mráv 2012, 94, fig. 22a-b.

<sup>55</sup> Popović 2013, 84, fig. 7.14–7.16.

<sup>56</sup> Cahn, Kaufmann-Heinimann 1984, 397, fig. 156; Dumbabin 2003, 160–161, fig. 93–94; Hobbs 2012, 47, fig. 30.

<sup>57</sup> Guggisberg 2003, 278, fig. 260.

<sup>58</sup> Mango 1986, 212–215, fig. 48.2; Baratte 1993, T. 17, fig. 35.





Slika / Figure 13. Jedna od tri lavlje glave s alkama na plitkoj posudi: kat. br. 7 / One of the lion heads with rings on the outside walls of a shallow vessel: cat. no. 7 (snimila / photo by V. Žarak).

njih posuda s hranom i dva velika komada pečenog mesa.<sup>56</sup> Posuda sličnog oblika, ali bez lavljih glava i alka, nalazi se u ostavi srebra iz Water Newtona.<sup>57</sup>

Za vinkovačku je ostavu karakteristična i zdjelica s ispupčenjem u središnjem dijelu (kat. br. 16) i ogledalom (kat. br. 34) koje je imalo i funkciju poklopca (sl. 14). Ovakvih kasnoantičkih srebrnih ogledala sačuvano je samo nekoliko, ali koliko je nama poznato, ni jedan nije sačuvan s pripadajućom toaletnom zdjelicom.<sup>58</sup> Prema svemu sudeći, riječ je o ženskom toaletnom priboru, odnosno predmetu koji je vjerojatno bio privatnog karaktera i nije nužno morao biti upotrebljavan kao dio servisa korištenog na svečanim gozabama.

Unikatan je i predmet širokoga srcolikog tijela s ručkom u obliku dupina (kat. br. 30, sl. 50). Pretpostavljamo da je korišten za vađenje hrane ili neke druge krute tvari iz tekućine jer na sebi ima male kružne perforacije. Predmeti za vađenje jušne hrane s ručkama u obliku dupina zastupljeni su u britanskim ostavama srebra iz Traprain Lawa,<sup>59</sup> Mild-

<sup>56</sup> Cahn, Kaufmann-Heinimann 1984, 397, sl. 156; Dunbabin 2003, 160–161, sl. 93–94; Hobbs 2012, 47, sl. 30.

<sup>57</sup> Guggisberg 2003, 278, sl. 260.

<sup>58</sup> Mango 1986, 212–215, sl. 48.2; Baratte 1993, T. 17, sl. 35.

<sup>59</sup> Kaufmann-Heinimann 2013, 253, sl. 15.13c.

an item that was most likely private in nature and was not necessarily used as part of a tableware set at formal banquets.

Also unique is the item with the heart-shaped body and the dolphin-shaped handle (cat. no. 30, fig. 50). We assume that it was used to remove food or other solid substances from liquids, seeing as it has small circular perforations. Items for removing brothy food with dolphin-shaped handles are present in British silver hoards from Traprain Law,<sup>59</sup> Mildenhall<sup>60</sup> and Hoxne.<sup>61</sup> However, the item from Vinkovci has an entirely different shape and purpose, which makes it unique among Late Antique silver items known to us.

Especially interesting is the unique ornamental vessel with a figurine, a gilded frieze and an inscription on the inside wall (cat. no. 14, fig. 32). The bowl, which has thick walls, stands on a low base decorated by carving. The bottom of the base also had a soldered circular disc with the engraved inscription: ANTONINVS FECIT AQVIL („Made by Antoninus in Aquileia“; fig. 12). The centre of the vessel contains a figurine of a person, sitting on a conical pedestal, legs crossed, arms outstretched, and gazing downward. The hollow pedestal has four small semi-circular openings on the bottom, and below the figurine and the pedestal, in the exact centre of the vessel, there is a circular opening, onto which a tube with the same diameter had been soldered. These parts were made with the goal of allowing for a certain amount of liquid to pour out of the bowl. After initial analyses, it seemed almost certain that the figurine represented Narcissus, who was, in all versions of the myth, punished by the gods by making him fall in love with his own reflection in the water. However, an X-ray scan was later made (fig. 15), which allowed us to make out the inscription which reads: AVARI DESCRIBVNTVR QVOS CIRCVMFLVIT / VSVS BONORVM SED NIL POSVNT TANGERE. These verses were written by the Roman fabulist Phaedrus in the 1<sup>st</sup> century BC, in which the figure of Tantalus is used to describe all those who are gluttonous and cannot enjoy the good things that surround them.<sup>62</sup>

<sup>59</sup> Kaufmann-Heinimann 2013, 253, fig. 15.13c.

<sup>60</sup> Painter 1977, 30, cat. no. 18–26, fig. 33–34.

<sup>61</sup> Leader-Newby 2004, 81, fig. 2.6.

<sup>62</sup> The inscription and its preceding verse read: QUOD STANS



halla<sup>60</sup> i Hoxne.<sup>61</sup> Međutim, predmet iz Vinkovaca ima posve drugačiji oblik i namjenu, što ga čini jedinstvenim među nama poznatim kasnoantičkim srebrnim predmetima.

Osobito je zanimljiva i jedinstvena ukrasna posuda s figuricom, pozlaćenim frizom i natpisom na unutrašnjoj strani (kat. br. 14, sl. 32). Posuda masivnih stijenka stoji na niskoj nozi, ukrašenoj rezanjem. Na dnu je noge bio zalemljen kružni disk s ugraviranim natpisom: ANTONINVS FECIT AQVIL („Izradio Antonin u Akvileji“; sl. 12). U sredini posude nalazi se figurica osobe koja sjedi na stožastom postolju prekrivenih nogu, ispruženih ruku i pogledom prema dolje. Šuplje postolje na dnu ima četiri mala polukružna otvora, a ispod figurice i postolja, točno na sredini posude, nalazi se kružni otvor na koji je bila zalemljena jednako široka cjevčica. Ovi su dijelovi bili izrađeni s ciljem da omogućе istjecanje određene količine vode iz posude. Nakon prvih analiza činilo se gotovo sigurnim da figurica predstavlja Narcisa kojeg su u svim varijantama mita bogovi kaznili na način da se zaljubi u vlastiti odraz u vodi. Međutim, naknadno je načinjen rendgenski snimak (sl. 15) koji je omogućio čitanje natpisa koji glasi: AVARI DESCRIBVNTVR QVOS CIRCVMFLVIT / VSVS BONORVM SED NIL POSSVNT TANGERE. Riječ je o stihovima rimskog basnopisca Julija Fedra (*Phaedrus*) iz 1. stoljeća poslije Krista, u kojima se u liku Tantalusa opisuju svi pohlepnici koji ne mogu uživati u dobrima koja ih okružuju.<sup>62</sup> Tantalus su bogovi osudili na vječne muke tako da, među ostalim, žedan stoji u rijeci, a kada se pokuša napiti, voda mu oteče ispred ruku. S obzirom na navedeno, gotovo je sigurno da figurica predstavlja Tantalusa. Ipak, konačna će potvrda biti moguća tek nakon završetka konzervatorsko-restauratorskih radova, kada će u potpunosti biti vidljivi figurica,

<sup>60</sup> Painter 1977, 30, kat. br. 18–26, sl. 33–34.

<sup>61</sup> Leader-Newby 2004, 81, sl. 2.6.

<sup>62</sup> Natpis i stih koji mu prethodi glase: QUOD STANS IN AMNE TANTALUS MEDIO SITIT / AVARI DESCRIBUNTUR, QUOS CIRCUMFLUIT / USUS BONORUM, SED NIL POSSUNT TENERE. Nešto slobodniji prijevod glasio bi: “(time) što stojeći nasred rijeke Tantal žeda, opisuju se pohlepnici koji su okruženi dobrima ali ih ne mogu doticati” (prema Perry (ed.) 1990, 378–380). Zahvaljujemo se dr. sc. Zvonku Lioviću i djelatnicima Odjela za klasičnu filologiju Sveučilišta u Zadru na pomoći i korisnim sugestijama.

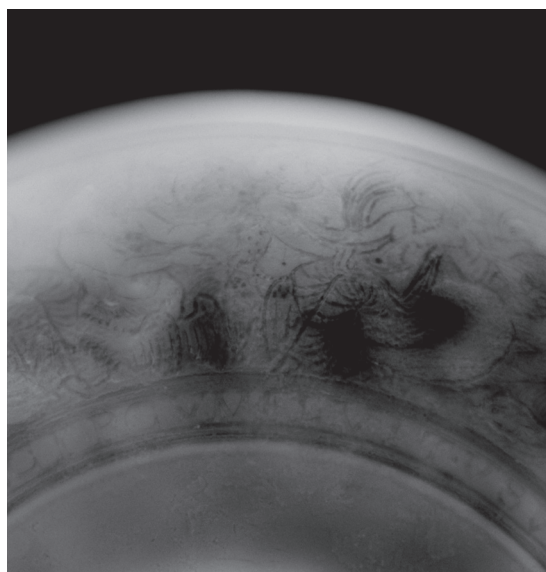


Slika / Figure 14. Toaletna zdjelica s ogledalom: kat. br. 16 i kat. br. 34 / Toiletry bowl with mirror: cat. no. 16 and cat. no. 34 (snimila / photo by V. Žarak).

Tantalus was sentenced by the gods to eternal torment, in that he, among other things, stands thirsty in a river, yet when he attempts to drink from it, the water recedes from his hands. With regard to all of this, it is almost certain that the figurine represents Tantalus. Nonetheless, a final confirmation will not be possible until after the finalization of the conservation and restoration process, when the figurine will become fully visible, along with the inscription and the frieze, which seems to depict various scenes from Greek mythology.<sup>63</sup>

IN AMNE TANTALUS MEDIO SITIT / AVARI DESCRIBUNTUR, QUOS CIRCUMFLUIT / USUS BONORUM, SED NIL POSSUNT TENERE translated as: “In the figure of Tantalus, standing a thirst in the midst of a river, the miserly are depicted, who are surrounded by a river of ways to enjoy their goods but can touch none of them” (Perry (ed.) 1990, 378–380). Here we would like to thank Zvonko Liović, PhD, and the staff of the Department of Classical Philology at the University of Zadar for their help and valuable suggestions.

<sup>63</sup> Here we would like to thank our colleague Damir Doračić, the head of the conservation and restoration process, for



Slika / Figure 15. Isječak radiografskog snimka ukrasne zdjelice: kat. br. 14 / X-ray of a section of a decorative vessel: cat. no. 14 (snimio / taken by D. Doračić).

natpis i friz na kojemu su, prema svemu sudeći, prikazane različite scene iz grčke mitologije.<sup>63</sup>

Ova je posuda korištena isključivo za pokazivanje i nema sličnih analogija u ostalim kasnoantičkim srebrnim servisima, ali ni među drugim nalazima kasnoantičkog srebra. Jedina donekle slična posuda, koja izgledom podsjeća na ovaj nalaz, i koja je vjerojatno izrađena po uzoru na ovakve posude, jest zlatna plitica sa statuom božice i reljefnim prikazom skandinavskih božanstava iz ostave Blago Petrosa s kraja 5. stoljeća.<sup>64</sup>

U navedenim ostavama nema ni male srebrne kutijice (kat. br. 32) ni amforiska (kat. br. 33). Ovi predmeti, zajedno s kutijom na lancima (kat. br. 13) i perforiranim nosačem (kat. br. 37), činili su set za čuvanje i upotrebu parfema (sl. 16). Slična kutija za parfem s perforiranim nosačem nalazi se u

<sup>63</sup> Zahvaljujemo se kolegi Damiru Doračiću, voditelju konzervatorsko-restauratorskih radova, na ustupljenoj rendgenskoj snimci i drugim podacima vezanim uz srebrne nalaze. Također, zahvaljujemo se svim ostalim kolegama koji su nam tijekom pripreme i pisanja rada pomogli korisnim savjetima: dr. sc. Ivani Ožanić Roguljić, dr. sc. Mirjani Sanader, dr. sc. Dini Demicheliju, dr. sc. Richardu Hobbsu, Frederiku Levardu, dr. sc. Juri Šućuru, Ivanu Čondiću, dr. sc. Tomislavu Fabijaniću, dr. sc. Korneliji A. Giunio, Dejanu Filipčiću, dr. sc. Igoru Borziću, dr. sc. Zvonku Lioviću, dr. sc. Igoru Kulenoviću i Nedi Kulenović Ocelić.

<sup>64</sup> Odobescu 1976, 627–654.

This vessel was used strictly for displaying and there are no items like it in other Late Antique silver tableware sets, nor among other finds of Late Antique silver. The only somewhat similar vessel, which is similar in appearance and was likely inspired by such vessels, is the golden saucer with the statuette of a goddess and a relief depiction of Scandinavian gods from the Pietroasele Treasure hoard from the end of the 5<sup>th</sup> century.<sup>64</sup>

The aforementioned hoards do not contain a small silver box (cat. no. 32), nor an amphorisk (cat. no. 33). These items, along with the box with chains (cat. no. 13) and the perforated stand (cat. no. 37), made up a set for storing and using perfume (fig. 16). A similar perfume box with a perforated stand can be found in the Seuso Treasure hoard, but it is missing the chains and the smaller vessels which were used for holding and mixing the perfume.<sup>65</sup> Such finds are extremely rare and only several have been preserved. One such set, made up of a vessel with chains, a perforated stand with an amphorisk and cylindrical perfume boxes, is part of the Esquiline Treasure, also one of the largest and most important hoards of Late Antique silver, which comes from Rome and is now kept in the British Museum in London.<sup>66</sup>

In the Roman world, perfumes were also luxury items which only the wealthiest individuals could afford to own. The Roman writer Pliny the Elder criticized their use, considering them to be the most worthless of luxury items, which cost a fortune while being short-lasting in use and effect, and neither could they be, like other luxury items, left as an inheritance to heirs.<sup>67</sup> It is usually thought that such items could be a part of a woman's toiletry set.<sup>68</sup> However, we believe that we should not rule out their

loaning us the X-ray image and other data related to the silver finds. We would also like to thank all of our other colleagues who helped us in preparing and writing this text with their valuable advice. They are: Ivana Ožanić Roguljić, PhD, Mirjana Sanader, PhD, Dino Demicheli, PhD, Richard Hobbs, PhD, Frederik Levarda, Jure Šućur, PhD, Ivan Čondić, Tomislav Fabijanić, PhD, Kornelija A. Giunio, PhD, Dejan Filipčić, Igor Borzić, PhD, Zvonko Liović, PhD, Igor Kulenović, PhD and Neda Kulenović Ocelić.

<sup>64</sup> Odobescu 1976, 627–654.

<sup>65</sup> Mundell Mango, Bennett 1994, 444–473.

<sup>66</sup> Cameron 1985, 135–145.

<sup>67</sup> For a short overview of perfume use in classical antiquity, see Ožanić-Roguljić 2010, 66–68.

<sup>68</sup> Mundell Mango, Bennett 1994, 473.

ostavi Seusovo blago, ali joj nedostaju lanci i manje posude u kojima se držao i miješao parfem.<sup>65</sup> Ovakvi su nalazi iznimno rijetki i sačuvano ih je samo nekoliko. Jedan ovakav set, koji čine posuda s lancima, perforirani nosač s amforiskom i cilindričnim kutijama za parfem, dio su Eskvilinskog blaga, također jedne od najvećih i najznačajnijih ostava kasnoantičkog srebra koja potječe iz Rima, a danas se čuva u British Museumu u Londonu.<sup>66</sup>

U rimskom su svijetu parfemi također bili luksuzna roba koju su si mogli priuštiti samo najbogatiji pojedinci. Njihovu je upotrebu osobito kritizirao rimski pisac Plinije Stariji, smatrajući ih najnekorisnijom luksuznom robom na koju se troši pravo bogatstvo, a upotreba i učinak su joj kratkotrajni, čak se ne može niti ostaviti nasljednicima, kao neki drugi luksuzni predmeti.<sup>67</sup> Obično se smatra da bi ovakvi predmeti mogli biti dio ženskoga kupaonskog servisa.<sup>68</sup> Međutim, ne bi trebalo isključiti njihovu upotrebu na gozbama, posebno zbog toga što je to bio još jedan od načina na koji su istaknuti pojedinci mogli pokazati svoje bogatstvo i moć.

Ova skupocjena roba zahtijevala je specifično čuvanje i način upotrebe, zbog čega su izrađivani predmeti posebno dizajnirani samo za ovu namjenu. Parfem je uglavnom bio u krutom stanju i čuvao se u malim kutijama s čepom, a upotrebljavao se miješanjem s raznim uljima, što se radilo u amforisku. Ove su male posudice stajale u perforiranom nosaču koji se nalazio u kutiji s poklopcem i lancima. Nije poznat točan način na koji se set upotrebljavao na svečanim gozbama. Lanci sugeriraju da se kutija mogla lakše prenositi, a prema potrebi mogla se i zanjihati, što bi pospješilo širenje mirisa po prostoriji. U tome smislu zanimljiv je detalj da su poklopci spojeni s kutijama, što je omogućavalo da se u svakom trenutku zaptvore.

<sup>65</sup> Mundell Mango, Bennett 1994, 444–473.

<sup>66</sup> Cameron 1985, 135–145.

<sup>67</sup> O upotrebi parfema u antici kratak pregled donosi Ožanić-Roguljić 2010, 66–68.

<sup>68</sup> Mundell Mango, Bennett 1994, 473.



Slika / Figure 16. Set za parfem / Perfume set (snimila / photo by V. Žarak).

use at banquets, especially because that was one more way in which prominent individuals could display their wealth and power.

Such precious items required specific manners of storing and using, and specially designed items were made exclusively for that purpose. Perfume was usually kept in a solid state and was kept in small, stoppered boxes, and was used by mixing with various oils, which was performed in the amphorisk. These small vessels stood on a perforated stand, which was placed into a box with a lid and chains. It is not known how the set was used at formal banquets. The chains would indicate that the box could be moved more easily, and it could also, if needed, be swung, which would accelerate the spreading of the scent throughout the room. An interesting detail here is that the lids are connected to the boxes, which allowed them to be closed at any time.



## TKO JE BIO VLASNIK VINKOVAČKE OSTAVE?

Posjedovanje je luksuznih srebrnih predmeta u provinciji dokaz da se radi o pripadniku kasnoantičke elite, koji je zasigurno bio poznata i politički utjecajna osoba u kasnoantičkim Cibalama, a možda i na širem području. Za sada nije poznato o kojoj je osobi riječ i koju je službu mogla obavljati. No svakako je morala biti imućna osoba koja je mogla organizirati svečane bankete i nabavljati skupocjene parfeme, što znači da je imala stalne novčane prihode koji su mogli dolaziti s vlasnikovih posjeda i/ili kao službenička ili vojnička plaća, koja je često uključivala razne srebrne i zlatne predmete.

U kasnoj antici darivanje je bilo regulirano zakonima, a proizvodnja i raspodjela srebrnih predmeta prilikom važnih carskih obljetnica odvijala se pod nadzorom službenika zvanog *comes sacrarum largitionum*.<sup>69</sup> Do sada je poznato 19 srebrnih predmeta koji su prepoznati kao carski darovi iz 4. stoljeća.<sup>70</sup> Srebrne posude carskog podrijetla pronađene su na šest lokaliteta na području Carstva i tri izvan njega.<sup>71</sup> Najpoznatiji je takav carski poklon Teodozijeve misorij iz Španjolske.<sup>72</sup> Carski su pokloni bili i manje posude, kao što je pet zdjela iz Niša, izrađenih za desetu obljetnicu vladavine cara Licinija iz 317. godine.<sup>73</sup> Nesumnjivo je dio predmeta iz vinkovačke ostave dospio u vlasnikov posjed darivanjem cara i njegova dvora, ali za sada nemamo ni jedan natpis koji bi to potvrdio.

Osim srebrnih posuda, carski su darovi mogli biti i zlatni medaljoni, fibule, pojase kopče, zlatni i srebrni novac, staklene posude i bjelokosni diptisi.<sup>74</sup> Važan je podatak da je i distribucija rijetkog dragog kamenja bila pod kontrolom cara i njegova dvora.<sup>75</sup>

<sup>69</sup> Leader-Newby 2004, 15.

<sup>70</sup> Leader-Newby 2004, 14.

<sup>71</sup> Guggisberg 2013, 197, sl. 13.6.

<sup>72</sup> González 2013, 91–98; Leader-Newby 2004, 11–14.

<sup>73</sup> Popović 1994, 360–367; Leader-Newby 2004, 18; Hobbs 2012, 46.

<sup>74</sup> Guggisberg 2013, 193.

<sup>75</sup> Hobbs 2012, 46.

## WHO WAS THE OWNER OF THE VINKOVCI HOARD?

The possession of luxurious silver items in the province is evidence that the owner was a member of the Late Antique elite, and was surely a well-known and most likely a politically influential person in the Late Antique Cibalae, and was perhaps even more widely influential. It is not yet known who this person was and what office they might have held. It certainly had to have been a wealthy individual, who was able to organize formal banquets and acquire expensive perfumes, which means that they had a consistent income, which could have come from the owner's lands and/or from his military salary or his salary as an official, which often included various silver or gold items.

In Late Antiquity, gift-giving was regulated by law, and the production and distribution of silver items on the occasion of important imperial anniversaries was supervised by an official called the *comes sacrarum largitionum*.<sup>69</sup> Thus far, 19 silver items have been identified as imperial gifts from the 4<sup>th</sup> century.<sup>70</sup> Silver vessels of imperial origin have been found on six sites within the Empire's territory and on three outside it.<sup>71</sup> The most famous such imperial gift is the Missorium of Theodosius I from Spain.<sup>72</sup> Imperial gifts were also smaller vessels, such as the five bowls from Niš, made for the tenth anniversary of the reign of Emperor Licinius in AD 317.<sup>73</sup> Undoubtedly some of the items from the Vinkovci hoard came into the owner's hands as gifts by the emperor and his court, but we do not yet have any inscriptions which would confirm this.

Along with silver vessels, imperial gifts could also be gold medallions, fibulae, belt buckles, gold and silver coins, glassware and ivory diptychs.<sup>74</sup> It is important to note that the distribution of rare jewels was also under the con-

<sup>69</sup> Leader-Newby 2004, 15.

<sup>70</sup> Leader-Newby 2004, 14.

<sup>71</sup> Guggisberg 2013, 197, fig. 13.6.

<sup>72</sup> González 2013, 91–98; Leader-Newby 2004, 11–14.

<sup>73</sup> Popović 1994, 360–367; Leader-Newby 2004, 18; Hobbs 2012, 46.

<sup>74</sup> Guggisberg 2013, 193.



Zbog toga je vrlo izgledno da je i kamen, koji je sastavni dio vinkovačke ostave, također dospio u posjed vlasnika srebrnog posuda, kao dio sustava nagrađivanja službenika ili vojnih zapovjednika. Kamen je obrađen i pripremljen za završnu izradu ukrasa, ali činjenica da je zakopan prije negoli je na njemu urezan ili izrezbaren neki prikaz, mogla bi sugerirati da je u posjed vlasnika srebra dospio neposredno prije vremena zakopavanja ostave.

Pojedini se predmeti međusobno prilično razlikuju, na primjer, ni jedan od pet vrčeva nije identičan, što sugerira da su u servis dospijevali u različito vrijeme i pod različitim okolnostima. Za sada nije poznato koliko je dugo servis bio u upotrebi prije zakopavanja, ali treba ostaviti mogućnost da su neki predmeti mogli biti u upotrebi tijekom nekoliko generacija, što bi značilo da je srebrni servis nastajao duže vremensko razdoblje. Osim službenim carskim darovanjima (*largitiones*), pojedini predmeti, posebno oni manji, mogli su dospjeti u servis kupovinom ili međusobnim darivanjem i poklonima između različitih pojedinaca i njihovih obitelji, kao što je to zabilježeno u pisanim povijesnim izvorima iz razdoblja kasne antike.

Većina predmeta iz vinkovačke ostave može se okvirno datirati u razdoblje oko sredine 4. stoljeća jer imaju oblike, tehnike ukrašavanja i motive karakteristične upravo za to razdoblje. S obzirom na to da smo nastanak ostave datirali u vrijeme neposredno nakon 378. godine, smatra se najizglednijim da je većina srebrnog servisa izrađena u razdoblju od 350. do 378. godine. To je zanimljivo povijesno razdoblje u kojemu su se Cibale nekoliko puta našle u središtu povijesnih zbivanja važnih za cijelo Rimsko Carstvo.

Jedan od važnijih događaja zbio se 351. godine, kada se car Konstancije II. (337. – 361.), pripremajući se za vojni obračun s uzurpatorom Magnencijem, utaborio kod Cibala. Na kraju se velika bitka, u kojoj je car pobijedio, odigrala kod susjedne Murse.<sup>76</sup>

<sup>76</sup> Detaljnije o bitci kod Murse u Gračanin 2003, 9–29.

trol of the emperor and his court.<sup>75</sup> It is, therefore, likely that the gemstone, which is a part of the Vinkovci hoard, also came into the ownership of the owner of the silver vessels as part of the system of rewarding officials and military commanders. The gemstone was cut and prepared for the final manufacture of an ornament, but the fact that it was buried before an image was cut or carved into it might suggest that it was obtained by the owner of the silver just before the burying of the hoard.

Certain items differ from each other quite substantially; for instance, none of the five pitchers is identical, which suggests that they came into the set at different times and under different circumstances. It is not yet known for how long the set was in use before being buried, but we should allow for the possibility that some items could have been used for several generations, which would mean that the silver set was created over a longer period. Save through official imperial gift-giving (*largitiones*), certain items, especially the smaller ones, could have entered the set through purchasing or mutual gift-giving between various individuals and their families, as has been noted in written historical sources from the period of Late Antiquity.

Most of the items from the Vinkovci hoard can be roughly dated to the period around the middle of the 4<sup>th</sup> century, because they exhibit shapes, ornamentation techniques and motifs characteristic of that period. Seeing as we have dated the creation of the hoard to the time just before AD 378, it is most likely that the majority of the silver set was created in the period from AD 350 to AD 378. This is an interesting historical period during which the town of Cibalae found itself in the centre of historic events, important for the entire Roman Empire, several times.

One of the more important events took place in AD 351, when the Emperor Constantius II (337 – 361), preparing for his military encounter with the usurper Magnentius, made camp at Cibalae. In the end, a great battle, in which the emperor was victorious, took place at the nearby Mursa.<sup>76</sup> It is not impossible that this

<sup>75</sup> Hobbs 2012, 46.

<sup>76</sup> For more details on the Battle of Mursa Major, see Gračanin 2003, 9–29.

Nije nemoguće ni da je taj događaj doveo do zakopavanja ostave, ali puno je vjerojatnije da je dolazak cara bio iskorišten da se vodeći ljudi grada nagrade za svoju odanost.

Posebno je važno podrijetlo careva Valentinijana I. (364. – 375.) i Valenta (378.) koji su rođeni u Cibalama. Probna arheološka istraživanja na starokršćanskom kompleksu Kamenica upućuju na povezanost obnove tog kompleksa s carem Valentinijanom I., vladarom zapadnog dijela carstva.<sup>77</sup> Iako zasad nemamo materijalnih dokaza, čini se izglednim da je dio predmeta iz ostave vezan upravo uz ovoga cara. Poznat je samo jedan pladanj vezan uz Valentinijana I. ili njegova sina Valentinijana II., pronađen u blizini Ženeve 1721. godine.<sup>78</sup> Carevi Gracijan (375. – 383.) i Valentinijan II. (375. – 392.), sinovi i nasljednici Valentinijana I., također su mogli imati veze s darivanjem srebrnih predmeta iz vinkovačke ostave.

Na srebrnim predmetima nisu uočeni nikakvi kršćanski elementi na osnovu kojih bi se vlasnika ostave moglo povezati s tom religijom. Tomu je najbliže pastoralna scena s prikazom pastira oslonjenog na štap, okruženog stadom ovaca i građevinom u pozadini (sl. 17). Građevina je oblikom potpuno identična onoj prikazanoj na središnjem medaljonu velikoga srebrnog pladnja iz Cesene u Italiji.<sup>79</sup> Ni ona nije prikazana s nekim posebnim obilježjima i u ambijentu koji bi se mogli povezati s kršćanstvom. Prikaz pastira sa stadom čest je motiv u antičkoj umjetnosti, a nalazimo ga i na nekim drugim srebrnim predmetima, kao što je, na primjer, prikaz na rubu Lovačkog pladnja iz Seusova blaga.<sup>80</sup> U vrijeme je izrade pladnja pastoralna scena s pastinom mogla imati više različitih značenja.<sup>81</sup> Mala je vjerojatnost da je riječ o kršćanskom motivu Dobrog pastira, što bi bio jedan od najstarijih biblijskih prikaza na kasnoantičkom srebrnom posuđu.

<sup>77</sup> Vulić 2014, 206.

<sup>78</sup> Leader-Newby 2004, 23–24.

<sup>79</sup> Hobbs 2012, 50, sl. 33.

<sup>80</sup> Mundell Mango, Bennett 1994, 95, sl. 1–48.

<sup>81</sup> Milinović 2012, 77.

event led to the burying of the hoard, but it is much more likely that the arrival of the emperor was used to reward the town's leaders for their loyalty.

Of special importance is the origin of the emperors Valentinian I (364 – 375) and Valens (378), who were born in Cibala. Trial excavations at the Early Christian complex of Kamenica point to the link between the restoration of the complex and Emperor Valentinian I, the ruler of the western provinces.<sup>77</sup> Although, as of yet, we do not have any material evidence, it seems very likely that part of the items from the hoard is connected to this very emperor. Thus far, only one platter is known to be connected to Valentinian I or his son Valentinian II, found near Geneva in 1721.<sup>78</sup> The emperors Gratian (375 – 383) and Valentinian II (375 – 392), the sons and successors of Valentinian I, also could have been connected to the gifting of the silver items from the Vinkovci hoard.

As of yet, no Christian elements have been observed on the silver items, on the basis of which the owner might be linked to this religion. The pastoral scene with the depiction of a shepherd leaning on a staff, surrounded by a herd of sheep and with a building in the background (fig. 17), is the closest to being interpreted as such an element. The building's shape is identical to that of the building depicted on the central medallion of the large silver platter from Cesena, Italy.<sup>79</sup> The building is also not depicted with special markings or in an ambient which might be linked to Christianity. The image of a shepherd with his herd is a frequent motif in the art of classical antiquity, and can be found on some other silver items, such as the image on the edge of the Hunting platter from the Seuso Treasure.<sup>80</sup> At the time of the platter's production, the pastoral scene with the shepherd could have held several different meanings.<sup>81</sup> It is unlikely that this is the Christian motif of the Good Shepherd, which would make it one of the oldest biblical images on a Late Antique silver vessel.

<sup>77</sup> Vulić 2014, 206.

<sup>78</sup> Leader-Newby 2004, 23–24.

<sup>79</sup> Hobbs 2012, 50, fig. 33.

<sup>80</sup> Mundell Mango, Bennett 1994, 95, fig. 1–48.

<sup>81</sup> Milinović 2012, 77.



Slika 17. Crtež pastoralne scene na velikom pladnju: kat. br. 3 / Drawing of the pastoral scene on a large platter: cat. no. 3 (izradio / made by I. Čondić).

#### ZAKLJUČNA RAZMATRANJA

Ostava Vinkovačko blago senzacionalni je arheološki nalaz kakav do sada nije bio pronađen na području Hrvatske. Prema svojoj važnosti u samom je vrhu sličnih nalaza pronađenih na području cijeloga Rimskog Carstva i nema sumnje da će značajno doprinijeti poznavanju i proučavanju kasnoantičkog srebra. Posebno je važno što je nalaz pronađen tijekom zaštitnih arheoloških istraživanja, koja su osigurala da svi predmeti dospiju u muzej i da bude poznat točan sadržaj, mjesto i širi kontekst u kojemu je ostava bila zakopana. Na žalost, nepovoljne okolnosti pri pronalasku dovele su do oštećenja većeg broja srebrnih predmeta. Osim znanstvenog doprinosa, očekuje se da će ovaj nalaz pridonijeti popularizaciji arheologije i pridonijeti većoj zaštiti arheoloških nalazišta na području Hrvatske.

Na osnovi dostupnih podataka čini se najizglednijim da je srebro zakopao vlasnik i njegova obitelj u blizini svoje gradske kuće u zapadnom dijelu Cibala. Razlog skrivanja, odnosno nastanka ostave, vjerojatno je isti kao i kod većine sličnih kasnoantičkih nala-

#### CONCLUDING REMARKS

The Vinkovci Treasure hoard is a sensational find, heretofore unseen in the territory of Croatia. It ranks among the most important such finds in the entire territory of the Roman Empire, and there is no doubt that it will contribute significantly to the knowledge and study of Late Antique silver. It is especially important that the hoard was found during rescue excavations, which ensured that all items ended up in a museum, and that the exact contents, site and wider context of the burying of the hoard are published. Unfortunately, unfavourable conditions during the excavation resulted in damage to a large number of silver items. Along with its scientific contribution, it is to be expected that the find will contribute to the popularization of archaeology and to a greater level of protection of archaeological sites in Croatia.

On the basis of the available data, it seems most likely that the silver was buried by the owner and their family in the proximity of their townhouse in the western part of Cibalae. The reason for the hiding, that is, the creation of the hoard is likely the same as it is with the majority of similar Late Antique finds, which is the



za, a to je izravna opasnost koja je zaprijetila vlasniku i njegovoj imovini. Takvu je opasnost ponajprije mogla prouzročiti provala barbarskih naroda, ali i niz drugih okolnosti vezanih uz unutarnja previranja i sukobe. Na osnovi dosadašnjih spoznaja, smatramo da je najizglednije da se zakopavanje srebra dogodilo neposredno nakon bitke kod Hadrianopola 378. godine, kada su barbarske skupine pod gotskim vodstvom poharale rimske gradove na području Panonije.

Samo su na dva najreprezentativnija predmeta uočene oznake radionice u Akvileji, a na jednome od njih nalazi se i ime majstora Antonina, što je prava rijetkost za kasnoantičke srebrne predmete. Ukrasna zdjelica ima natpis sa stihovima koji se odnose na lik Tantara, a najmanje još dvije zdjelice imaju naknadno urezane natpise. Izgledno je da će tijekom konzervatorsko-restauratorskih radova biti otkriveni novi detalji, kao što su natpisi koji bi mogli sadržavati imena vlasnika, oznake mase, radionice ili možda neke kršćanske simbole i sl.

Određeni je broj srebrnih posuda zasigurno vezan uz carska darovanja (*largitiones*), zbog čega će biti posebno zanimljivo vidjeti hoće li se moći pronaći čvrsta poveznica s carevima iz sredine i druge polovice 4. stoljeća, posebno onima koji se mogu dovesti u izravnu vezu s Cibalama. Takvi su prije svega Konstancije II. (337. – 361.), koji se 351. godine s vojskom utaborio pokraj grada, iščekujući sudbonosnu bitku protiv uzurpatora Magnencija, zatim braća Valentinijan I. (363. – 375.) i Valent (363. – 378.), carevi rođeni u Cibalama, kao i Gracijan (375. – 383.) i Valentinijan II. (375. – 392.), sinovi i nasljednici Valentinijana I.

threat of imminent danger for the owner and their property. Such danger could have first and foremost been caused by the arrival of barbarian peoples, but also by many other circumstances related to inner turmoil and conflicts. On the basis of present knowledge, we consider it most likely that the silver was buried immediately after the Battle of Adrianople in AD 378, when barbarian groups under Gothic leadership laid waste to Roman towns in Pannonia.

Thus far, only the two most representative items have been found to bear the markings of the workshop in Aquileia, and one of them also bears the name of Master Antoninus, which is truly rare for Late Antique silver items. The ornamental bowl has an inscription with verses about the mythological hero Tantalus, and at least two more bowls have inscriptions that were carved additionally. It is to be expected that new details will be uncovered during the conservation and restoration process, such as inscriptions that may contain the names of owners, weight markings, workshops, or perhaps some Christian symbols and similar elements.

A number of the items are surely connected to imperial gift-giving (*largitiones*), which is why it will be especially interesting to see whether a solid link with emperors from the middle and second half of the 4<sup>th</sup> century can be found, especially those who can be directly linked to Cibalae. These are, first and foremost, Constantius II (337 – 361), who made camp with his army next to the town in AD 351, in preparation of the deciding battle against the usurper Magnentius, then the brothers Valentinian I (363 – 375) and Valens (363 – 378), emperors born in Cibalae, as well as Gratian (375 – 383) and Valentinian II (375 – 392), the sons and successors of Valentinian I.



## KATALOG

## CATALOGUE



Slika / Figure 18. Veliki pladanj s *niello* rozetom: kat. br. 1 / Large platter with *niello* rosette: cat. no. 1 (snimila / photo by V. Žarak).

### 1. Pladanj s *niello* rozetom

Dimenzije: promjer 57,5 cm, visina 1,5 – 2 cm; prstenasta noga: promjer 36,5 cm, visina 0,5 cm, debljina 0,5 cm; središnja rozeta: promjer 12,7 cm.

Masa: 4,65 kg.

Očuvanost: pladanj je relativno dobro očuvan, osim što mu je na jednoj strani odlomljen rub i manji ulomci između ruba i središnjeg dijela. Na središtu se nalazi mehanički probod nastao od udarca nastalog pri pronalasku ostave. *Niello* smjesa samo je djelomično očuvana. Na većem se dijelu pladnja sačuvao izvorni srebrni sjaj.

Opis: veliki kružni pladanj, ravnoga tijela, stoji na niskoj prstenastoj nozi (sl. 18). Uski je rub konveksan i blago uzdignut. Na središnjem dijelu nalazi se medaljon s prikazom rozete (sl. 10: 1). Motivi su izrađeni

### 1. Platter with *niello* rosette

Dimensions: diameter 57.5 cm, height 1.5 – 2 cm; ring base: diameter 36.5 cm, height 0.5 cm, thickness 0.5 cm; central rosette: diameter 12.7 cm.

Mass: 4.65 kg.

State of preservation: The platter is relatively well-preserved, aside from the rim being broken off on one side and some smaller broken pieces between the rim and the central part. There is a mechanical puncture in the centre, made by an impact on discovery of the hoard. The *niello* mixture is only partly preserved. On most of the platter, the original silver sheen has been preserved.

Description: A large circular platter, with a flat body, standing on a low ring base (fig. 18). The narrow rim is convex and slightly raised. The central part has a medallion with a rosette (fig.

žlijebljenjem i zatim ispunjeni plavo-sivom *niello* smjesom. Oko središnje točke nalazi se cvijet sa šest latica, uokolo je šest manjih kružnih rozeta, okruženih girlandama. Cijeli je prikaz uokviren tanjom kružnicom, motivom savinutih valova i tanjom kružnom linijom s izdancima na obje strane.

Funkcija: pladanj je korišten za serviranje hrane.

Literatura: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.

10: 1). The motifs were made by grooving and then filled with a blue-grey niello mixture. A flower with six petals is arranged around the central point; there are six smaller circular rosettes around it, surrounded by garlands. The whole image is framed by a thinner circle, a motif of winding waves, and a thinner circular line with tendrils on both sides.

Function: The platter was used to serve food.

References: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.



Slika / Figure 19. Veliki pladanj s rozetom: kat. br. 2 / Large platter with rosette: cat. no. 2 (snimila / photo by V. Žarak).

## 2. Pladanj s rozetom

Dimenzije: promjer 55,2 cm, visina 1,5 – 2 cm; prstenasta noga: promjer 39 cm, visina 0,5 cm, debljina 0,5 cm; središnja rozeta: promjer 13,5 cm.

Masa: 3,65 kg.

Očuvanost: pladanj je relativno dobro očuvan, odlomljeni su mu manji dijelovi između ruba i središnjeg dijela. Na sredini se

## 2. Platter with rosette

Dimensions: diameter 55.2 cm, height 1.5 – 2 cm; ring base: diameter 39 cm, height 0.5 cm, thickness 0.5 cm; central rosette: diameter 13.5 cm.

Mass: 3.65 kg.

State of preservation: The platter is relatively well-preserved, with some smaller pieces being broken off between the rim and the central



nalazi mehanički proboj nastao od udarca nastalog pri pronalasku ostave. Na cijeloj površini sačuvao se izvorni srebrni sjaj.

Opis: veliki kružni pladanj, ravnog tijela, stoji na niskoj prstenastoj nozi (sl. 19). Širi je rub stepenasto profiliran i uzdignut, završetak mu je ukrašen kombinacijom manjih okruglih i ovalnih perlica. Na središnjem dijelu nalazi se medaljon s rozetom (sl. 10: 2). Motivi su usječeni i ispunjeni tamnosivom *niello* smjesom. Oko središnje točke nalazi se rozeta sa šest širokih latica, okružena manjim obrubom. Uokolo je plitko izvedeni motiv izduženih latica, uokviren tankim bisernim obrubom. Prikaz je okružen tanjom trakom, ispunjenom girlandama i uokviren tankim bisernim obrubom.

Funkcija: pladanj je korišten za serviranje hrane.

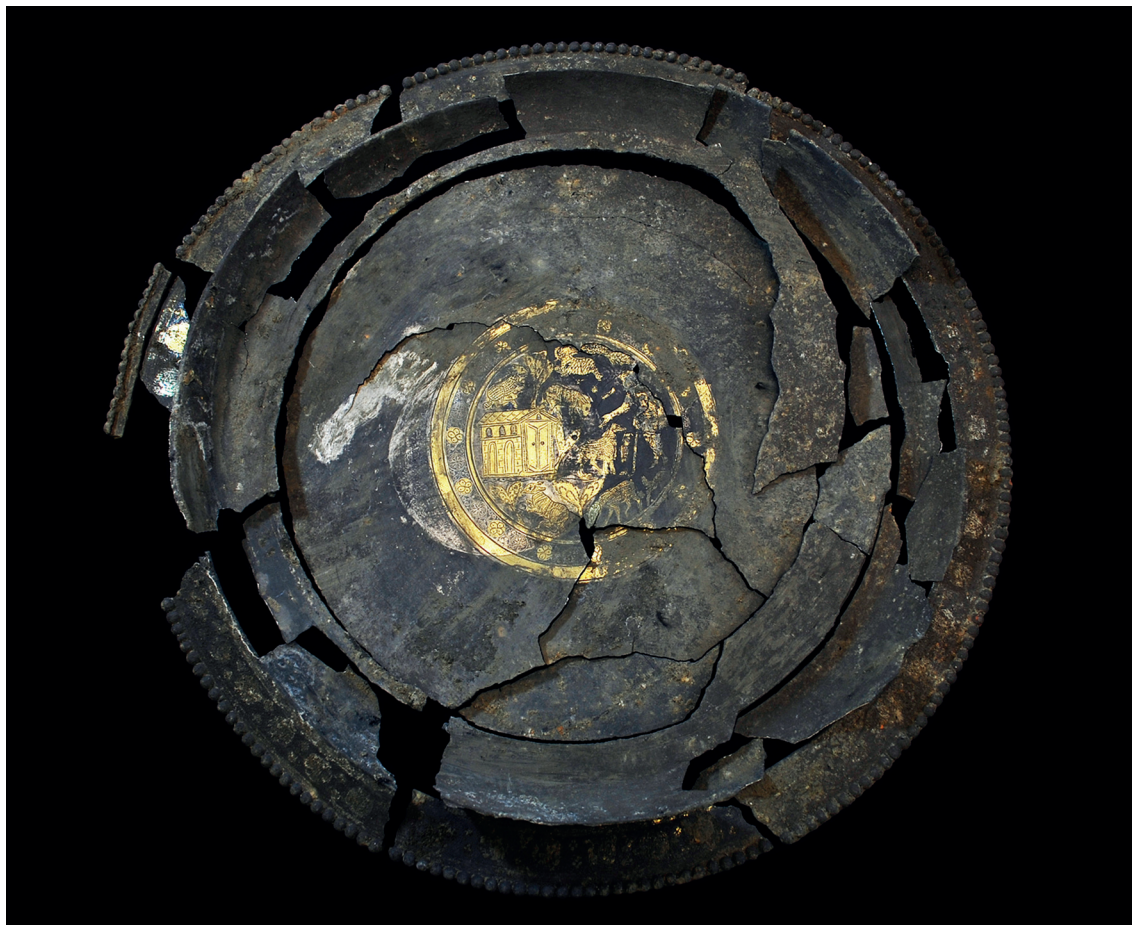
Literatura: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.

part. There is a mechanical puncture in the centre, made by an impact on discovery of the hoard. The original silver sheen has been preserved on the entire surface of the platter.

Description: A large circular platter, with a flat body, standing on a low ring base (fig. 19). The wider rim is stepped and raised, with its edge being decorated by a combination of smaller round and oval beads. The central part has a medallion with a rosette (fig. 10: 2). The motifs were carved and filled with a dark grey niello mixture. A rosette with six wider petals is arranged around the central point and framed by a smaller border. Around it is a shallow carved motif of elongated petals, framed by a narrow, pearl border. The image is surrounded by a narrow band filled with garlands and framed by a narrow, pearl border.

Function: The platter was used to serve food.

References: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.



Slika / Figure 20. Veliki pladanj s pastoralnim prikazom: kat. br. 3 / Large platter with pastoral scene: cat. no. 3 (snimila / photo by V. Žarak).



Slika / Figure 21. Mali medaljon na rubu velikog pladnja: kat. br. 3 / Small medallion on the rim of a large platter: cat. no. 3 (snimila / photo by V. Žarak).

### 3. Pladanj s pastoralnim prikazom

Dimenzije: promjer oko 65 cm, visina oko 6,7 cm; prstenasta noga: promjer 43,6 cm, visina 1,1 cm, debljina 0,5 cm; središnji medaljon: promjer 14,5 cm; medaljoni na rubu: promjer 2,4 cm.

Masa: 6,1 kg.

Očuvanost: pladanj je loše očuvan i izlomljen na nekoliko desetaka ulomaka. Srebro je potpuno potamnilo, a prikazi su velikim dijelom prekriveni srebrnom korozijom.

Opis: veliki kružni pladanj ravnoga konkavnog profila i širokoga horizontalnog ruba, stoji na niskoj prstenastoj nozi (sl. 20). Završetak je ruba ukrašen gustim bisernim nizom. Na središnjem dijelu nalazi se veliki medaljon s prikazom pastoralne scene, a na rubu niz od nekoliko desetaka malih kružnih medaljona (sl. 21). Ukrasi su izvedeni graviranjem, žlijebljenjem, urezivanjem, umetanjem *niello* smjese i pozlatom. Na središnjem medaljonu nalazi se prikaz pastira oslonjenog na štap, okruženog sa stadom od šest ovaca. Između se nalaze biljni motivi: stablo, razne listolike biljke i trava. Na lijevoj je strani prikazana građevina s dvoslivnim krovom, velikim vratima i tri prozora. Centralni je prikaz obrubljen tanjim pozlaćenim obrubom, uokvirenim dvjema žlijebljenim kružnicama. Zatim slijedi šira traka ispunjena manjim kružnim rozetama i girlandama, obrubljena širokim pozlaćenim obrubom, uokvirenim dvjema žlijebljenim kružnicama. Na širokom rubu pladnja nalaze se dvije zlatne trake između

### 3. Platter with pastoral image

Dimensions: diameter around 65 cm, height around 6.7 cm; ring base: diameter 43.6 cm, height 1.1 cm, thickness 0.5 cm; central medallion: diameter 14.5 cm; medallions on the rim: diameter 2.4 cm.

Mass: 6.1 kg.

State of preservation: The platter is poorly preserved and is broken into several dozen pieces. The silver is heavily tarnished, and the images are largely covered by a silver corrosion.

Description: A large circular platter, with a flat concave profile and a wide horizontal rim, standing on a low ring base (fig. 20). The rim's edge is adorned with a dense row of pearls. The central part has a large medallion depicting a pastoral scene, while the edge holds a row of several dozen small circular medallions (fig. 21). The decorations were made through engraving, grooving, carving, inserting a niello mixture, and gilding. The central medallion holds an image of a shepherd leaning on a staff, surrounded by a herd of six sheep. Between them we can observe certain vegetal motifs: a tree, various leafy plants, and grass. On the left side, we can see a building with a double-pitch roof, large doors, and three windows. The central image is bordered with a thinner gilded border, framed by two grooved circles. Around this is a wider band filled with smaller circular rosettes and garlands, and bordered with a wider gilded border, framed by two grooved circles. The wide rim of the platter has two golden bands, between which there are arranged several dozen (around 50) golden medallions, of which only two are somewhat



kojih je nanizano nekoliko desetaka (oko 50) kružnih medaljona, od kojih su samo dva donekle vidljiva. Prostor između medaljona ukrašen je manjim rozetama i drugim slabije vidljivim motivima. Prikazi su izvedeni graviranjem, urezivanjem i punciranjem, nakon čega je izvedena pozlata. Na dva su vidljiva medaljona prikazana poprsja muških osoba, okrenutih u lijevu i desnu stranu. Rubovi malih medaljona obrubljeni su istočkanim kružnicama.

S donje strane pladnja nalazi se natpis izveden punciranjem: (.)XXAQ. Prvi znak nije potpuno vidljiv, ali pretpostavljamo da označava masu libre ili rimske funte, XX predstavlja broj, odnosno označava masu predmeta u librama, a slova AQ predstavljaju početna slova radionice u Akvileji. Libra je u ono vrijeme iznosila oko 329 g, što bi značilo da je pladanj originalno težio 6,549 kg.

Funkcija: pladanj je korišten za pokazivanje i posluživanje hrane.

Literatura: Cahn, Kaufmann-Heinimann 1984, 206–224; Guggisberg 2003, 117–170; Mundell Mango, Bennett 1994, 55–97.

visible. The space between the medallions is decorated with smaller rosettes and other less visible motifs. The images were made through engraving, carving, and hallmarking, after which they were gilded. The two visible medallions depict male busts facing to the left and to the right. The edges of the small medallions are bordered with dotted circles.

The bottom of the platter holds an inscription made by hallmarking: (.)XXAQ. The first mark is not entirely visible, but we assume that it indicates the mass of the libra, or the Roman pound; XX represents a number, i.e. indicates the mass of the item in libras, while the letters AQ represent the initial letters of the workshop in Aquileia. At that time, the libra was equal to around 329 g, which would mean that the platter originally weighed 6.549 kg.

Function: The platter was used to display and serve food.

References: Cahn, Kaufmann-Heinimann 1984, 206–224; Guggisberg 2003, 117–170; Mundell Mango, Bennett 1994, 55–97.



Slika / Figure 22. Veliki neukrašeni pladanj: kat. br. 4 / Large unadorned platter: cat. no. 4 (snimila / photo by V. Žarak).

#### 4. Neukrašeni pladanj

Dimenzije: promjer oko 63 cm, visina oko 3 cm, širina ruba 2,2 cm; prstenasta noga: promjer 15,4 cm, visina 1,4 cm.

Masa: oko 3,67 kg.

#### 4. Unadorned platter

Dimensions: diameter around 63 cm, height around 3 cm, rim width 2.2 cm; ring base: diameter 15.4 cm, height 1.4 cm.

Mass: around 3.67 kg.

Očuvanost: pladanj je iznimno loše očuvan; izlomljen na više desetaka ulomaka, od kojih neki vjerojatno nisu sačuvani. Na manjem dijelu sačuvao se srebrni sjaj.

Opis: veliki kružni pladanj konkavnog profila stoji na manjoj prstenastoj nozi (sl. 22). Prijelaz između tijela i ruba čini nakošena stijenka, a široki ravni rub nakošen je prema van i završava profiliranim zadebljanjem. Oko središnje točke nalaze se dvije manje kružnice, izvedene žlijebljenjem, a širi je središnji dio uokviren složenijom profiliranom i žlijebljenom trakom.

Funkcija: pladanj je korišten za serviranje hrane.

Literatura: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.

State of preservation: The platter is extremely poorly preserved; it is broken into several dozen pieces, some of which have likely not been preserved. A silver sheen has been preserved on a smaller portion.

Description: A large circular platter, with a concave profile, standing on a low ring base (fig. 22). The wall of the platter between the body and the rim is slanted, and the wide level rim slanting out and ending in a thicker profile. There are two smaller fluted circles around the central point, and the wider central part is framed by a complexly formed and fluted band.

Function: the platter was used for serving food.

References: Cahn, Kaufmann-Heinimann 1984, 180–186, 189–193; Guggisberg 2003, 95–116; Hobbs 2010, 24–33.



Slika / Figure 23. Manji pladanj s lovačkim prikazima: kat. br. 5 / Smaller platter with hunting scene: cat. no. 5 (snimila / photo by V. Žarak).

### 5. Lovački pladanj

Dimenzije: promjer 31,1 cm, visina 3,5 cm, širina ruba 5,28 cm; prstenasta noga: promjer 11,58 cm, visina 6,5 mm, debljina 4 mm; središnji medaljon: promjer 9 cm.

Masa: 1,22 kg.

Očuvanost: pladanj je izlomljen na više dijelova, posebno tanki središnji dio između sredine i ruba. Srebrni sjaj sačuvao se samo manjim dijelom, dok su figuralni ukrasi uglavnom dobro vidljivi.

Opis: manji kružni pladanj konkavnog tijela stoji na niskoj prstenastoj nozi. Na širokom se rubu nalazi dvanaest udubljenja u obliku školjki jakobovih kapica, a kraj ruba završava gustim nizom od 146 većih kružnih bisera (sl. 23). Ukrašavanje je izvedeno umetanjem *niello* smjese i pozlatom. Na središnjem medaljonu nalazi se konjanik u lovu na lava. Konjanik je prikazan uzdignute desne ruke i manjim kopljem koje drži na lijevoj strani, dok mu na leđima vijori plašt. Na donjem dijelu nalazi se prikaz lava pogođenog drugim kopljem i pokraj njega ovalni štiti. Na lijevoj strani prikazano je stilizirano stablo. Središnji je prikaz uokviren dvjema tankim žlijebljenim kružnicama ispunjenim *niello* smjesom. Nakon toga slijedi šira traka, gusto ispunjena nejasnim motivom. Središnji je medaljon uokviren nizom različitih koncentričnih kružnica izvedenih pozlatom, žlijebljenjem i umetanjem *niello* smjese. Na rubu, između 12 udubljenja u obliku školjki, izmjenjuju se prikazi maski (6) s biljnim i životinjskim motivima (6), izvedenim urezivanjem, žlijebljenjem, pozlatom i umetanjem *niello* smjese. Biljni su prikazi dva stilizirana stabla, identična onomu na središnjem medaljonu. Životinjski prikazi dolaze u kombinaciji s manjom listolikom biljkom, a prikazane su dvije srne (?), leopard i zec. Prikazi su uokvireni dvjema žlijebljenim linijama ispunjenim *niello* smjesom i zlatnim okvirom.

Funkcija: pladanj je korišten za pokazivanje i posluživanje hrane.

Literatura: Popović 1994, 326, kat. br. 270; Leader-Newby 2004, 22–23, sl. 1.8.

### 5. Hunting platter

Dimensions: diameter 31.1 cm, height 3.5 cm, rim width 5.28 cm, ring base: diameter 11.58 cm, height 6.5 mm, thickness 4 mm; central medallion: diameter: 9 cm.

Mass: 1.22 kg.

State of preservation: the platter is fragmented into several pieces, especially the thin central part between the centre and the rim. The silver sheen was sparsely preserved, while the figural motifs are mostly fairly visible.

Description: smaller circular platter of concave body on a short ring base. The wide rim holds twelve indentations in the shape of the Mediterranean scallop (*Pecten jacobaeus*), and ends in a line of 146 large circular pearls (fig. 23). The platter was adorned by inlay of niello and gilding. The central medallion depicts a horseman hunting a lion. The horseman has his right arm raised, and is holding a short spear on his left side, while a cape flutters behind him. The lion is depicted at the bottom, struck by another spear and next to an oval shield. A stylized tree is depicted to the left. The central image is framed by two thin fluted circles inlaid with niello mixture. The two circles are followed by a wide track densely filled with an unclear motif. The central medallion is framed by a line of different concentric gilded, fluted, and niello circles. Between the 12 indentations in the form of shells, there are masks (6) interchanging with floral and animal motifs (6), done by carving, grooving, gilding and inlaying niello mixture. The floral motifs are two stylised trees identical to the tree in the central medallion. The animal motifs are complemented by a smaller leafy plant, and include two does (?), a leopard, and a rabbit. The motifs are framed by two grooves filled with niello mixture and with a golden rim.

Function: the platter was used to display and serve food.

References: Popović 1994, 326, cat. no. 270; Leader-Newby 2004, 22–23, fig. 1.8.





Slika / Figure 24. Velika kanelirana zdjela za vodu: kat. br. 6 / Large fluted water bowl: cat. no. 6 (snimila / photo by V. Žarak).

#### 6. Velika kanelirana zdjela

Dimenzije: promjer 51,2 cm, visina 11,4 cm, širina ruba 2,7 cm; prstenasta noga: promjer 13,6 cm, visina 0,4 cm, debljina 0,3 cm. Masa: 2,5 kg.

Očuvanost: zdjela je relativno dobro očuvana, osim što je istrunula i ispucala na nekoliko mjesta, a odlomljeni su i manji dijelovi ruba. Unutarnja je strana prekrivena korozijom, dok je na većem dijelu vanjske površine sačuvan srebrni sjaj.

Opis: velika zdjela koničnog tijela, na niskoj kružnoj nozi sa širim horizontalnim rubom (sl. 24). Kanelirane se stijenke blago šire prema gore i završavaju širim rubom, ukrašen plitkim žljebljenjem manjih okomitih traka.

Funkcija: zdjela je korištena za držanje vode u kojoj su se prale ruke i lice.

Literatura: Painter 1977, 29; Cahn, Kaufmann-Heinimann 1984, 133–136, 159–164; Mundell Mango, Bennett 1994, 427–441.

#### 7. Posuda s lavljim glavama i alkama

Dimenzije: promjer 51,2 cm, visina 11,4 cm, širina ruba 2,7 cm; prstenasta noga: promjer 13,6 cm, visina 0,4 cm, debljina 3 mm. Masa: oko 2,9 kg.

Očuvanost: odlomljen je veći komad posu-

#### 6. Large fluted bowl

Dimensions: diameter 51.2 cm, height 11.4 cm, rim width 2.7 cm; ring base: diameter 13.6 cm, height 0.4 cm, thickness 0.3 cm.

Mass: 2.5 kg.

State of preservation: the bowl is relatively well preserved, despite being corroded and cracked in several places, and several smaller pieces of the rim are broken off. The inside of the bowl is covered in corrosion, while the silver sheen was mostly preserved on the outside.

Description: large bowl with conic body, on a short circular base with a wide horizontal rim (fig. 24). The fluted walls grow slightly wider toward the rim and end in a wide rim decorated with shallow fluting of smaller vertical bands.

Function: the bowl was used to hold water used for washing the face and hands.

References: Painter 1977, 29; Cahn, Kaufmann-Heinimann 1984, 133–136, 159–164; Mundell Mango, Bennett 1994, 427–441.

#### 7. Vessel with lion heads and rings

Dimensions: diameter 51.2 cm, height 11.4 cm, rim width 2.7 cm; ring base: diameter 13.6 cm, height 0.4 cm, thickness 3 mm.

Mass: approximately 2.9 kg.

State of preservation: a larger piece of the ves-





Slika / Figure 25. Plitka posuda s lavljim glavama i alkama za vješanje kat. br. 7 / Shallow vessel with lion heads and suspension rings: cat. no. 7 (snimila / photo by V. Žarak).

de, a na mjestu loma nedostaju sitni ulomci. Lavlje su glave s alkama odlijepljene od vanjskih stijenki posude. Cijela je površina potamnjela i nema sačuvan srebrni sjaj.

Opis: široka plitka zdjela na manjoj prstenastoj nozi (sl. 25). Okomite stijenke završavaju užim profiliranim rubom na čijem se vrhu nalazi gusti biserni niz. Na vanjskim stijenkama nalazile su se zalemljene tri lavlje glave s profiliranim kružnim alkama, provučenim kroz lavlje čeljusti. Alke su korištene za vješanje posude na tronožnom stalku.

Funkcija: posuda je korištena za serviranje hrane ili manjih posuda s hranom i pićem.

Literatura: Kaiseraugst 1984, 397, sl. 156; Hobbs 2012, 47, sl. 30; Mráv 2012, 94, sl. 22a-b.

#### 8. Kanelirani vrč

Dimenzije: visina 25,5 cm, širina 12,7 cm, širina dna 9,1 cm, širina otvora 8,5 cm; dužina ručke 16 cm (sačuvani dio).

Masa: 773 g.

Očuvanost: vrč je loše očuvan, odlomljeni su mu dno i ručka. Površina je potpuno prekrivena srebrnom korozijom.

Opis: vrč kruškolikog tijela na niskoj stopi s koničnim vratom koji završava oblikovanim izljevom (sl. 26). Tijelo je ukrašeno

sel is broken off, and tiny fragments are missing around the crack. The lion heads with rings are separated from the outside walls of the vessel. The whole surface of the vessel has darkened and no silver sheen has been preserved.

Description: a wide shallow bowl on a small ring base (fig. 25). The vertical walls end in a thinly formed rim with a dense pearl line. Three lion heads with formed rings running through the lions' maws were soldered to the outside walls of the vessel. The rings were used to suspend the vessel from a tripod.

Function: the vessel was used to serve food and smaller vessels with food and drink.

References: Kaiseraugst 1984, 397, fig. 156; Hobbs 2012, 47, fig. 30; Mráv 2012, 94, fig. 22a-b.

#### 8. Fluted pitcher

Dimensions: height 25.5 cm, width 12.7 cm, bottom width 9.1 cm, mouth width 8.5 cm; handle length 16 cm (preserved part).

Mass: 773 g.

State of preservation: the pitcher is in a bad state of preservation; its bottom and handle are broken off. The surface is completely covered in silver corrosion.

Description: pitcher with pear-like body on a short base with a conical neck which ends in a shaped spout (fig. 26). The body is decorated



Slika / Figure 26. Vrš kaneliranog tijela: kat. br. 8 / Fluted pitcher: cat. no. 8 (snimila / photo by V. Žarak).

okomitim kanelurama, a stopa s bisernim nizom. Noga ima konveksnu profilaciju. Ručka „S“ oblika i četvrtastog presjeka spaja trbuh i otvor vrča. Donji je kraj ručke oblikovan u manju listoliku pločicu koja je bila zalemljena na trbuhu, a gornji kraj završava ukrašenim proširenjem, oblikovanim prema širini otvora na koji se spajalo proširenje. Na vrhu drške nalazi se manja istaka koja je omogućavala lakše držanje pri izlivanju tekućine.

Funkcija: vrč je korišten za držanje vode ili vina.

Literatura: Mundell Mango, Bennett 1994, 240–426; Baratte 1993, 73–78.

#### 9. Vrš

Dimenzije: visina 29,4 cm, širina 11,9 cm, širina dna 9,30 cm, širina otvora 8,6 cm, dužina ručke 19,5 cm.

Masa: 856 g.

Očuvanost: vrč je loše očuvan, odlomljeni su mu ručka i stopa. Na tijelu ima nekoliko



Slika / Figure 27. Vrš izduženog tijela: kat. br. 9 / Elongated pitcher: cat. no. 9 (snimila / photo by V. Žarak).

with fluting, while the base is decorated with a pearl line. The foot has conical profilation. The handle in the shape of an „S“ and with a rectangular cross section connects the belly and the mouth of the pitcher. The lower end of the handle is shaped into a small leaf-like plate soldered to the belly, while the upper end has a wider decoration, shaped according to the width of the mouth the wider part of the handle was connected to. On the very top of the handle, there is a small bulge that facilitated easier handling during pouring.

Function: the pitcher was used for serving water and wine.

References: Mundell Mango, Bennett 1994, 240–426; Baratte 1993, 73–78.

#### 9. Pitcher

Dimensions: height 29.4 cm, width 11.9 cm, bottom width 9.3 cm, mouth width 8.6 cm, handle length 19.5 cm.

Mass: 856 g.

State of preservation: the pitcher is in a bad state of preservation; its handle and foot are

oštećenja i udubljenja. Površina je potpuno prekrivena korozijom.

Opis: vrč jajolikog tijela, stoji na niskoj stopi. Cilindrični vrat ima konveksno oblikovanje s kružnim otvorom bez oblikovanog izlijeva (sl. 27). Okomita ručka četvrtastog presjeka spaja trbuh i vrat vrča. Ručka je na donjem dijelu završavala manjim listolikim proširenjem koje je bilo zalemljeno na trbuh vrča, a gornji je dio imao polumjesečasti završetak koji prati oblik otvora.

Funkcija: vrč je korišten za držanje vode ili vina.

Literatura: Ivanovski 1987, 83; Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426; Popović 2013, 81, sl. 7.9.

broken off. There are several cracks and indentations on the body. The surface is completely covered in corrosion.

Description: pitcher with egg-like body, on a short base. The cylindrical neck is convexly shaped, and has a circular mouth with no spout (fig. 27). A vertical handle with a rectangular cross section connects the belly and the neck of the pitcher. The lower end of the handle ends in a leaf-like widening which was soldered to the belly of the pitcher, while the upper end of the handle had a crescent moon ending following the shape of the mouth.

Function: the pitcher was used for water and wine.

References: Ivanovski 1987, 83; Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426; Popović 2013, 81, fig. 7.9.



Slika / Figure 28. Vrč: kat. br. 10 / Wide pitcher: cat. no. 10 (snimila / photo by V. Žarak).

#### 10. Vrč

Dimenzije: visina 30 cm, širina 14,5 cm, širina stope 8,9 cm, dužina ručke 22,8 cm.

Masa: 776 g.

Očuvanost: vrč je loše očuvan, odlomljeni su mu vrat i ručka, a dio je tijela izlomljen na manje dijelove. Cijela je površina potpuno prekrivena jakom srebrnom korozijom.



Slika / Figure 29. Vrč s poklopcem: kat. br. 11 / Pitcher with lid: cat. no. 11 (snimila / photo by V. Žarak).

#### 10. Pitcher

Dimensions: height 30 cm, width 14.5 cm, base width 8.9 cm, handle length 22.8 cm.

Mass: 776 g.

State of preservation: the pitcher is in a bad state of preservation; its neck and handle are broken off, and a part of the body is broken into smaller pieces. The whole surface is covered in prominent silver corrosion.

Opis: vrč širokog tijela, stoji na stopi ukrašenoj bisernim nizom i niskoj nozi s konveksnim oblikovanjem (sl. 28). Viši cilindrični vrat ima oblikovan izljev. Trbuh i otvor vrča spojeni su savinutom drškom četvrtastog i zaobljenog presjeka. Na donjem je kraju ručke oblikovana listolika pločica koja je bila zalemljena za trbuh posude. Na gornjem kraju ručka završava proširenjem ukrašenim volutama i oblikovanima prema širini vrata s kojim je bila spojena. Na vrhu drške nalazi se okomito postavljena istaka koja je omogućavala lakše držanje pri izlivanju tekućine.

Funkcija: vrč je korišten za držanje vode ili vina.

Literatura: Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.

#### 11. Vrč s poklopcem

Dimenzije: širina 12,6 cm, visina 24 cm, širina dna 7,9 cm, visina vrata 7 cm, širina vrata 4,3 cm, dužina ručke 19 cm.

Masa: 662 g.

Očuvanost: vrč je loše očuvan, odlomljeni su mu poklopac, vrat, ručka i dno. Cijela je površina potpuno prekrivena jakom srebrnom korozijom.

Opis: vrč širokog tijela, stoji na niskoj prstenastoj stopi s cilindričnim vratom i kružnim otvorom (sl. 29). Drška „S“ oblika i zaobljenog presjeka spaja trbuh i otvor vrča. Na donjem kraju završava u obliku kružne pločice, koja je bila zalemljena na trbuh vrča, a gornji kraj završava polukružnim proširenjem oblikovanim prema širini otvora. Na sredini proširenja nalazio se zglob na koji se spajao mali kružni poklopac koji se poklapa sa širinom otvora. Na vrhu drške nalazi se mala istaka koja je omogućavala lakše držanje pri izlivanju tekućine iz vrča. Vrat i gornji dio poklopca ukrašeni su plitkim, horizontalno postavljenim kanelurama.

Funkcija: vrč je korišten za držanje vode ili vina.

Literatura: Popović 1994, 327, kat. br. 271; Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.

Description: pitcher with wide body, on a base decorated with a pearl line on a convex foot (fig. 28). The tall cylindrical neck has a formed spout. The belly and mouth of the pitcher are connected by a bended handle with a rounded quadrangle cross section. On the lower end of the handle, there is a leaf-like plate that was soldered to the belly. The upper end of the handle ends in a widening following the shape of the neck it was connected to, adorned with volutes. There is a vertical bulge that facilitated easier handling during pouring.

Function: the pitcher was used for water and wine.

References: Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.

#### 11. Pitcher with lid

Dimensions: width 12.6 cm, height 24 cm, bottom width 7.9 cm, neck height 7 cm, neck width 4.3 cm, handle length 19 cm.

Mass: 662 g.

State of preservation: the pitcher is in a bad state of preservation, its lid, neck, handle, and bottom are broken off. The whole surface is completely covered in prominent silver corrosion.

Description: pitcher of wide body, on a short round base, with a cylindrical neck and round mouth (fig. 29). The “S” shaped handle with a round cross section connects the belly to the mouth of the pitcher. The lower end of the handle ends in a circular plate, which was soldered to the belly of the pitcher. The upper end of the handle ends with a semi-circular widening shaped according to the width of the mouth. In the middle of the widening, there was a joint which connected the small circular lid which coincides in size with the mouth. There is a small bulge at the top of the handle that facilitated easier handling during pouring. The neck and the upper part of the lid are decorated with shallow, horizontal fluting.

Function: the pitcher was used for water and wine.

References: Popović 1994, 327, cat. no. 271; Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.





Slika / Figure 30. Izlomljeni vrč s poklopcem: kat. br. 12 / Fragmented pitcher with lid: cat. no. 12 (snimila / photo by V. Žarak).

### 12. Vrč s poklopcem

Dimenzije: visina oko 24,5 cm, širina 12 cm, širina dna 8,7 cm, visina vrata 7,5 cm, dužina ručke 18,5 cm.

Masa: oko 597 g (sačuvani dio).

Očuvanost: vrč je izlomljen na nekoliko desetaka ulomaka. Moguće je da je dio ulomaka izgubljen prije vađenja ostave. Cijela je površina prekrivena jakom srebrnom korozijom.

Opis: vrč širokog tijela, stoji na niskoj, koničnoj stopi i povišenoj nozi s konveksnim proširenjem (sl. 30). Drška „S“ oblika i poligonalnog presjeka spaja trbuh i otvor vrča. Na donjem kraju završava manjim listolikim proširenjem koje je bilo zalemljeno na trbuh vrča. Gornji kraj završava polumjesčastim proširenjem oblikovanim prema širini otvora na koji se spaja. Na sredini proširenja nalazi se zglobni pregib s djelomično sačuvanim poklopcem. Rub je stope ukrašen bisernim nizom, a vrat nizom urezanih kružnica.

Funkcija: vrč je korišten za držanje vode ili vina.

Literatura: Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.

### 12. Pitcher with lid

Dimensions: approximate height 24.5 cm, width 12 cm, bottom width 8.7 cm, neck height 7.5 cm, handle length 18.5 cm.

Mass: approximately 597 g (preserved part).

State of preservation: the pitcher is broken into several dozen fragments. It is possible that some of the fragments were lost before the hoard was excavated. The whole surface is covered in prominent silver corrosion.

Description: pitcher of tall body, on a short, conical base and an elevated foot with a convex widening (fig. 30). An “S” shaped handle with a polygonal cross section connects the belly with the mouth of the pitcher. The lower part of the handle ends in a leaf-like plate soldered to the belly of the pitcher. The upper end of the handle ends in a lunate widening shaped according to the width of the mouth it was attached to. In the middle of the widening, there is a joint with a partially preserved lid. The bottom edge of the base is decorated with a pearl line, while the neck is decorated with a line of incised circles.

Function: the pitcher was used for water and wine.

References: Baratte 1993, 73–78; Mundell Mango, Bennett 1994, 240–426.



Slika / Figure 31. Kutija za čuvanje parfema: kat. br. 13 / Perfume box: cat. no. 13 (snimila / photo by V. Žarak).

### 13. Kutija za parfem

Dimenzije: visina kutije 22 cm, širina 16,5 cm; promjer drške 4,8 cm.

Masa: oko 841 g.

Očuvanost: kutija je loše očuvana. Odlomljeni su joj dno, dijelovi stijenki i rubni dio poklopca. Svi dijelovi kutije, osim unutarnje strane dna, prekriveni su jakim srebrnom korozijom.

Opis: kutija cilindričnog tijela i ravnog dna, ima konični poklopac s kuglastom drškom na vrhu (sl. 31). Na unutarnjim stijenka- ma kutije bile su zalemljene tri pločice „L“ oblika na kojima je stajao perforirani nosač (kat. br. 37), koji je služio za držanje cilindrične kutijice (kat. br. 32) i amforiska (kat. br. 33). Kutija i poklopac bili su spojeni zalemljenim zglobnim pločicama. Poklopac je imao i kukicu obješenu na alki, čiji se kraj mogao zakačiti na ušicu pričvršćenu na prednjoj strani kutije. Tri su lanca izrađena od niza karičica u obliku broja „8“. Na vrhu su se spajali na alku, dok su na donjim krajevima imali listolike pločice koje su bile zalemljene na vanjske stijenke kutije. Kutija i poklopac ukrašeni su spiralnim okomitim žljebovima. Na gornjem dijelu drške nalazi se rozeta, izvedena plitkim žlijebljenjem.

Funkcija: kutija je korištena za čuvanje i upotrebu parfema.

Literatura: Mundell Mango, Bennett 1994, 444–473.

### 13. Perfume box

Dimensions: box height 22 cm, width 16.5 cm; handle diameter 4.8 cm.

Mass: approximately 841 g.

State of preservation: the box is in a bad state of preservation. The bottom, parts of the walls, and a marginal part of the lid are broken off. All parts of the box, except the inner side of the bottom, are covered in prominent silver corrosion.

Description: box of cylindrical body and flat bottom, with a conical lid with a spherical handle on the top (fig. 31). Three “L” shaped plates were soldered to the inner walls of the box, supporting a perforated stand (cat. no. 37), which was used to hold a cylindrical box (cat. no. 32) and an amphorisk (cat. no. 33). The box and the lid were connected by hinge plates that were soldered on. The lid also had a hook suspended from a ring. The end of the hook could be hooked to a ring on the front side of the box. Three chains were made out of a series of links in the shape of the number “8”. Their upper ends connected to a ring, while the lower part ended in leaf-like plates soldered to the outside walls of the box. The box and lid are decorated with vertical spiral grooves. On the upper part of the handle, there is a rosette of shallow grooves.

Function: the box was used to store and use perfume.

References: Mundell Mango, Bennett 1994, 444–473.



Slika / Figure 32. Ukrasna zdjelica s figuricom Tantala: kat. br. 14 / Decorative vessel with a figurine, an inscription, and a gilded frieze: cat. no. 14 (snimila / photo by V. Žarak).

## 14. Tantalova zdjelica

Dimenzije: širina 19,4 cm, visina 8,2 cm, debljina 3,8 cm; prstenasta stopa: promjer 6,9 cm, visina 2,1 cm, debljina 2 mm; figurica: visina 6,3 cm, širina 6,3 – 5,8 cm, cjevčica: visina 3,6 cm, promjer na dnu 1,8 cm, promjer na vrhu 1,3 cm; promjer otvora u sredini posude 1,37 cm; promjer diska s natpisom 5,8 cm.

Masa: 811 g.

Očuvanost: posuda je vrlo dobro očuvana, osim što su odlijepljene pločica s natpisom, cjevčica i figurica. Figurica je dijelom oštećena, glava joj je raspuknuta i nedostaje joj lijeva ruka. Pozlaćeni friz i natpis na unutarnjoj stijenci prekriveni su slojem srebrne korozije.

Opis: zdjelica debelih stijenki, koničnog tijela na niskoj šupljoj nozi, ukrašenoj rezanjem. Na dnu je noge bio zalemljen kružni disk s ugraviranim natpisom: ANTONINVS FECIT AQVIL. („Izradio Antonin u Akvileji“). U unutrašnjosti posude nalazila se figurica na stožastom postolju koje je bilo zalemljeno na sredini posude (sl. 32). Na sredini posude, ispod figurice i postolja, nalazio se manji kružni otvor na koji je bila zalemljena jednako široka cjevčica. Šuplje postolje na dnu ima četiri polukružna otvora, koji su zajedno s cjevčicom i otvorom omogućavali da iz posude isteče dio ulivene tekućine. Na unutarnjim stijenkama nalazi se pozlaćeni friz s figuralnim prikazima koji najvjerojatnije predstavljaju scene iz grčke mitologije. Ispod se nalazi široka traka uokvirena dvjema zlatnim linijama, na kojoj se nalazi natpis: AVARI DESCRIBVNTVR QVOS CIRCVMFLVIT / VSVS BONORVM SED NIL POSSVNT TANGERE, koji bi se mogao prevesti u smislu: „Škraci su ljudi okruženi dobrima koja ne mogu dotaknuti“. Velika slova latinske kapitale najvjerojatnije su izrađena žlijebljenjem i zatim ispunjena *niello* smjesom.

Funkcija: posuda je korištena za ukras i pokazivanje.

Literatura: Odobescu 1976, 627–654.

## 14. Tantalus' bowl

Dimensions: width 19.4 cm; height 8.2 cm, thickness 3.8 cm; ring base: diameter 6.9 cm, height 2.1 cm, thickness 2 mm; figurine: height 6.3 cm, width 6.3–5.8 cm, tube: height 3.6 cm, bottom diameter 1.8 cm, top diameter 1.3 cm; diameter of the opening in the middle of the vessel 1.37 cm; diameter of the disk with an inscription 5.8 cm.

Mass: 811 g.

State of preservation: the vessel is in a very good state of preservation, except for the plate with the inscription, the tube, and the figurine being broken off. The figurine is partially damaged, its head is cracked and it is missing its left arm. The gilded frieze and the inscription on the inner wall are covered in a layer of silver corrosion.

Description: small bowl with thick walls, with a conical body on a short, hollow foot adorned with incisions. A circular disk was soldered to the bottom of the foot with the engraved inscription: ANTONINVS FECIT AQVIL. („Made by Antoninus in Aquileia“). The inside of the vessel held a figurine on a conical stand soldered to the middle of the vessel (fig. 32). In the middle of the vessel, under the figurine and stand, there is a small circular opening onto which an equally wide tube was soldered. The hollow stand has four semi-circular openings on the bottom, which, along with the tube and the opening, allowed some of the liquid inside to pour out. On the inner walls of the vessel, there is a gilded frieze with figural images that most likely represent scenes from Greek mythology. There is a wide band below framed with two golden lines, and an inscription on it: AVARI DESCRIBVNTVR QVOS CIRCVMFLVIT / VSVS BONORVM SED NIL POSSVNT TANGERE, which can be translated as: „Misers are people surrounded with goods they cannot touch“. The capital Latin letters were probably made by grooving and then filled with *niello* mixture.

Function: the vessel was used as an ornament and for displaying.

References: Odobescu 1976, 627–654.



Slika / Figure 33. Veća zdjelica širokog ruba: kat. br. 15 / Larger small bowl with wide rim: cat. no. 15 (snimila / photo by V. Žarak).

#### 15. Zdjelica širokog ruba

Dimenzije: promjer 23,6 cm, visina 7,2 cm, širina ruba 3,5 cm; prstenasta stopa: promjer 7,45 cm, visina 1,15 cm, debljina 1,5 cm.

Masa: 855 g.

Očuvanost: zdjelica je vrlo dobro očuvana i ne sadrži nikakva oštećenja. Cijela je površina prekrivena srebrnom korozijom.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi s izrazito širokim rubom (sl. 33). Završetak je ruba okrenut prema dolje i blago savinut prema unutrašnjosti posude. Na površini nisu vidljivi nikakvi ukrasi.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158.

#### 16. Toaletna zdjelica

Dimenzije: promjer 23,5 cm, visina 5,5 cm, širina ruba 3,3 cm; središnje ispupčenje: promjer 5,7 cm, visina 1,8 cm; prstenasta stopa: promjer 7,96 cm, visina 0,7 cm, debljina 2,1 cm.

Masa: 654 g.



Slika / Figure 34. Toaletna zdjelica s ispupčenjem: kat. br. 16 / Toiletry bowl with bulge: cat. no. 16 (snimila / photo by V. Žarak).

#### 15. Small bowl with wide rim

Dimensions: diameter 23.6 cm, height 7.2 cm, rim width 3.5 cm; ring base: diameter 7.45 cm, height 1.15 cm, thickness 1.5 cm.

Mass: 855 g.

State of preservation: the small bowl is very well preserved and shows no apparent damage. The whole surface is covered in silver corrosion.

Description: small bowl with conical body on a short ring base with an exceptionally wire rim (fig. 33). The edge of the rim turns downward and is slightly bent toward the inside of the vessel. There are no visible decorations on the surface.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158.

#### 16. Toiletry bowl

Dimensions: diameter 23.5 cm, height 5.5 cm, rim width 3.3 cm; central bulge: diameter 5.7 cm, height 1.8 cm; ring base: diameter 7.96 cm, height 0.7 cm, thickness 2.1 cm.

Mass: 654 g.



Očuvanost: posuda je relativno dobro očuvana, osim što je na jednome mjestu stijenka istrunula i ispucala. Na velikom je dijelu površine sačuvan srebrni sjaj.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi, s kružnim ispupčenjem na središnjem dijelu (sl. 34). Široki, horizontalni rub završava vertikalnim dijelom, na čijemu se vrhu nalazi biserni niz. Ostali su ukrasi dvije urezane koncentrične kružnice oko središnjeg ispupčenja i dvije kružnice te profilacija na rubu. Zdjelica i ogledalo, koje je služilo i kao poklopac (kat. br. 34), bili su dio jednog predmeta.

Funkcija: dio ženskoga toaletnog servisa.

State of preservation: the vessel is in a relatively good state of preservation, except having a heavily corroded and cracked portion of a wall. Silver sheen was preserved on a large portion of the surface.

Description: small bowl of conical body on a short ring base with a circular bulge in its central part (fig. 34). The wide, horizontal rim ends in a vertical part with a pearl line on top. It is also adorned by two incised concentric circles around the central bulge, and two circles and a profilation on the rim. The small bowl and the mirror, which served as the lid (cat. no. 34), were two pieces of a single item.

Function: part of a woman's toiletry set.



Slika / Figure 35. Zdjelica širokog ruba: kat. br. 17 / Small bowl with wide rim: cat. no. 17 (snimila / photo by V. Žarak).

### 17. Zdjelica

Dimenzije: promjer 16,1 cm, visina 5 cm, širina ruba 2,62 cm; prstenasta stopa: promjer 5,38 cm, visina 6 mm, debljina 1 mm.

Masa: 286 g.

Očuvanost: posuda je dobro očuvana sa srebrnim sjajem po cijeloj površini. Na jednom je manjem dijelu stijenka istrunula i napukla.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi, s izrazito širokim rubom (sl. 35). Završetak širokog, horizontalnog ruba okrenut je prema dolje. U sredini posude nalazi se središnja točka, uokvirena trima



Slika / Figure 36. Zdjelica širokog ruba: kat. br. 18 / Small bowl with wide rim: cat. no. 18 (snimila / photo by V. Žarak).

### 17. Small bowl

Dimensions: diameter 16.1 cm, height 5 cm, rim width 2.62 cm; ring base: diameter 5.38 cm, height 6 mm, thickness 1 mm.

Mass: 286 g.

State of preservation: the vessel is in a good state of preservation with a silver sheen across the whole surface. The wall is corroded and cracked on one minor portion of the vessel.

Description: a small bowl of conical body on a short ring base with an exceptionally wide rim (fig. 35). The edge of the wide, horizontal rim turns downward. In the middle of the vessel, there is a central point framed by three con-

žlijebljenim koncentričnim kružnicama. Plitke su kružnice vidljive i na rubu posude.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

#### 18. Zdjelica

Dimenzije: promjer 16,1 cm, visina 4,8 cm, širina ruba 2,6 cm; promjer dna 5,42 cm.

Masa: 254 g.

Očuvanost: posuda je relativno dobro očuvana s djelomično vidljivim srebrnim sjajem. Na većem dijelu ruba nalazi se lom.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi s izrazito širokim rubom (sl. 36). Završetak širokog, horizontalnog ruba okrenut je prema dolje. Na sredini posude nalazi se središnja točka uokvirena trima žlijebljenime koncentričnim kružnicama. Plitke su kružnice vidljive i na rubu posude.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

centric circles done by grooving. Shallow circles are also visible along the rim of the vessel.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

#### 18. Small bowl

Dimensions: diameter 16.1 cm, height 4.8 cm, rim width 2.6 cm; bottom diameter 5.42 cm.

Mass: 254 g.

State of preservation: the vessel is in a relatively good state of preservation with partially visible silver sheen. There is a crack along a larger portion of the rim.

Description: a small bowl of conical body on a short ring base with an exceptionally wide rim (fig. 36). The edge of the wide, horizontal rim turns downward. In the middle of the vessel, there is a central point framed by three concentric circles done by grooving. Shallow circles are also visible along the rim of the vessel.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.



Slika / Figure 37. Zdjelica širokog ruba: kat. br. 19 / Small bowl with wide rim: cat. no. 19 (snimila / photo by V. Žarak).



Slika / Figure 38. Zdjelica širokog ruba: kat. br. 20 / Small bowl with wide rim: cat. no. 20 (snimila / photo by V. Žarak).

## 19. Zdjelica

Dimenzije: promjer 16 cm, visina 4,8 cm, širina ruba 2,6 cm; prstenasta stopa: promjer 5,3 cm, visina 0,6 cm, debljina 0,2 cm.

Masa: 253 g.

Očuvanost: posuda je loše očuvana jer joj je odlomljen veći dio ruba. Na većem je dijelu površine sačuvan srebrni sjaj.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi, s izrazito širokim rubom (sl. 37). Završetak širokog, horizontalnog ruba okrenut je prema dolje. Na sredini posude nalazi se središnja točka uokvirena trima žlijebljenim koncentričnim kružnicama. Plitke su kružnice vidljive i na rubu posude.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

## 19. Small bowl

Dimensions: diameter 16 cm, height 4.8 cm, rim width 2.6 cm; ring base: diameter 5.3 cm, height 0.6 cm, thickness 0.2 cm.

Mass: 253 g.

State of preservation: the vessel is in a bad state of preservation because a large portion of the rim is broken off. The silver sheen was preserved on a large portion of the vessel.

Description: a small bowl of conical body on a short ring base with an exceptionally wide rim (fig. 37). The edge of the wide, horizontal rim turns downward. In the middle of the vessel, there is a central point framed by three concentric circles done by grooving. Shallow circles are also visible along the rim of the vessel.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

## 20. Zdjelica

Dimenzije: promjer 17 cm, visina 4,6 cm, širina ruba 2,2 cm; prstenasta stopa: promjer 5,5 cm, visina 0,6 cm, debljina 1,8 cm.

Masa: 254 g.

Očuvanost: posuda je loše očuvana, odlomljen joj je veći dio ruba i stijenka. Na većem je dijelu površine sačuvan srebrni sjaj.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi, s izrazito širokim rubom (sl. 38). Završetak širokog, horizontalnog ruba okrenut je prema dolje. Na sredini posude nalazi se središnja točka uokvirena trima žlijebljenim koncentričnim kružnicama. Plitke su kružnice vidljive i na rubu posude.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158.

## 20. Small bowl

Dimensions: diameter 17 cm, height 4.6 cm, rim width 2.2 cm; ring base: diameter 5.5 cm, height 0.6 cm, thickness 1.8 cm.

Mass: 254 g.

State of preservation: the vessel is in a bad state of preservation; a large portion of its rim and wall is broken off. The silver sheen was preserved on a large portion of the vessel.

Description: a small bowl of conical body on a short ring base with an exceptionally wide rim (fig. 38). The edge of the wide, horizontal rim turns downward. In the middle of the vessel, there is a central point framed by three concentric circles done by grooving. Shallow circles are also visible along the rim of the vessel.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158.



Slika / Figure 39. Zdjelica s rozetom: kat. br. 21 / Small bowl with rosette: cat. no. 21 (snimila / photo by V. Žarak).

#### 21. Zdjelica s rozetom

Dimenzije: promjer 13,1 cm, visina 4,8 cm, širina ruba 1,18 cm; prstenasta stopa: promjer 4,45 cm, visina 0,7 – 0,8 cm, debljina 1,4 cm; promjer rozete 4,7 cm.

Masa: 136 g.

Očuvanost: zdjelica je lošije očuvana. Prelomljena je na dva dijela, a na mjestu loma nedostaju sitni dijelovi stijenki.

Opis: zdjelica koničnog tijela, stoji na niskoj prstenastoj nozi (sl. 39). Gornji dio šireg, konveksnog ruba ukrašen je oblikovanjem izduženih ovalnih perlica. U središtu posude nalazi se medaljon s rozetom (sl. 10: 3). Ukrasni su motivi izrađeni graviranjem i žljebljenjem, nakon čega su ispunjeni sivom *niello* smjesom. Na središnjem dijelu nalazi se rozeta s osam latica, uokvirena dvama kvadratima koji se međusobno sijeku i tvore osmerokraku zvijezdu. Trokutasti odsječci ispunjeni su manjim kružnim uzorcima. Cijeli je prikaz obrubljen ukrasom savnutih valova okrenutih prema središtu posude.

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

#### 21. Small bowl with rosette

Dimensions: diameter 13.1 cm, height 4.8 cm, rim width 1.18 cm; ring base: diameter 4.45 cm, height 0.7 – 0.8 cm, thickness 1.4 cm; rosette diameter 4.7 cm.

Mass: 136 g.

State of preservation: the small bowl is in a bad state of preservation. It is broken into two pieces, and small wall fragments around the crack are missing.

Description: a small bowl of conical body on a short ring base (fig. 39). The upper part of the wide, convex rim is adorned with elongated oval beads. There is a medallion with a rosette in the middle of the vessel. (fig. 10: 3). The decorative motifs are done by engraving and grooving, after which they were filled with grey niello mixture. There is a rosette with eight petals in the middle of the vessel, framed by two squares that intersect and form an eight-pointed star. The small triangles of the star are filled with smaller circular patterns. The whole central piece is framed by crashing waves turned toward the middle of the vessel.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.





Slika / Figure 40. Mala zdjelica ukrašenog ruba: kat. br. 22 / Small bowl with adorned rim: cat. no. 22 (snimila / photo by V. Žarak).



Slika / Figure 41. Urezani znakovi na zdjelici: kat. br. 22 / Incised symbols on a small bowl: cat. no. 22 (snimila / photo by V. Žarak).

## 22. Zdjelica

Dimenzije: promjer 11,72 cm, visina 3,6 cm, širina ruba 1,85 cm; prstenasta stopa: promjer 3,65 cm, visina 5 mm.

Masa: 104 g.

Očuvanost: posuda je dobro očuvana, osim što na većem dijelu površine nema sačuvan srebrni sjaj.

Opis: zdjelica koničnog tijela na niskoj prstenastoj nozi (sl. 40). Horizontalni je rub ukrašen žlijebljenim koncentričnim kružnicama i gustim bisernim nizom. Unutrašnjost je ukrašena s više žlijebljenih koncentričnih kružnica. Na vanjskoj strani posude, unutar prstenaste stope, urezano je nekoliko znakova, koji se jasno ne razaznaju (sl. 41).

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Popović 1994, 329, kat. br. 276.

## 23. Zdjelica

Dimenzije: promjer 13,4 cm, visina oko 3,8 cm, širina ruba 1,8 cm; prstenasta stopa: promjer 4,5 cm, visine 5 mm.

Masa: 142 g.

## 22. Small bowl

Dimensions: diameter 11.72 cm, height 3.6 cm, rim width 1.85 cm; ring base: diameter 3.65 cm, height 5 mm.

Mass: 104 g.

State of preservation: the vessel is in a good state of preservation, except not having the silver sheen preserved on most of its surface.

Description: a small bowl of conical body on a short ring base (fig. 40). The horizontal rim is adorned with concentric circles done by grooving and a dense pearl line. The inside is adorned with several concentric circles done by grooving. On the outside of the vessel, inside the ring base, several illegible symbols were incised (fig. 41).

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Popović 1994, 329, cat. no. 276.

## 23. Small bowl

Dimensions: diameter 13.4 cm, approximate height 3.8 cm, rim width 1.8 cm; ring base: diameter 4.5 cm, height 5 mm.

Mass: 142 g.



Slika / Figure 42. Mala zdjelica ukrašenog ruba: kat. br. 23 / Small bowl with adorned rim: cat. no. 23 (snimila / photo by V. Žarak).

Očuvanost: posuda je loše očuvana, rub je u potpunosti odlomljen od ostataka posude a odlomljeni su i dijelovi stjenka.

Opis: zdjelica koničnog tijela, stoji na niskoj prstenastoj nozi (sl. 42). Uži je rub konveksno oblikovan, a završetak mu je ukrašen nizom izduženih ovalnih i manjih kuglastih perlica. Na vanjskoj strani posude, unutar prstenaste stope, urezano je više slova koja se međusobno sijeku i vjerojatno predstavljaju osobno ime (sl. 43).

Funkcija: zdjelica je mogla biti korištena za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

#### 24. Čaša

Dimenzije: visina 7,8 cm, širina 10,1 cm, debljina 3,2 mm; prstenasta stopa: visina 0,5 cm, širina 4,3, debljina 0,23 cm.

Masa: 181g.

Očuvanost: čaša je dobro očuvana, osim što joj je cijela površina prekrivena srebrnom korozijom.

Opis: čaša koničnog tijela s niskom, prstenastom nogom (sl. 44). Rub je ukrašen oblikovanjem bisernog niza. Na vanjskim stijenama nalaze se dvije horizontalne trake ispunjene ukrasima izvedenim graviranjem



Slika / Figure 43. Urezani natpis na zdjelici: kat. br. 23 / Incised inscription on a small bowl: cat. no. 23 (snimila / photo by V. Žarak).

State of preservation: the vessel is in a bad state of preservation; the rim is completely broken off from the rest of the vessel, along with parts of the vessel walls.

Description: small bowl of conical body on a short ring base (fig. 42). The thin rim is convex and ends in a decoration of elongated oval and smaller spherical beads. On the outer side of the vessel, inside the ring base, there are several incised intersecting letters that probably represent an individual's name (fig. 43).

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

#### 24. Cup

Dimensions: height 7.8 cm, width 10.1 cm, thickness 3.2 mm; ring base: height 0.5 cm, width 4.3, thickness 0.23 cm.

Mass: 181 g.

State of preservation: the cup is well preserved, except having its whole surface covered in silver corrosion.

Description: cup of conical body on a short ring base (fig. 44). The rim is adorned with a pearl line. On the outside of the walls, there are two horizontal decorative tracks with engravings of different patterns originally filled with



Slika / Figure 44. Ukrašena čaša: kat. br. 24 / Adorned cup: cat. no. 24 (snimila / photo by V. Žarak).



Slika / Figure 45. Ukrašena čaša: kat. br. 25 / Adorned cup: cat. no. 25 (snimila / photo by V. Žarak).

raznih uzoraka koji su originalno bili ispunjeni *niello* smjesom. Ukras je u potpunosti prekriven korozijom, ali je vidljivo da je identičan onomu na drugoj čaši (kat. br. 25).

Funkcija: čaša je korištena za piće.

Literatura: Cahn, Kaufmann-Heinimann 1984, 152–154.

#### 25. Čaša

Dimenzije: visina 7,7 cm, širina 10,05 cm, debljina 3,4 mm; prstenasta stopa: visina 0,5 cm, širina 4,14 cm, debljina 0,23 cm.

Masa: 181 g.

Očuvanost: čaša je odlično očuvana s potpuno vidljivim srebrnim sjajem.

Opis: čaša koničnog tijela s niskom, prstenastom nogom (sl. 45). Rub je ukrašen oblikovanjem gustoga bisernog niza. Na vanjskim stijenkama nalaze se dvije horizontalne trake ispunjene ukrasima izvedenim graviranjem različitih uzoraka. Uzorci su originalno bili ispunjeni tamnom sivo-plavom *niello* smjesom koja se samo manjim dijelom sačuvala. Na gornjoj traci nalazi se niz preklapljenih listolikih uzoraka, ispunjenih s pet izdanaka. Na donjoj traci nalaze se motivi spirale i girlandi.

Funkcija: čaša je korištena za piće.

Literatura: Cahn, Kaufmann-Heinimann 1984, 152–154.

*niello* mixture. The decoration is completely covered in corrosion, but it is visible enough to determine that it is identical to the one on the other cup (cat. no. 25).

Function: the cup was used for drinking.

References: Cahn, Kaufmann-Heinimann 1984, 152–154.

#### 25. Cup

Dimensions: height 7.7 cm, width 10.05 cm, thickness 3.4 mm; ring base: height 0.5 cm, width 4.14 cm, thickness 0.23 cm.

Mass: 181 g.

State of preservation: the cup is in an excellent state of preservation with the silver sheen completely visible.

Description: cup of conical body on a short ring base (fig. 45). The rim is adorned with a pearl line. On the outside of the walls, there are two horizontal decorative tracks with engravings of different patterns. The patterns were originally filled with a dark grey-blue *niello* mixture, which was also partly preserved. The upper track contains a line of overlapping leaf patterns filled with five offshoots. The lower track contains spirals and garlands.

Function: the cup was used for drinking.

References: Cahn, Kaufmann-Heinimann 1984, 152–154.



Slika / Figure 46. Mala neukrašena čaša: kat. br. 26 / Small adorned cup: cat. no. 26 (snimila / photo by V. Žarak).

#### 26. Čaša

Dimenzije: visina 5,6 cm, širina 8,1 cm.

Masa: 111g.

Očuvanost: čaša je vrlo dobro očuvana i na većoj površini ima sačuvan srebrni sjaj.

Opis: manja čaša koničnog tijela s niskom, prstenastom nogom (sl. 46). Na vanjskim stijenkama nalazi se jednostavan ukras izveden žlijebljenjem plitkih koncentričnih kružnica.

Funkcija: čaša je korištena za piće.

Literatura: Cahn, Kaufmann-Heinimann 1984, 152–154.

#### 27. Plitka zdjelica

Dimenzije: promjer 19 cm, visina 3,78 cm; prstenasta stopa: promjer 14,8 cm, visina 0,5 cm, debljina 0,15 cm.

Masa: 625 g.

Očuvanost: posuda je dobro očuvana, manje je oštećenje nastalo od udarca pri pronalasku ostave. Na unutrašnjoj strani sačuvao se srebrni sjaj.

Opis: plitka zdjela, ravnog dna s debljim, okomitim stijenkama na niskoj, prstenastoj nozi (sl. 47). Jedini su ukras kružnice urezane oko središnje točke u unutrašnjosti posude.



Slika / Figure 47. Plitka zdjelica: kat. br. 27 / Small shallow bowl: cat. no. 27 (snimila / photo by V. Žarak).

#### 26. Cup

Dimensions: height 5.6 cm, width 8.1 cm.

Mass: 111 g.

State of preservation: the cup is very well preserved and the silver sheen was preserved on a large portion of its surface.

Description: a small conical cup on a short ring base (fig. 46). On the outside walls, there is a simple decoration of shallow concentric circles done by grooving.

Function: the cup was used for drinking.

References: Cahn, Kaufmann-Heinimann 1984, 152–154.

#### 27. Shallow bowl

Dimensions: diameter 19 cm, height 3.78 cm; ring base: diameter 14.8 cm, height 0.5 cm, thickness 0.15 cm.

Mass: 625 g.

State of preservation: the vessel was well preserved; it was slightly damaged when the hoard was discovered. The silver sheen was preserved on the inside.

Description: a shallow bowl with a flat bottom and thick, vertical walls on a short ring base (fig. 47). The only decorations are circles incised around the central point inside the vessel.





Slika / Figure 48. Plitka zdjelica: kat. br. 28 / Small shallow bowl: cat. no. 28 (snimila / photo by V. Žarak).

Funkcija: posuda je korištena za serviranje jušnih jela ili umaka.

Literatura: Popović 1994, 327–328, kat. br. 272–274.

#### 28. Plitka zdjelica

Dimenzije: promjer 19,1 cm, visina 4,4 cm; prstenasta stopa: promjera 13,3 cm, debljine 1,5 mm, visina 7 mm; centralna točka: promjer 0,6 cm.

Masa: 618 g.

Očuvanost: predmet je vrlo dobro očuvan, ali je potamnio i nema sačuvan srebrni sjaj.

Opis: plitka zdjela, ravnog dna s debljim, okomitim stijenkama na niskoj, prstenastoj nozi (sl. 48). Jedini su ukras urezane kružnice oko središnje točke u unutrašnjosti posude.

Funkcija: posuda je korištena za serviranje jušnih jela ili umaka.

Literatura: Popović 1994, 327–328.

#### 29. Mali četvrtasti pladanj

Dimenzije: dužina 20,06 cm, širina 14,03 cm, visina 2,4 cm, debljina 1 mm; četvrtasta stopa: dužina 10 cm, širina 6,5 cm, visina 0,2 mm, debljina 0,4 mm.

Masa: 321 g.



Slika / Figure 49. Mali četvrtasti pladanj: kat. br. 29 / Small square platter: cat. no. 29 (snimila / photo by V. Žarak).

Function: the bowl was used for serving various soups and sauces.

References: Popović 1994, 327–328, cat. no. 272–274.

#### 28. Shallow bowl

Dimensions: diameter 19.1 cm, height 4.4 cm; ring base: diameter 13.3 cm, thickness 1.5 mm, height 7 mm; central point: diameter 0.6 cm.

Mass: 618 g.

State of preservation: the item was very well preserved, but has darkened and did not retain its silver sheen.

Description: a shallow bowl with a flat bottom and thick, vertical walls on a short ring base (fig. 48). The only decorations are circles incised around the central point inside the vessel.

Function: the bowl was used for serving various soups and sauces.

References: Popović 1994, 327–328.

#### 29. Small square platter

Dimensions: length 20.06 cm, width 14.03 cm, height 2.4 cm, thickness 1 mm; square base: length 10 cm, width 6.5 cm, height 0.2 mm, thickness 0.4 mm.

Mass: 321 g.

Očuvanost: odlomljeni su manji dijelovi na dvama kutovima. Srebrni sjaj sačuvao se samo na manjem dijelu površine.

Opis: manji pladanj četvrtastog oblika na niskoj četvrtastoj nozi (sl. 49). Nakošene stijenke imaju niz listolikih udubljenja između kojih se nalaze po dvije male volute koje izlaze iz oboda. U unutrašnjem dijelu nalazi se jednostavni ukras izveden plitkim žlijebljenjem.

Funkcija: posuda je korištena za posluživanje manjih komada hrane.

Literatura: Cahn, Kaufmann-Heinimann 1984, 165–166, 194–206.

State of preservation: two corners have small pieces broken off. Silver sheen was preserved on a small portion of the surface.

Description: small square platter on a short square base (fig. 49). The slanted walls have a series of leaf-like indentations with two small volutes between them coming out of the rim. Inside the vessel, there is a simple decoration done by shallow grooving.

Function: the vessel was used for serving small pieces of food.

References: Cahn, Kaufmann-Heinimann 1984, 165–166, 194–206.



Slika / Figure 50. Predmet s drškom u obliku dupina: kat. br. 30 / Item with a dolphin-shaped handle: cat. no. 30 (snimila / photo by V. Žarak).

### 30. Predmet s drškom u obliku dupina

Dimenzije: dužina 41,5 cm, širina 21,1 cm, dužina ručke 14 cm.

Masa: 537 g.

Očuvanost: predmet je dobro očuvan, osim što je završetak drške prelomljen.

Opis: predmet se sastoji od velikoga plitkog recipijenta srcolikog oblika i drške u obliku dupina (sl. 50). Na dijelu gdje se spaja s drškom, recipijent se sužava i produbljuje. Oko produbljenog je dijela oblikovan prošireni rub ukrašen bisernim nizom. Na tri mjesta na plitkom dijelu predmeta nalaze

### 30. Item with dolphin-shaped handle

Dimensions: length 41.5 cm, width 21.1 cm; handle length 14 cm.

Mass: 537 g.

State of preservation: the item is well preserved, except for the broken end of the handle.

Description: the item is comprised of a large, shallow heart-shaped recipient and a dolphin-shaped handle (fig. 50). The recipient grows thinner and deeper on the part where it connects to the handle. A wide rim was formed around the deeper section, adorned with a pearl line. On each of three places on the shal-

se po tri male kružne perforacije i još jedna u produbljenom dijelu. Perforacije su očito načinjene radi otjecanja tekućine. Izdužena je drška u obliku dupina na središnjem dijelu savinuta.

Funkcija: predmet je korišten za vađenje hrane ili neke druge krute tvari iz tekućine.

Literatura: Painter 1977, 30, sl. 33–34.

low section of the item, there are three small circular perforations, and one perforation on the deeper section. The perforations were obviously made for draining liquids. The elongated dolphin-shaped handle is bent in its central part.

Function: the item was used to remove food or other solid substances from liquids.

References: Painter 1977, 30, fig. 33–34.



Slika / Figure 51. Veliki svijećnjak: kat. br. 31 / Large candelabrum: cat. no. 31 (snimila / photo by V. Žarak).

### 31. Svijećnjak

Dimenzije: visina oko 42 cm, širina oko 18 cm; visina posude oko 7 cm; širina stope 12,07 cm; stalak: visina 29 cm, širina 4,1 – 5,6 cm.

Masa: oko 1,18 kg.

Očuvanost: predmet je loše očuvan, stopa je oštećena i odlomljena, a gornji je recipijent potpuno izlomljen na više manjih ulomka. Cijela je površina pokrivena jakom korozijom.

### 31. Candelabrum

Dimensions: approximate height 42 cm, approximate width 18 cm; approximate vessel height 7 cm; base width 12.07 cm; stand: height 29 cm, width 4.1 – 5.6 cm.

Mass: approximately 1.18 kg.

State of preservation: the item is in a bad state of preservation; the base is damaged and broken off, while the upper recipient is completely fragmented into several smaller pieces. The whole surface is covered in prominent corrosion.

Description: an item with a short conical base and a tall, massive stand with seven convex profilations, widening at the top into a small vessel with vertical fluting (fig. 51). The inside of the stand is filled with a material that is not silver. The stand is adorned with a line of shallowly incised circles.

Function: the item was probably used as a stand for a lamp or torch.

References: Milliken 1958, 37–38, fig. 54.597; Cahn, Kaufmann-Heinimann 1984, 137–150.

Opis: predmet s niskom koničnom stopom i visokim, masivnim stalkom sa sedam konveksnih profilacija, na vrhu se širi u manju posudu s okomitim kanelurama (sl. 51). Unutrašnjost je stalka ispunjena materijalom koji nije srebro. Stalak je ukrašen nizom plitko urezanih kružnica.

Funkcija: predmet je najvjerojatnije služio kao postolje za svjetiljku ili baklju.

Literatura: Milliken 1958, 37–38, sl. 54.597; Cahn, Kaufmann-Heinimann 1984, 137–150.



Slika / Figure 52. Cilindrična kutijica za parfem: kat. br. 32 / Small cylindrical perfume box: cat. no. 32 (snimila / photo by V. Žarak).

### 32. Parfemska kutijica

Dimenzije: visina 7,5 cm, širina 4,1 cm, širina otvora 3,6 cm.

Masa: 55 g.

Očuvanost: predmet je neoštećen sa sačuvanim izvornim srebrnim sjajem.

Opis: mala cilindrična kutijica s poklopcem (sl. 52). Gornji dio kutijice ima konveksno prstenasto proširenje na koje se naslanja donji dio poklopca. Po tri žlijebljene široke kružnice nalaze se na dnu, sredini i vrhu vanjskih stijenki kutijice. Na vrhu poklopca nalazi se centralna točka oko koje su žlijebljene dvije šire koncentrične kružnice.

Funkcija: kutijica je korištena za držanje parfema.

Literatura: Popović 1994, 236; Kaufmann-Heinimann 2013, 251–252, sl. 15.12.

### 33. Amforisk

Dimenzije: visina 9,85 cm, širina 5,01 cm, širina otvora 3,35 cm.

Masa: 46 g.

Očuvanost: posudica je dobro očuvana, osim što je ručka odlijepljena i dijelom iskrivljena.

Opis: bikonična posudica zaobljenog dna i



Slika / Figure 53. Amforisk: kat. br. 33 / Amphorisk: cat. no. 33 (snimila / photo by V. Žarak).

### 32. Small perfume box

Dimensions: height 7.5 cm, width 4.1 cm, mouth width 3.6 cm.

Mass: 55 g.

State of preservation: the item is undamaged and its original silver sheen is intact.

Description: a small cylindrical box with a lid (fig. 52). The upper part of the box has a convex ring widening that leans onto the bottom part of the lid. The bottom, middle, and top of the outer walls of the box are decorated with three wide grooved circles each. On top of the lid, there is a central point framed by two wide concentric circles done by grooving.

Function: the small box was used for storing perfume.

References: Popović 1994, 236; Kaufmann-Heinimann 2013, 251–252, fig. 15.12.

### 33. Amphorisk

Dimensions: height 9.85 cm, width 5.01 cm, mouth width 3.35 cm.

Mass: 46 g.

State of preservation: the vessel is in a good state of preservation, except the handle being detached and bent.



koničnog vrata s proširenim kružnim otvorom (sl. 53). Imala je tanku ručku od srebrnog lima koja je spajala rame i vrat posude.

Funkcija: predmet je korišten za upotrebu parfema, odnosno njegovo miješanje s raznim uljima.

Literatura: Ožanić-Roguljić 2010, 66–68.

Description: a biconical vessel with a round bottom and conical neck with a widened circular mouth (fig. 53). It had a thin handle made of silver sheet connecting the shoulder and the neck of the vessel.

Function: the item was used for perfume, i.e. the mixing of perfume with various oils.

References: Ožanić-Roguljić 2010, 66–68.



Slika / Figure 54. Ogledalo: kat. br. 34 / Mirror: cat. no. 34 (snimila / photo by V. Žarak).

#### 34. Ogledalo

Dimenzije: promjer 17,1 cm, visina 1,2 cm, debljina 1,08 mm; ručka: dužina 7,9 cm, širina 1,18 cm, visina 2,8 cm.

Masa: 191 g.

Očuvanost: predmet je vrlo dobro očuvan, osim što je ručka odlijepljena.

Opis: kružni disk sa zadebljanim rubom i ručkom zalemljenom na središtu gornjeg dijela (sl. 54). Donji je dio lagano ispupčen i poliran do visokog sjaja. Ručka je izduženog četverokutnog oblika sa zaobljenim proširenjem na sredini. Izrađena je od jednog komada srebrnog lima, čiji su krajevi savinuti i oblikovani u dvije noge s trokutastim završecima koji su bili zalemljeni na gornji dio ogledala. Ručka je na gornjem dijelu ukrašena plitkim listastim ukrasima.

Funkcija: predmet je služio kao ogledalo i poklopac toaletne zdjelice (kat. br. 16).

Literatura: Milliken 1958, 37, sl. 56.31; Mundell Mango 1986, 212–215; Baratte 1993, 87–93, T. 17, sl. 35.

#### 34. Mirror

Dimensions: diameter 17.1 cm, height 1.2 cm, thickness 1.08 mm; handle: length 7.9 cm, width 1.18 cm, height 2.8 cm.

Mass: 191 g.

State of preservation: the item is in a very good state of preservation, except the handle being detached.

Description: a circular disk with a thick rim and a handle soldered to the middle of the upper part (fig. 54). The lower part slightly convex and is polished to a high shine. The handle is elongated and in the shape of a quadrangle with a round widening in the middle. It was made out of one piece of silver sheet, the ends of which were bent and shaped into two legs with triangular ends that were soldered to the upper part of the mirror. The upper part of the handle is decorated with shallow leaf motifs.

Function: the item served as a mirror and the lid of a toiletry bowl (cat. no. 16).

References: Milliken 1958, 37, fig. 56.31; Mundell Mango 1986, 212–215; Baratte 1993, 87–93, T. 17, fig. 35.



Slika / Figure 55. Mali kružni pladanj; kat. br. 35 / Small round platter: cat. no. 35 (snimila / photo by V. Žarak).

### 35. Mali kružni pladanj

Dimenzije: promjer 13,8 cm, visina 1,25 cm, širina ruba 1,8 cm; kružna stopa: promjer 4 cm, debljina 2,5 mm, visina 5 mm.

Masa: 132 g.

Očuvanost: pladanj je vrlo dobro očuvan i na cijeloj površini ima sačuvan izvorni srebrni sjaj.

Opis: mali kružni pladanj koničnog tijela na niskoj prstenastoj nozi (sl. 55). Nakošene stijenke završavaju uskim rubom čiji je kraj ukrašen oblikovanjem niza manjih kružnih i izduženih ovalnih perlica. U sredini se nalazi središnja točka okružena nekim plitkim kružnicama.

Funkcija: za posluživanje manjih komada hrane.

Literatura: Guggisberg 2003, 43–46.

### 36. Mali pladanj s rozetom

Dimenzije: promjer 14,7 cm, visina 1,1 cm, širina ruba 1,7 cm; prstenasta stopa: promjer 5,1 cm, debljina 1,7 cm, visina 4,5 cm.

Masa: 170 g.

Očuvanost: predmet je dobro očuvan, osim što je većim dijelom prekriven srebrnom korozijom.



Slika / Figure 56. Mali kružni pladanj s rozetom; kat. br. 36 / Small round platter with rosette: cat. no. 36 (snimila / photo by V. Žarak).

### 35. Small circular platter

Dimensions: diameter 13.8 cm, height 1.25 cm, rim width 1.8 cm; circular base: diameter 4 cm, thickness 2.5 mm, height 5 mm.

Mass: 132 g.

State of preservation: the platter is in a very good state of preservation and the original silver sheen remains across its entire surface.

Description: a small circular platter of conical body on a short ring base (fig. 55). The slanted walls end in a thin rim, the edge of which is decorated with a line of small circular and elongated oval beads. In the middle of the vessel, there is a central point decorated with several shallow circles.

Function: the item was used for serving morsels of food.

References: Guggisberg 2003, 43–46.

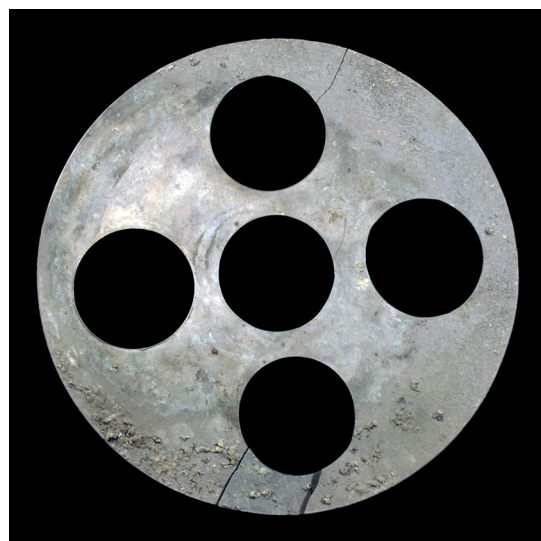
### 36. Small platter with rosette

Dimensions: diameter 14.7 cm, height 1.1 cm, rim width 1.7 cm; ring base: diameter 5.1 cm, thickness 1.7 cm, height 4.5 cm.

Mass: 170 g.

State of preservation: the item was well preserved, except for the most part being covered in silver corrosion.

Slika / Figure 57. Perforirani nosač iz kutije za parfem: kat. br. 37 / Perforated rack from the perfume box: cat. no. 37 (snimila / photo by V. Žarak).



Opis: manji kružni pladanj ravnog tijela na niskoj kružnoj nozi (sl. 56). Konveksni je rub ukrašen nizanjem jedne veće, izdužene ovalne i dviju manjih kuglastih perlica. Središnji je dio ukrašen medaljonom, čiji su motivi izrađeni graviranjem i žlijebljenjem te ispunjeni sivom *niello* smjesom. U sredini se nalazi mala rozeta u četvrtastom okviru, okružena nizom geometrijskih motiva. Po rubu se nalazi motiv savinutih valova, okrenutih prema središtu posude (sl. 10: 4).

Funkcija: pladanj je korišten za posluživanje hrane.

Literatura: Cahn, Kaufmann-Heinimann 1984, 175–179; Guggisberg 2003, 47–50.

### 37. Perforirani nosač

Dimenzije: promjer 16,3 cm, debljina 0,7 mm, promjer perforacija 4,07 cm.

Masa: 70 g.

Očuvanost: predmet je dobro očuvan, osim što se manji dio odlomio. Srebrni je sjaj sačuvan po cijeloj površini predmeta.

Opis: disk od tankoga srebrnog lima s pet jednakih kružnih perforacija (sl. 57). Nalazio se unutar kutije za parfem (kat. br. 13), postavljen na tri pločice „L“ oblika, koje su

Description: a small circular platter of flat body on a short circular base (fig. 56). The convex rim is adorned with a line of interchanging elongated oval and two smaller spherical beads. The central part is adorned with a medallion, which was done by engraving and grooving, and filled by grey niello mixture. There is a small rosette in the middle within a quadrangle frame, surrounded by a line of geometrical motifs. There are crashing waves along the edge of the vessel facing toward the centre of the platter (fig. 10: 4).

Function: the platter was used for serving food.

References: Cahn, Kaufmann-Heinimann 1984, 175–179; Guggisberg 2003, 47–50.

### 37. Perforated rack

Dimensions: diameter 16.3 cm, thickness 0.7 mm, perforation diameter 4.07 cm.

Mass: 70 g.

State of preservation: the item was well preserved, except a small piece being broken off. The item retained its silver sheen across its entire surface.

Description: a disk of thin silver sheet with five identical circular perforations (fig. 57). It was found inside a perfume box (cat. no. 13),

bile zalemljene na stijenkama posude. Nije utvrđeno je li disk bio zalemljen za pločice ili se mogao vaditi.

Funkcija: nalazio se unutar kutije za parfem i koristio za držanje amforiska i malih cilindričnih kutijica u kojima su se čuvali parfemi.

Literatura: Mundell Mango, Bennett 1994, 452–457.

resting on three “L” shaped plates, which were soldered to the walls of the box. It was not determined whether the disk was soldered to the plates or could be taken out.

Function: the item was part of the perfume box and was used for storing amphorisks and small cylindrical boxes which held perfumes.

References: Mundell Mango, Bennett 1994, 452–457.



Slika / Figure 58. Žlice iz ostave: kat. br. 38-44 / All the spoons from the hoard: cat. no. 38–44 (snimila / photo by V. Žarak).

### 38. Žlica s ukrasom

Dimenzije: dužina 17,5 cm, širina 2,95 cm, dužina zdjelice 5,5 cm, dužina drške 12 cm, debljina drške 4 mm.

Masa: 20 g.

Očuvanost: predmet je vrlo dobro očuvan, osim što je cijela površina prekrivena srebrnom patinom.

Opis: žlica s izduženom, ovalnom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške je u obliku malog svitka. Unutar zdjelice nazire se ukras u obliku lista izveden plitkim reljefom. Drška je na spoju četvrtastog, a na ostatku poligonalnog presjeka.

### 38. Adorned spoon

Dimensions: length: 17.5 cm, width 2.95 cm, bowl length 5.5 cm, handle length 12 cm, handle thickness 4 mm.

Mass: 20 g.

State of preservation: the item is in a very good state of preservation, except the whole surface being covered in silver patina.

Description: a spoon with an elongated bowl and a straight pointed handle (fig. 58). The joint between the bowl of the spoon and the handle is in the shape of a small scroll. Inside the bowl, there is a barely visible decoration in the shape of a leaf done in shallow relief. The handle is of a square cross section at the joint, while being polygonal for the rest of its length.



Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 32–34; Cahn, Kaufmann-Heinimann 1984, 77–78; Simoni 1988, 79–86; Hobbs 2005, 197–208.

#### 39. Žlica

Dimenzije: dužina 18,2 cm, širina 2,8 cm, dužina zdjelice 5,8 cm, dužina drške 12,4 cm, debljina drške 4 mm.

Masa: 26 g.

Očuvanost: predmet je dobro očuvan, osim što je drška malo iskrivljena. Cijela je površina u potpunosti prekrivena zelenom bakrenom korozijom.

Opis: žlica s izduženom, ovalnom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške u obliku je malog svitka. Drška je na spoju četvrtastog presjeka, a ostatak nije vidljiv zbog jake korozije.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

#### 40. Žlica s ukrasom

Dimenzije: dužina 17,9 cm, širina 2,92 cm, dužina zdjelice 5,6 cm, dužina drške 12,15 cm, debljina drške 4 mm.

Masa: 24 g.

Očuvanost: predmet je sačuvan neoštećen, ali je cijeli prekriven srebrnom korozijom.

Opis: žlica s izduženom, ovalnom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške u obliku je malog svitka. Unutar zdjelice vidljiv je ukras u obliku lista izveden plitkim reljefom. Drška je na spoju četvrtastog, a na ostatku poligonalnog presjeka.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 32–34; Cahn, Kaufmann-Heinimann 1984, 77–78; Simoni 1988, 79–86; Hobbs 2005, 197–208.

Function: the spoon was used as part of a silverware set for eating.

References: Painter 1977, 32–34; Cahn, Kaufmann-Heinimann 1984, 77–78; Simoni 1988, 79–86; Hobbs 2005, 197–208.

#### 39. Spoon

Dimensions: length 18.2 cm, width 2.8 cm, bowl length 5.8 cm, handle length 12.4 cm, handle thickness 4 mm.

Mass: 26 g.

State of preservation: the item was well preserved, except the handle being slightly bent. The whole surface is covered in copper corrosion.

Description: a spoon with an elongated oval bowl and a straight pointed handle (fig. 58). The joint between the bowl and the handle is in the shape of a small scroll. The handle is of a square cross section at the joint, while the rest is not visible due to strong corrosion.

Function: the spoon was used for eating.

References: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

#### 40. Adorned spoon

Dimensions: length 17.9 cm, width 2.92 cm, bowl length 5.6 cm, handle length 12.15 cm, handle thickness 4 mm.

Mass: 24 g.

State of preservation: the item is undamaged, but is completely covered in silver corrosion.

Description: a spoon with an elongated oval bowl and a straight pointed handle (fig. 58). The joint between the bowl and the handle is in the shape of a small scroll. Inside the bowl, there is a decoration in the shape of a leaf done in shallow relief. The handle is of square cross section at the joint, while being polygonal for the rest of its length.

Function: the spoon was used for eating.

References: Painter 1977, 32–34; Cahn, Kaufmann-Heinimann 1984, 77–78; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 41. Žlica

Dimenzije: dužina 15,8 cm, širina 2,89 cm, dužina zdjelice 4,8 cm, dužina drške 11 cm, debljina drške 4 mm.

Masa: 20 g.

Očuvanost: predmet je dobro očuvan sa srebrnim sjajem po cijeloj površini. Vrh je zdjelice žlice napuknut i djeluje dosta istrošeno od upotrebe.

Opis: žlica s kruškolikom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške u obliku je malog svitka. Cijela je drška četvrtastog presjeka.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 30–34; Baratte 1980, 259; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 42. Žlica

Dimenzije: dužina 16,2 cm (sačuvani dio), širina 3,2 cm, dužina zdjelice 6,1 cm, dužina ručke 10,1 cm, debljina drške 4 mm.

Masa: 20 g.

Očuvanost: predmet je loše očuvan, odlomljeni su dijelovi zdjelice žlice i vrh drške (sl. 58). Površina je predmeta prekrivena zelenom bakrenom korozijom.

Opis: žlica s izduženom, ovalnom zdjelicom i ravnom, zašiljenom drškom. Spoj između zdjelice žlice i drške u obliku je malog svitka. Drška je na spoju četvrtastog presjeka, a ostatak se zbog korozije ne može odrediti.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 41. Spoon

Dimensions: length 15.8 cm, width 2.89 cm, bowl length 4.8 cm, handle length 11 cm, handle thickness 4 mm.

Mass: 20 g.

State of preservation: the item was well preserved and retained its silver sheen across its entire surface. The top of the bowl is cracked and seems considerably worn out from use.

Description: a spoon with a pear-shaped bowl and a straight pointed handle (fig. 58). The joint between the bowl and the handle is in the shape of a small scroll. The whole handle has a square cross section.

Function: the spoon was used for eating.

References: Painter 1977, 30–34; Baratte 1980, 259; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 42. Spoon

Dimensions: length 16.2 cm (preserved part), width 3.2 cm, bowl length 6.1 cm, handle length 10.1 cm, handle thickness 4 mm.

Mass: 20 g.

State of preservation: the item is in a bad state of preservation; parts of the bowl are broken off, as well as the top of the handle (fig. 58). The surface of the item is covered in green copper corrosion.

Description: a spoon with an elongated oval bowl and a straight pointed handle. The joint between the bowl and the handle is in the shape of a small scroll. The handle is of a square cross section at the joint, while the rest cannot be determined due to corrosion.

Function: the spoon was used for eating.

References: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 43. Žlica

Dimenzije: dužina 16,5 cm (sačuvani dio), širina 3 cm, dužina zdjelice 4,4 cm, dužina ručke 12 cm, debljina drške 4 mm.

Masa: 21 g.

Očuvanost: predmet je lošije očuvan, vrh je zdjelice žlice odlomljen, a drška malo iskrivljena. Srebrni je sjaj sačuvan samo na manjoj površini predmeta.

Opis: žlica s kruškolikom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške u obliku je malog svitka. Drška je na spoju četvrtastog, a ostatak kružnog presjeka.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 30–34; Baratte 1980, 259; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 44. Žlica s ukrašenom drškom

Dimenzije: dužina 16,73 cm, širina 2,6 cm, dužina zdjelice 5,38 cm, dužina drške 11,5 cm, debljina drške 5,3 cm.

Masa: 27 g.

Očuvanost: predmet je sačuvan bez oštećenja sa srebrnim sjajem po cijeloj površini.

Opis: žlica s izduženom, ovalnom zdjelicom i ravnom, zašiljenom drškom (sl. 58). Spoj između zdjelice žlice i drške je u obliku malog svitka. Drška je na spoju četvrtastog presjeka, a ostatak je poligonalan i ukrašen plitkim kanelurama. Na spoju ovih dijelova nalaze se dva prstenasta ukrasa.

Funkcija: žlica je korištena kao pribor za jelo.

Literatura: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 43. Spoon

Dimensions: length 16.5 cm (preserved part), width 3 cm, bowl length 4.4 cm, handle length 12 cm, handle thickness 4 mm.

Mass: 21 g.

State of preservation: the item was badly preserved; the top of the bowl is broken off and the handle is slightly bent. The silver sheen was retained on a small portion of the item.

Description: a spoon with a pear-shaped bowl and a straight pointed handle (fig. 58). The joint between the bowl and the handle is in the shape of a small scroll. The handle is of a square cross section at the joint, while the rest of the handle has a circular cross section.

Function: the spoon was used for eating.

References: Painter 1977, 30–34; Baratte 1980, 259; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.

## 44. Spoon with adorned handle

Dimensions: length 16.73 cm, width 2.6 cm, bowl length 5.38 cm, handle length 11.5 cm, handle thickness 5.3 cm.

Mass: 27 g.

State of preservation: the item is undamaged and has retained its silver sheen across the entire surface.

Description: a spoon with an elongated oval bowl and a straight pointed handle (fig. 58). The joint between the bowl and the handle is in the shape of a small scroll. The handle is of a square cross section at the joint, while the rest has a polygonal cross section and is adorned with shallow fluting. The joint is also adorned by two rings.

Function: the spoon was used for eating.

References: Painter 1977, 30–34; Cahn, Kaufmann-Heinimann 1984, 56–96; Simoni 1988, 79–86; Hobbs 2005, 197–208.



Slika / Figure 59. Mala cjediljka za vino: kat. br. 45 / Small wine strainer: cat. no. 45 (snimila / photo by V. Žarak).

#### 45. Cjediljka

Dimenzije: dužina 14,1 cm (s alkom 15,6 cm), širina 2,58 cm; alka: promjer 2,06 cm, debljina 0,25 cm.

Masa: 12 g.

Očuvanost: predmet je sačuvan bez oštećenja i s vidljivim srebrnim sjajem po gotovo cijeloj površini.

Opis: mala cjediljka kružne, perforirane zdjelice i uvijene drške s alkom za vješanje (sl. 59). Prijelaz između zdjelice i drške je profiliran i ukrašen horizontalnim žljebovima. Na sredini je drške oblikovan manji ukrasni dio. Alka je izrađena od srebrne žice sa zapletenim krajevima.

Funkcija: cjediljka je korištena za pročišćavanje vina.

Literatura: Cahn, Kaufmann-Heinimann 1984, 98–121; Mundell Mango 1986, kat. br. 24,25; Aimone 2015, 203, sl. 6.

#### 45. Strainer

Dimensions: length 14.1 cm (with the ring 15.6 cm), width 2.58 cm; ring: diameter 2.06 cm, thickness 0.25 cm.

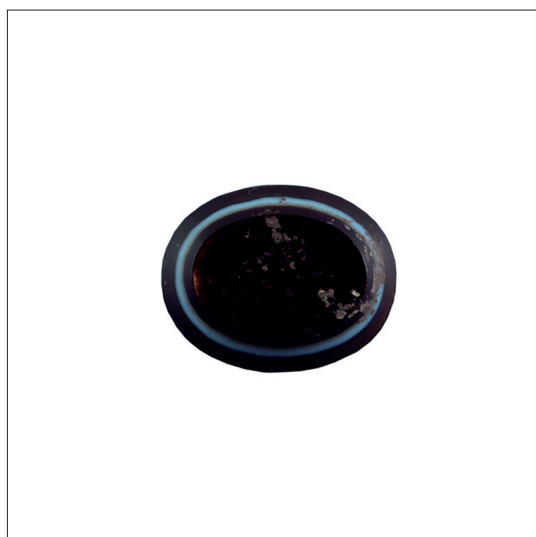
Mass: 12 g.

State of preservation: the item is undamaged and has retained its silver sheen almost across its entire surface.

Description: a small strainer with a circular, perforated bowl and a curled handle with a ring for hanging (fig. 59). The joint between the bowl and the handle is formed and decorated with horizontal grooves. There is a small decorative section in the middle of the handle. The ring is made of silver wire with intertwined ends.

Function: the strainer was used for wine purification.

References: Cahn, Kaufmann-Heinimann 1984, 98–121; Mundell Mango 1986, cat. no. 24, 25; Aimone 2015, 203, fig. 6.



Slika / Figure 60. Poludrugi kamen tamne boje s plavom horizontalnom linijom: kat. br. 46 / Dark semi-precious stone with blue line: cat. no. 46 (snimila / photo by V. Žarak).



## 46. Poludragi kamen

Dimenzije: dužina 3,25 cm, širina 2,58 cm, debljina 0,8 cm.

Masa: 11 g.

Očuvanost: predmet je sačuvan s manjim oštećenjima.

Opis: predmet je elipsoidnog oblika i nakošenih stranica (sl. 60). Dno je ravno i hrpavo, a stranice i vrh glatki te sjajni. Tamne je boje s horizontalnom plavom linijom u sredini. Predmet je izrađen od poludragog kamena, najvjerojatnije oniksa (?).

Funkcija: predmet je pripremljen za završnu izradu gеме s urezanim prikazom na plavoj površini ili kameje s plavim reljefnim prikazom na tamnoj podlozi.

## 46. Semi-precious stone

Dimensions: length: 3.25 cm, width: 2.58 cm, thickness: 0.8 cm.

Mass: 11 g.

State of preservation: the item is preserved with minimal damage.

Description: an ellipsoid item with slanted sides (fig. 60). The bottom is straight and coarse, while the sides and top are smooth and shiny. The item is dark, with a blue horizontal line through the middle. The item was made from a semi-precious stone, probably onyx (?).

Function: the item was prepared to be worked into a *gemma* with an incised scene on the blue surface, or a cameo with a blue relief against the dark background.



Slika / Figure 61. Mali dvodijelni svijećnjak: kat. br. 47 / Small two-piece candelabrum: cat. no. 47 (snimila / photo by V. Žarak).

## 47. Mali dvodijelni svijećnjak

Dimenzije (gornji dio): visina 10,3 cm, širina koluta 3,9 cm, širina tijela 3,15 cm; (donji dio): visina 6 cm, širina dna oko 6,5 cm.

Masa: 120 g.



Slika / Figure 62. Mala zdjelica ukrašenog ruba: kat. br. 48 / Small bowl with adorned rim: cat. no. 48 (snimila / photo by V. Žarak).

## 47. Small two-piece candelabrum

Dimensions (upper part): height 10.3 cm, collet width 3.9 cm, body width 3.15 cm; (bottom part): height 6 cm, approximate bottom width 6.5 cm.

Mass: 120 g.

Očuvanost: donji je dio relativno dobro očuvan, dok je gornji savijen i djelomično razlomljen. Cijeli je predmet prekriven srebrnom korozijom.

Opis: dvodijelni predmet koji bi mogao imati funkciju malog svijećnjaka (sl. 61). Donji je dio široko, stožasto postolje od tanjega srebrnog lima s kružnim otvorom na vrhu. Gornji je dio cilindričnog oblika s otvorom na vrhu, proširenim središnjim dijelom i širokim kolutastim oblikovanjem pri dnu, koje je omogućavalo lakše fiksiranje na postolje. Gornji je dio ukrašen plitko urezanim kružnicama.

Funkcija: predmet je vjerojatno korišten kao svijećnjak.

#### 48. Zdjelica

Dimenzije: širina 14,6 cm, visina 5,1 cm, širina ruba 2,1 cm; prstenasta stopa: promjer 4,7 cm.

Masa: 188 g.

Očuvanost: posuda je relativno dobro očuvana osim što je odlomljen dio stijenke. Srebrni je sjaj sačuvan samo u unutrašnjosti posude.

Opis: zdjelica koničnog tijela, širokog ruba na niskoj prstenastoj nozi (sl. 62). Horizontalni rub završava konveksnim dijelom na kojemu je oblikovan niz od jedne veće izdužene i po dvije manje perle. Unutrašnjost je ukrašena malom i dvjema većim žlijebnim kružnicama koje se šire oko središnje točke.

Funkcija: za posluživanje jušnih jela, umaka ili vode za pranje ruku između obroka.

Literatura: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

State of preservation: the bottom half was relatively well preserved, while the upper part is bent and partially fragmented. The whole item is covered in silver corrosion.

Description: a two-part item that could have been used as a small candelabrum (fig. 61). The bottom part is a wide, conical stand made of thin silver sheet with a circular opening at the top. The upper part is cylindrical, with an opening at the top, a wider central part, and a wide collute at the bottom, which facilitated easier fixture into the stand. The upper part is adorned with shallow incised circles.

Function: the item was probably used as a candelabrum.

#### 48. Small bowl

Dimensions: width 14.6 cm, height 5.1 cm, rim width 2.1 cm; ring base: diameter 4.7 cm.

Mass: 188 g.

State of preservation: the vessel was relatively well preserved, except for a part of the walls being broken off. It retained its silver sheen only on the inside.

Description: a small bowl of conical body and wide rim on a short ring base (fig. 62). The horizontal rim ends in a convex section with a line of interchanging single elongated and two smaller beads. The inside is adorned with one small and two larger grooved circles around the central point.

Function: the small bowl may have been used for serving soups and sauces, or for holding water for washing hands between meals.

References: Cahn, Kaufmann-Heinimann 1984, 155–158; Bland, Johns 1995, 26.

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# Nalazi 8. i 9. stoljeća sa Šarnjaka kod Šemovca

## Finds from the 8<sup>th</sup> and 9<sup>th</sup> centuries at Šarnjak near Šemovec

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*Šarnjak kod Šemovca je višeslojno arheološko nalazište na obalama rijeke Plitvice u okolici Varaždina. Tijekom posljednjih nekoliko godina (2006. i 2010.) na tome su nalazištu provedena dva manja arheološka istraživanja, prilikom kojih je istražen veći broj ukopa iz kasnoga brončanog doba, starijega željeznog doba, rimska cesta i ukopi iz ranoga srednjeg vijeka. U radu se objavljuju novopronađeni nalazi iz nekoliko jama i zemunice koje mogu datirati iz 8. ili 9. stoljeća. Uglavnom, riječ je o keramičkim nalazima koji nam svjedoče o vezama stanovnika Šarnjaka sa slavenskim narodima na sjeveru. Među nalazima valja izdvojiti i jednu obujmicu pojasa avarskog podrijetla, koja je rijedak nalaz izvan grobnih cjelina.*

**Ključne riječi:** *Šarnjak, rani srednji vijek, zemunice, naselje, slavenska keramika, 8. i 9. stoljeće, avarska obujmica*

*Šarnjak near Šemovec is a multilayered archaeological site on the banks of the Plitvica River in the broader Varaždin area. Two small-scale archaeological campaigns were conducted at the site in recent years (2006 and 2010), in the course of which a large number of Late Bronze Age and Early Iron Age burials, a Roman road, and burials from the Early Medieval period were investigated. The paper brings the publication of newly discovered finds from several pits and dugout houses dated to the 8<sup>th</sup> or 9<sup>th</sup> century. For the most part, these are finds of pottery that bear witness to the links between the inhabitants of Šarnjak and the Slavic peoples to the north. Noteworthy among the finds is one belt keeper of Avar provenance – a rare find outside of grave contexts.*

**Keywords:** *Šarnjak, Early Medieval, dugout houses, settlement, Slavic pottery, eighth and ninth century, Avar belt keeper*

Polja zvana Šarnjak nalaze se južno od sela Šemovec, a sjeverno od sela Jalžabet, u okoliću grada Varaždina. Kroz polja Šarnjaka<sup>1</sup> i šume koje ga okružuju teče rijeka Plitvica, pritoka Drave. Taj je položaj udaljen od naselja i danas ga odlikuju brojna prostrana obrađena polja, manje šume i šumarci koji su bogati s divljači.

Nalazište Šarnjak otkriveno je još šezdesetih godina prošlog stoljeća tijekom radova na regulaciji rijeke Plitvice i uklanjanju šuma radi početka poljoprivredne proizvodnje, dok je prvo arheološko sondiranje provedeno tek 1988. godine. Svi su stariji nalazi uglavnom bili neobjavljeni, a sada se čuvaju u varaždinskom muzeju.<sup>2</sup>

Sjeverno, ali i južno od Plitvice, na obrađenim poljima Šarnjaka, pronađeni su brojni površinski arheološki nalazi.<sup>3</sup> Uglavnom, riječ je o ulomcima keramike koji datiraju iz kasnoga brončanog doba te starijega i mlađega željeznog doba. Osim prapovijesnih nalaza, tu prolazi i trasa rimske ceste koja je iz smjera Petrijanca (*Aqua Viva*) išla prema Ludbregu (*Iovia / Botivo*), a negdje su su pronađeni i površinski nalazi antičke keramike. Očigledno je da su se ova razvedena naselja prostirala na prostoru od oko 500 x 500 metara. Nisu vidljivi nikakvi tragovi zemljanih bedema ili sličnih fotifikacijskih zahvata u prostoru, osim blagih uzvišenja – greda, koje vjerojatno predstavljaju nekadašnje riječne sprudove. Vjerojatno je riječ o naseljima otvorenog tipa koja su jedinu zaštitu uživala od vijugave rijeke i njezinih rukavaca.

S obzirom na nalaze iz ranosrednjovjekovnog doba, možemo pretpostaviti sličnu situaciju. Tih je nalaza doduše mnogo manje nego prapovijesnih, a nalazimo ih i na najvišem uzvišenju, sjeverno od rijeke, kao i

The fields referred to as Šarnjak are located to the south of the village of Šemovec and to the north of the village of Jalžabet, in the environs of the city of Varaždin. The Plitvica River, a tributary of the Drava River, runs through the Šarnjak<sup>1</sup> fields and the forests that surround it. The position is far from any settlements and is presently characterised by numerous extensively cultivated fields, small forests, and groves rich in game.

The Šarnjak site was discovered back in the 1960s during work on the amelioration of the Plitvica River and the removal of the woods for the purpose of initiating agricultural production, while it was only in 1988 that the first archaeological exploratory trenching was conducted. All of these early finds were for the most part not published and are presently kept in the museum in Varaždin.<sup>2</sup>

Numerous surface finds were found to the north and south of the Plitvica River on the ploughed fields of Šarnjak.<sup>3</sup> These are, for the most part, potsherds dated to the Late Bronze Age and to the Early and Late Iron Age. In addition to the prehistoric finds, here we also find traces of the route of a Roman road that ran from Petrijanec (*Aqua Viva*) towards Ludbreg (*Iovia/Botivo*), and sporadic surface finds of Roman period pottery. It is evident that these dispersed settlements stretched over an area of some 500 by 500 metres. We see no traces of earthen ramparts or similar fortification interventions into the area outside of gentle rises – bars, which are probably former alluvial sandbanks. These were likely settlements of the open type, the only protection of which was derived from the meanders of the river and its armlets.

Given the Early Medieval period finds, we can hypothesise a similar situation. There are, admittedly, substantially fewer of these finds

<sup>1</sup> Šarnjak, Šarnica i slični toponimi možda potječu od uočavanja raznobojnih mrlja u obrađenome tlu, očigledno ostatku jama, jer se na tako nazvanim položajima gotovo redovito uočavaju arheološka nalazišta. Konkretno, riječ je o poljima Šarnjak kod Šemovca, Šarnica kod Kelemena, Šarnica poduzetničke zone Knežinec i Šarnica kod Jalkovca. Zanimljivo bi bilo pregledati i ostale slično nazvane položaje i potvrditi ovu pretpostavku.

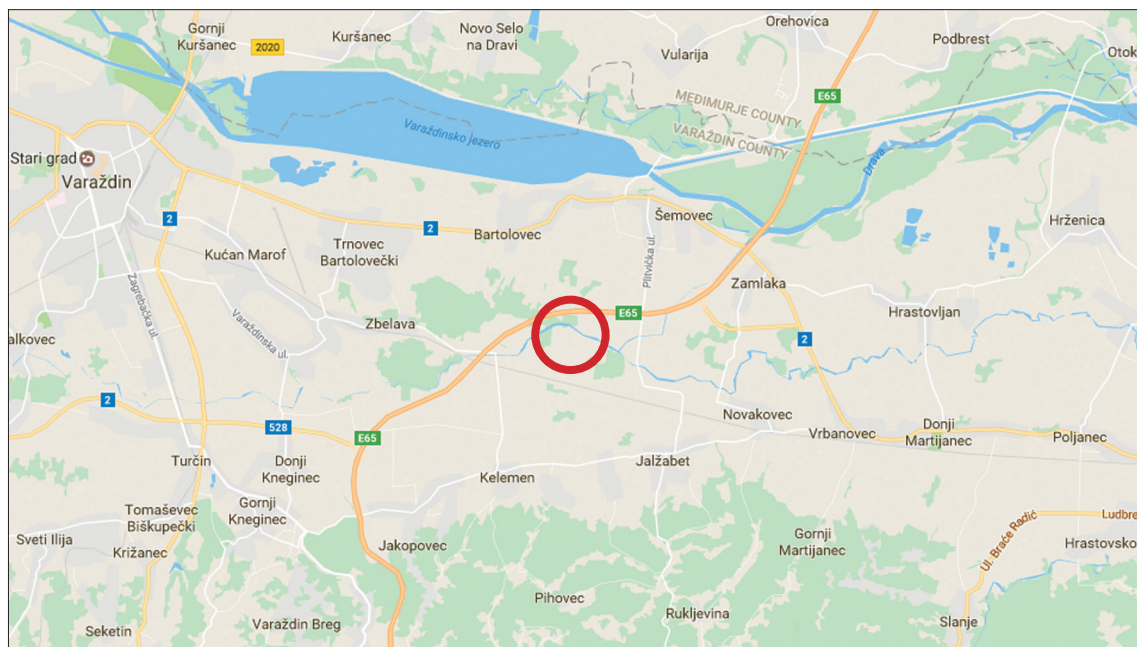
<sup>2</sup> Šarnjak-Korlatina – Fulir 1969, 409–411; Šimek 1989; Težak, Šimek, Lipljin 1999.

<sup>3</sup> Bekić 2006, 287, 288; Bekić, Percan 2006, 143, 144

<sup>1</sup> Šarnjak, Šarnica, and similar toponyms may originate from the observation of multi-hued patches on freshly ploughed soil, evidently the remains of pits, given that archaeological sites are almost always found at positions bearing this name. Concretely, this pertains to the Šarnjak field near Šemovec, Šarnica near Kelemen, Šarnica at the Knežinec commercial zone and Šarnica near Jalkovec. It would be interesting to survey the other similarly named positions to confirm this hypothesis.

<sup>2</sup> Šarnjak-Korlatina (Fulir 1969, 409–411; Šimek 1989; Težak, Šimek, Lipljin 1999).

<sup>3</sup> Bekić 2006, 287, 288; Bekić, Percan 2006, 143, 144.



Slika / Fig 1. Položaj Šarnjaka na Google maps / The position of Šarnjak on Google maps

na uzvišenju južno od rijeke. O stratigrafiji istraživanja iz 1988. godine javnost ne zna mnogo, ali čini se da je na sjevernom uzvišenju pronađen barem jedan ranosrednjovjekovni objekt.<sup>4</sup>

No zahvaljujući novijim istraživanjima iz 2006. i 2010.<sup>5</sup> očito je kako su na južnome uzvišenju ranosrednjovjekovni objekti bili rijetko raspoređeni, a činile su ih izdužene ovalne zemunice i pliče otpadne jame. Pregledima terena uočeni su brojni ostaci oštećenih objekata iz ranoga srednjeg vijeka, a sveukupno su tri objekta u potpunosti arheološki istražena. Nalazi iz ovih objekata upućuju nas na pripadnost grupi Drava – Mura – Sava.<sup>6</sup>

<sup>4</sup> Težak, Šimek, Lipljin 1999, 34.

<sup>5</sup> Bekić, Percan 2006; Bekić 2008; Bekić 2011.

<sup>6</sup> Grupa Drava – Mura – Sava objedinjuje područje na kojem se javlja slična ranosrednjovjekovna građa, slični modeli življenja i privrede, a koji se mogu pripisati novodoseljenim ranim Slavenima od kraja 6. do 8. stoljeća. To područje otprilike zahvaća neke prostore tokova rijeka Mure, Drave i Save, a teritorijalno neke dijelove današnje Slovenije, Austrije, Hrvatske i Mađarske (Bekić 2016, 33). O zajedničkom karakteru ranoslavenskih nalaza iz međuriječja Drave i Mure već je pisao Guštin (2010, 48).

than those of prehistoric provenance, and we also find them on the highest elevation to the north of the river, and on the elevation to the south of the river. Little has been published concerning the stratigraphy of the investigation conducted in 1988, but it does appear that at least one Early Medieval structure was found on the northern elevation.<sup>4</sup>

Thanks, however, to more recent research campaigns, in 2006 and 2010,<sup>5</sup> we now see that it is evident that the Early Medieval structures on the southern elevation are sparsely distributed, and consisted of elongated oval dugout houses and shallow middens. Field surveys revealed numerous remains of damaged structures from the Early Medieval period – all three structures have been fully archaeologically investigated. The finds from these structures indicate that they belong to the Drava-Mura-Sava group.<sup>6</sup>

<sup>4</sup> Težak, Šimek, Lipljin 1999, 34.

<sup>5</sup> Bekić, Percan 2006; Bekić 2008; Bekić 2011.

<sup>6</sup> The Drava-Mura-Sava group unifies an area in which we find similar Early Medieval material, and similar models of living and economy, that can be attributed to newly arrived early Slavs from the later 6th to the 8th century. This area roughly encompasses some of the areas of the Mura, Drava and Sava rivers, and in terms of territory parts of present day Slovenia, Austria, Croatia and Hungary (Bekić 2016, 33). Guštin has written in the past of the common characteristics of the early Slav finds from the area between the Drava and Mura rivers (Guštin 2010, 48).

Prilikom istraživanja 2006. godine otkrivena je jedna veća zemunica (SJ 9), veličine 4,8 x 2,1 metara i dubine do 34 centimetara, orijentacije istok – zapad, s malim otklonom prema SI – JZ. U njoj su, osim brojnih ulomaka ranosrednjovjekovne keramike, pronađena i dva ulomka stakla i jedan manji željezni klin. Također, pronađena su i tri ulomka rimske keramike i deset ulomaka latenske keramike. Uz to, prikupljeno je 27 manjih ulomaka tegula, od kojih je veći dio prepaljen, četiri komada zapečene zemlje (dijelovi peći?) i više riječnih oblutaka. U zemunici se nalazilo i gotovo dvije stotine ulomaka te cijelih životinjskih kostiju. Među kostima su prepoznate kosti svinje, goveda, ovce ili koze i gavrana.<sup>7</sup>

Prvi je ulomak stakla djelić nekad veće staklene posude, žućkasto zelenkaste boje s crvenom crtom u strukturi stakla. Također, u istoj je jami SJ 9 pronađena i jedna vrlo tanka te malena staklena cjevčica zelene boje. Ona je vjerojatno služila kao privjesak na ogrlici.<sup>8</sup> Vrlo slične zelene staklene cjevaste perle pronalaze se i u karolinškim grobljima iz 8. i 9. stoljeća, kao na primjer u Eggolsheimu.<sup>9</sup>

Uzorci ugljena prikupljeni u jami analizirani su AMS C14 metodom, a rezultat je srednje vrijednosti calAD 710±39. g. Zemunica SJ 9 je prema C14 dataciji svakako prerano datirana zemunica. Keramika je tehnički vrlo doradana, većina je ulomaka ukrašena i gotovo da nema više rupičaste, prostoručno izrađene keramike ili nekih arhaičnih ukrasa. Stoga bi je ipak trebalo datirati u kraj 8. ili početak 9. stoljeća i time u početak faze 3 grupe Drava – Mura – Sava.<sup>10</sup>

Nastavkom istraživanja 2010. godine uspješli smo otkriti još dva ranosrednjovjekovna objekta, i to u blizini zemunice SJ 9. Prvi je objekt prema dimenzijama još jedna zemunica, SJ 10, a drugi jedna plitka jama, SJ 20.

<sup>7</sup> Bekić 2016, 136.

<sup>8</sup> Bekić 2016, 133.

<sup>9</sup> Regele 2006, T. 2, prvi, drugi i treći red.

<sup>10</sup> Bekić 2016, 98.

A large dugout house (SU 9) was discovered in the course of the investigation in 2006. Its dimensions are 4.8 by 2.1 metres, with a depth of 34 centimetres, and an east-west orientation, deviating slightly along the NE-SW line. It contained numerous sherds of Early Medieval pottery, two fragments of glass, and a small iron spike. Three sherds of Roman pottery and ten sherds of La Tène pottery were also recovered from the house. Also among the finds were 27 small sherds of tegulae, most of which were scorched, four pieces of hard burnt earth (parts of a stove?) and a number of river pebbles. The dugout house also contained almost two hundred bone fragments and intact animal bones. Identified among the bones are those of swine, cattle, sheep or goat, and raven.<sup>7</sup>

The first glass fragment is part of a once larger glass vessel of yellowish-green colour with a red line in the structure of the glass. Also found in the same pit, SU 9, was one very thin and small glass tube of green colour. It was likely used as a pendant on a necklace.<sup>8</sup> Very similar green glass tubular beads are found in Carolingian graves of the 8<sup>th</sup> and 9<sup>th</sup> centuries, for example at Eggolsheim.<sup>9</sup>

Charcoal samples collected from the pit were subjected to AMS C14 analysis yielding a mean value of calAD 710±39. The C14 date of dugout house SU 9 is certainly too early. The pottery is technically highly refined, most of the potsherds are decorated, and there is practically no more vesicular, freehand modelled pottery, or any of the archaic decorations. We should, then, date it to the later 8<sup>th</sup> or early 9<sup>th</sup> century in spite of the C14 dating and, thereby, to the start of the third phase of the Drava-Mura-Sava group.<sup>10</sup>

With the continuation of investigation in 2010, we successfully discovered two additional Early Medieval structures, both close to dugout house SU 9. The first structure is, by its dimensions, another dugout house, SU 10, and the second a shallow pit, SU 20.

<sup>7</sup> Bekić 2016, 136.

<sup>8</sup> Bekić 2016, 133.

<sup>9</sup> Regele 2006, T. 2, first, second and third row.

<sup>10</sup> Bekić 2016, 98.





Slika / Fig. 2. Iskopavanje zemunice SJ 10 i pakiranje zemlje u vreće za vodeno sisanje / Excavation of dugout house SU 10 and packaging of the soil in bags for water sieving (foto / photo: L. Bekić).

Zemunica SJ 10 je dužine 3,2 m, širine 1,4 m i dubine oko 20 cm. Orijentacije je istok – zapad, s malim odklonom prema SI – JZ, poput zemunice SJ 9. Takva je orijentacija potpuno u skladu s većinom ovalno izduženih zemunica<sup>11</sup> koje su dosad istražene na prostoru ranoslavenske grupe Drava – Mura – Sava.<sup>12</sup>

U zemunici je pronađeno mnoštvo keramičkih ulomaka, nešto malo životinjskih kostiju te staklenih i metalnih predmeta. Predmet T. 5-4 (slika 3) je vjerojatno dio željezne oplata koja je u potpunosti korodirana, a čini se kako je na sredini bila i neka zakovica. Međutim, unatoč nepoznatoj namjeni ove pločice, vrlo je zanimljiva činjenica kako je ona pronađena potpuno korodirana s mnoštvom sitnih drvenih iveraka,

<sup>11</sup> Poimence to su zemunice Stara ves J 6, J 1 (Bekić 2006, 211, 250), Šarnjak SJ 9, Brezje V SJ 4, 5 i 7, Brezje IV SJ 11(12) (Bekić 2009, 192).

<sup>12</sup> Bekić 2016, 73, sl.38.

Dugout house SU 10 has a length of 3.2 m, a width of 1.4 m and a depth of approximately 20 cm. The orientation is east to west, with a slight deviation to the NE-SW line, as in the case of dugout house SU 9. This orientation is entirely consistent with the majority of oval-elongated dugout houses<sup>11</sup> that have been investigated to date in the area of the early Slavic Drava-Mura-Sava group.<sup>12</sup>

An abundance of potsherds was recovered from the dugout house, along with some animal bones, glass, and metal artefacts. Artefact T. 5-4 (Fig. 3) is likely a part of iron plating that has entirely corroded, and it appears that some manner of rivet was located at its centre. Although we do not know the purpose of this small plate, it is very interesting to note that it was found entirely corroded with an abun-

<sup>11</sup> Individually these are dugout house Stara ves J 6, J 1 (Bekić 2006, 211, 250), Šarnjak SU 9, Brezje V SU 4, 5 and 7, Brezje IV SU 11(12) (Bekić 2009, 192).

<sup>12</sup> Bekić 2016, 73, Fig. 38.



Slika / Fig 3. Lice i naličje željezne pločice s drvenim iverjem i slamom očuvanim u koroziji / The obverse and reverse of the iron plate with slivers of wood and hay preserved in the corrosion (foto / photo: L. Bekić)

slame i piljevine. To ukazuje kako su podovi zemunice možda bili nasipavani ovim materijalom kako bi se izbjegla vlaga i blato. Vjerojatno su zato podovi ovih zemunica uvijek bez traga poda koji bi bio uređen kamenim popločavanjem ili zapečenom zemljom. Naime, pretpostavlja se da su se redovno popravljali nasipavanjem uvijek novoga sitnoga drvenog otpada i slamom, koja je propala i pretvorila se u crnu zemlju kakvu uvijek nalazimo u tim jamama. Tako je i ova metalna pločica, korodirajući u tim slojevima, privukla na sebe i korozijom sačuvala ostatke materijala. Ovo nije izoliran slučaj jer je takvih nalaza bilo i prilikom iskopavanja Brezja (zasad neobjavljeno), a na to bi i ubuduće valjalo obratiti pozornost.

U jami SJ 10 je prikupljeno malo drvenog ugljena koji je datiran C14 metodom, a rezultat ukazuje na kalibriranu godinu 842±45 calAD.<sup>13</sup>

Plitka jama SJ 20 nalazi se nešto manje od dva metra udaljena od SJ 10. Jama je dužine 2,4 m, širine do 1,5 m i dubine oko 10 cm. Orijentacija joj je sjever – jug i vjerojatno

<sup>13</sup> Iz jednog je uzorka ugljena izrađena AMS C14 analiza na *Poznańskie Laboratorium Radiowęglowe* u sklopu *Uniwersytetu im. Adama Mickiewicza* u Poznaniu, u Poljskoj. Uzorak POZ 40306 rezultirao je datumom BP 1175±30, što iznosi calAD 842±45.

dance of tiny slivers of wood, hay, and sawdust. This tells us that the floors of dugout houses may have been covered with this material to mitigate moisture accumulation and mud formation. This may be why the floors of these dugout houses are always without traces of flooring based on stone paving or hard burnt earth. They were, namely, likely regularly repaired by layering on fresh highly fragmented wooden waste and hay, which then decayed into the black earth we always find in these pits. The metal plate corroded in these layers and preserved the remains of these materials in its corrosion layer. This is not an isolated case – finds of this kind have been excavated at Brezje (as yet unpublished), and attention should be given to this issue in the future.

A small quantity of wood charcoal was collected from pit SU 10 and dated using the C14 method with a calibrated result of calAD 842±45.<sup>13</sup>

The shallow pit SU 20 is situated a little less than two metres from SU 10. This pit has a length of 2.4 m, a width of up to 1.5 m and a depth of approximately 10 cm. Its orientation is north to south and it is likely a work pit/

<sup>13</sup> AMS C14 analysis was conducted on one charcoal sample at the *Poznańskie Laboratorium Radiowęglowe* of the *Uniwersytetu im. Adama Mickiewicza* in Poznan, Poland. Sample POZ 40306 yielded a date of 1175±30 BP, which comes out to calAD 842±45.



je riječ o radnoj / otpadnoj jami uz kuću / zemunicu SJ 10. U njoj je pronađeno samo nešto malo ulomaka keramike i drugih nalaza.

I jama SJ 20 je datirana putem C14 metode i kalibrirani rezultat je ispaao nešto drugačiji, tj.  $712 \pm 39$  calAD.<sup>14</sup> Ovaj je datum sličan onome iz uzorka prikupljenog u zemunici SJ 9.

Keramika iz obje jame djeluje datacijski istovremena i tipološki sukladna. Uglavnom, riječ je o loncima izrađenima od barem tri dijela, posebno je izrađeno dno, trbuh i gornji dio posude s vratom i obodom. Na svim dijelovima ima tragova ručnog modeliranja, a to se najviše primjećuje na trbuhu s unutrašnje strane. Na mnogim su ulomcima s unutrašnje strane vidljivi spojevi dijelova, između dna i trbuha te doljeplijvanja gornjeg dijela na rame lonca.

Očigledno je kako su se dijelovi izrađivali zasebno prostoručno, a njihovim spajanjem vršila se konačna dorada na sporovrtećem kolu. Tada bi se izveli ukrasi, prikrili tragovi spajanja i izravnale nepravilnosti, posebice na gornjem dijelu lonca.

Keramika rupičaste fature u ove dvije jame zastupljena je samo u nekoliko primjeraka, većina je keramike izrađena s mnogo primjesa srednjih i sitnijih riječnih kamenčića (oblutaka), dok je manji broj izrađen i kombinacijom drobljenog kamena (uglavnom kvarcita) ili mrvica keramike i pečene zemlje. Primjese gline konzistentne su s opisanim načinom izrade keramike jer se rupičasta, prostoručno izvedena keramika izrađivala u ranijem razdoblju, od 6. do najkasnije 8. stoljeća. Keramika izrađena doradom na sporovrtećem kolu, redovno s primjesama kamenčića i pijeska, na području grupe Drava – Mura – Sava javlja se u načelu tek od početka 8. stoljeća.<sup>15</sup>

<sup>14</sup> Iz jednog je uzorka ugljena izrađena AMS C14 analiza na *Poznańskie Laboratorium Radiowęglowe* u sklopu *Uniwersytetu im. Adama Mickiewicza* u Poznaniu, u Poljskoj. Uzorak POZ 40307 rezultirao je datumom BP  $1300 \pm 30$ , što iznosi calAD  $712 \pm 39$ .

<sup>15</sup> Bekić 2016, 90.

midden associated with house/dugout house SU 10. A small quantity of potsherds and other finds were collected from this pit.

Pit SU 20 was also dated applying the C14 radiocarbon method, yielding a slightly different calibrated result of calAD  $712 \pm 39$ .<sup>14</sup> This date is very similar to that from the sample collected in dugout house SU 9.

The pottery from both pits appears to be contemporaneous and typologically correlated. These are, for the most part, pots fabricated from three parts – the base, belly section, and upper part of the vessel with the neck and rim are separately fabricated. There are traces of hand modelling on all these parts, most evident on the inside wall of the belly section. On many of the sherds we see the visible joints of sections on the inside wall, between the base and belly, and traces of bonding of the upper section to the shoulder of the pot.

It is evident that these parts were fabricated freehand and separately, and joining these parts was achieved by their final reworking on a slow potter's wheel. This was the phase when decoration would be effected, the traces of joining concealed, and the irregularities flattened out, especially on the upper section of the pot.

In these two pits, pottery of vesicular fabric is represented only by a few specimens – most of the pottery is fabricated with abundant temper of mid-sized and small river pebbles, while a smaller number was fabricated by combining crushed rock (mostly quartzite) or grains of pottery and burnt/fired earth. The tempers in the clay are consistent with the described method of pottery manufacture, given that vesicular, freehand modelled pottery was produced in the earlier period, from the 6<sup>th</sup> to – at the latest – 8<sup>th</sup> century. As a rule, pottery reworked on a slow potter's wheel, routinely with a temper of pebbles and sand, appears in the area of the Drava-Mura-Sava group only from the start of the 8<sup>th</sup> century.<sup>15</sup>

<sup>14</sup> AMS C14 analysis was conducted on one charcoal sample at the *Poznańskie Laboratorium Radiowęglowe* of the *Uniwersytetu im. Adama Mickiewicza* in Poznan, Poland. Sample POZ 40307 yielded a date of  $1300 \pm 30$  BP, which comes out to calAD  $712 \pm 39$ .

<sup>15</sup> Bekić 2016, 90.

Velik broj keramičkih ulomaka je ukrašen, a gotovo polovina svih ulomaka ima tragove nekog ukrasa. Uglavnom dominira ukras višestruke valovnice koja se nalazi na vratu, ramenu i trbuhu lonca, a u nekoliko slučajeva i na unutarnjem dijelu oboda. Prve višestruke valovnice javljaju se već u prvoj polovini 7. stoljeća, međutim, znakovito je kako se na Šarnjaku više ne pojavljuju ukrasi iz 7. i prve polovine 8. stoljeća, poput kratkih višestrukih crta, ureza na obodu, nizova uboda itd.<sup>16</sup>

Vrlo je brojna i ukras pojaseva višestrukih ravnih crta (T. 1-5, T. 2-3, T. 6-2) koje se često pojavljuju u kombinaciji s višestrukim valovnicama (T. 2-4, T. 4-2), pokatkad i presijecajući jedan drugoga (T. 5-5). Jednostruke i dvostruke valovnice često su neuredno i isprekidano izvedene (T. 1-1, 2, 3, T. 3-1). Rjeđe su prisutne jednostruke crte i valovnice (T. 3-2, T. 6-4), i to uglavnom bez višestrukih ukrasa.

Najbliže i najsličnije usporedbe za ovako izrađenu i ukrašenu keramiku su ulomci s nalazišta Jakopovec – Blizna, Varaždin – Brezje.<sup>17</sup> Nizvodno, pokraj Drave, ovakva keramika nalazi se na nalazištima oko Torčeca, posebice na nalazištu Prečno Pole I.<sup>18</sup> Nešto su udaljenija nalazišta s ovakvom keramikom na područjima grupe Drava – Mura – Sava u Hrvatskoj i Sloveniji<sup>19</sup> ali i u Mađarskoj.<sup>20</sup> Sve u svemu, može se reći kako su najsličniji nalazi ove keramike na području koje obilježava grupa ranoslavenskih nalaza Drava – Mura – Sava.

Što se tiče usporedbi s nalazima iz sjevernijih područja, valja navesti nalaze iz Slovačke, npr. s groblja Nové Zámky, gdje su u 8. stoljeću zastupljeni skoro svi tipovi ukrasa koji postoje na Šarnjaku,<sup>21</sup> zatim iz avaroslavenskoga groblja Šebastovce 8./9. stolje-

A large number of the potsherds are decorated – almost half of all sherds bear traces of some decoration. The multiple wavy line is the dominant decoration, found on the neck, shoulder, and belly of pots and, in a few cases, also on the inside wall of the rim. Certainly, the first multiple wavy lines appear as early as the first half of the 7<sup>th</sup> century – it is, however, significant that at Šarnjak we no longer see decoration from the 7<sup>th</sup> and first half of the 8<sup>th</sup> century such as short multiple lines, incisions on the rim, rows of punctations, and so forth.<sup>16</sup>

The decoration consisting of belts of multiple straight lines is also very frequent (T. 1-5, T. 2-3, T. 6-2), appearing frequently in combination with multiple wavy lines (T. 2-4, T. 4-2), at times intersecting one another (T. 5-5). In their execution, single and double wavy lines are often not neatly arranged and are discontinuous (T. 1-1, 2, 3, T. 3-1). Single lines and single wavy lines are much less frequent (T. 3-2, T. 6-4) and largely without multiple decorations.

The closest and most similar parallels for pottery manufactured and decorated in such fashion are potsherds from the Drava-Mura-Sava sites of Varaždin-Brezje.<sup>17</sup> Downstream on the Drava River, this kind of pottery is found at sites around Torčec, in particular at the Prečno Pole I site.<sup>18</sup> Less proximate sites with this kind of pottery are found in the areas of the Drava-Mura-Sava group in Croatia and Slovenia<sup>19</sup> but also in Hungary.<sup>20</sup> All in all, it can be said that the most similar finds of this kind of pottery are to be found in the area characterised by the Drava-Mura-Sava group of early Slavic finds.

Regarding the analogies with finds from areas farther to the north, we should mention the finds from Slovakia, e.g. at the Nové Zámky cemeteries,<sup>21</sup> where in the 8<sup>th</sup> century we find almost all of the types of decoration found at Šarnjak, from the 8<sup>th</sup>/9<sup>th</sup> century Avar-Slav

<sup>16</sup> Bekić 2016, 92, 93.

<sup>17</sup> Bekić 2008, Sl.3, 4; 2016, T. 6-25.

<sup>18</sup> Sekelj-Ivančan 2010, T. 10, 11, 12, 13...

<sup>19</sup> Tomičić 2002, kat. 1, 3, 6, 7, 8, 13, 27, 30...; Guštin, Tiefengraber 2002, sl.9 i 10; itd.

<sup>20</sup> Na primjer Miklósfá – Mórighely, Cigánykút, Szőke 1992, Kep.9-11.

<sup>21</sup> Čilinska 1966, 132, 133.

<sup>16</sup> Bekić 2016, 92, 93.

<sup>17</sup> Bekić 2008, Sl. 3, 4; 2016, T. 6 to 25.

<sup>18</sup> Sekelj-Ivančan 2010, T. 10, 11, 12, 13...

<sup>19</sup> Tomičić 2002, cat. 1, 3, 6, 7, 8, 13, 27, 30...; Guštin, Tiefengraber 2002, Fig. 9 and 10 etc.

<sup>20</sup> E.g. Miklósfá-Mórighely, Cigánykút, Szőke 1992, Kep.9-11.

<sup>21</sup> Čilinska 1966, 132, 133.



će<sup>22</sup> te iz naselja poput Čeladica kod Nitre.<sup>23</sup> U Češkoj se lonci oblika i ukrasa kao na Šarnjaku javljaju od 8. stoljeća, na primjer u Uvalnom kod Krnova<sup>24</sup> te na naselju i groblju Breclav – Pohansko te Breclav – Libiva.<sup>25</sup> Na sjeveru srednje Europe objavljeno je mnogo građe i analogije su toliko brojne da ih nema smisla sve navoditi.

Ipak, valja dodati kako se brojni zajednički elementi primjećuju i na keramičkim nalazima koji se pripisuju starohrvatskim grobljima i naseljima u Dalmaciji. Pritom treba naglasiti kako je riječ o elementima, dok je izvedba drugačija, ali o tome je pitanju potrebno zasebno pisati. Stoga treba navesti element jednostruke valovnice s groblja na Ždrijacu,<sup>26</sup> višestruke valovnice<sup>27</sup> i višestrukih ravnih crta<sup>28</sup> pa i jednostrukih valovnica.<sup>29</sup> Posebice su važni primjeri višestruke valovnice koja se nalazi između višestrukih vodoravnih crta na Glavčinama u Podvršju,<sup>30</sup> a u literaturi svakako postoje i drugi primjeri i na širem dalmatinskom području.

Svakako je najrjeđi i najzanimljiviji metalni nalaz (T. 5-13, Sl.4.), pronađen u ovih nekoliko objekata na Šarnjaku, mala obujmica remena (*Gürtelschlaufe*), izrađena od željeznoga kvadratastog prstena i brončane gravirane pločice.<sup>31</sup> Pločica je bila prekrivena metalom srebrnog sjaja, a bez podrobne analize ne može se tvrditi je li riječ o posrebrenoj pločici ili je to samo pokrov od kositra i olova, kakav je, primjerice, prepoznat na nalazištima Torčeca.<sup>32</sup>

<sup>22</sup> Grobovi 61, 84, 87, 91, 103, 111... Budinsky-Krička, Točik 1991.

<sup>23</sup> Ruttkayova, Ruttkay 2004, Obr.2,5,6.

<sup>24</sup> Kouřil 1994, obr.22-27.

<sup>25</sup> Dostal 1975, Abb.1; Macháček 2001, obr.1, 11,13, mada, nešto ranija građa.

<sup>26</sup> Belošević 1980, T. LX-5, 6, 7, 9 itd.

<sup>27</sup> Belošević 1980, T. LXI-7-9.

<sup>28</sup> Belošević 1980, T. LX-2,3, T. LXII-5.

<sup>29</sup> Belošević 1980, T. LIII-8, T. LIV-8.

<sup>30</sup> Gusar 2009, T. 3, T. 4, T. 5.

<sup>31</sup> Bekić 2016, 129.

<sup>32</sup> Doračić 2010, 401–403.

cemetery at Šebastovce,<sup>22</sup> and from settlements such as Čeladice in Nitra.<sup>23</sup> In the Czech Republic, pots of the shape and with the decoration found at Šarnjak appear from the 8<sup>th</sup> century, for example at Uvalno near Krnov<sup>24</sup> and at the settlement and cemetery of Breclav-Pohansko and Breclav-Libiva.<sup>25</sup> A great deal of material and analogies have been published in the north of Central Europe, too numerous to cite here extensively.

It is worth adding, however, that numerous common elements were also observed on finds of pottery attributed to early Croatian cemeteries and settlements in Dalmatia. We emphasize here that only the elements are in common, while the actual execution differs, but this issue needs to be discussed separately. We should, then, mention the element of a single wavy line from the cemetery at Ždrijac,<sup>26</sup> the multiple wavy line,<sup>27</sup> multiple straight lines,<sup>28</sup> and even single wavy lines.<sup>29</sup> Particularly important are examples of multiple wavy lines between multiple straight lines found at Glavčine in Podvršje,<sup>30</sup> and there are certainly other examples to be found in the literature from the broader area of Dalmatia.

Certainly the rarest and interesting metal find (T. 5-13, Fig. 4) found at these structures at Šarnjak is a small belt keeper (*Gürtelschlaufe*) made of an iron rectangular ring and a small engraved bronze plate.<sup>31</sup> The small plate was covered with a metal of silver sheen, but without detailed analysis we cannot be sure whether the plate is plated with silver or tin and lead, like the one, for example, identified at the Torčec sites.<sup>32</sup>

<sup>22</sup> Graves 61, 84, 87, 91, 103, 111...; Budinsky-Krička, Točik 1991.

<sup>23</sup> Ruttkayova, Ruttkay 2004, Obr. 2, 5, 6.

<sup>24</sup> Kouřil 1994, obr. 22-27.

<sup>25</sup> Dostal 1975, Abb.1; Macháček 2001, obr. 1, 11,13, although somewhat earlier material.

<sup>26</sup> Belošević 1980, T. LX-5, 6, 7, 9 etc.

<sup>27</sup> Belošević 1980, T. LXI-7-9.

<sup>28</sup> Belošević 1980, T. LX-2,3, T. LXII-5.

<sup>29</sup> Belošević 1980, T. LIII-8, T. LIV-8.

<sup>30</sup> Gusar 2009, T. 3, T. 4, T. 5.

<sup>31</sup> Bekić 2016, 129.

<sup>32</sup> Doračić 2010, 401–403.



Slika 4. Obujmica prije i poslije konzerviranja i restauriranja (foto: L. Bekić). Fig. 4. A belt keeper prior to and following conservation and restoration (photo: L. Bekić)

Identičnog primjerka nema u dostupnoj literaturi iako obujmice nisu rijetke, a ukras vitica zapravo je prilično čest. Najveći broj prikazanih obujmica objavio je Zabožnik,<sup>33</sup> a mogu se razlikovati primjeri kvadratastih obujmica s apliciranom pločicom, kao i onih bez nje. Vizualno je slična obujmica pronađena na groblju Šebastovce, kao dio raskošne avarske pojasne garniture u konjaničkom grobu 131,<sup>34</sup> ali je način izrade ukrasa drugačiji.

Motiv ukrasa je S-vitica sa šiljatim listovima (*S-Ranke mit spitzen Blättern*), što je prilično čest osnovni tip ukrasa, iako se pojavljuje u velikom broju kombinacija i izvedbi. Vrlo čest ukras je na groblju Orosháza – Bónum, a posebice je sličan onome na jezičcu iz groba 56.<sup>35</sup> Groblje Orosháza – Bónum datira s kraja 7. do treće trećine 8. stoljeća, a grob 56 pripada grupi koju autorica stavlja u prvu polovinu 8. stoljeća.<sup>36</sup> Ukras je sličan i onome s pojasnog jezičca na nalazištu Vac – Kavicsbanya u grobu 203.<sup>37</sup>

Ukras u vidu dvostruke vitice (S-vitica, krugolika lozica, S-lozica) porijeklom je od bizantskog zlatarstva (kapljica) i taj je motiv nadalje razvijan u avarskom zlatarstvu.<sup>38</sup> Zabožnik je nabrojao čak 17 vrsta

There are no identical specimens in the available literature even though belt keepers are not very rare and the tendrill decoration is in fact quite frequent. The greatest number of belt keepers similar to ours have been published by Zabožnik,<sup>33</sup> and we can differentiate between examples of rectangular belt keepers with applied plates and those without them. A visually very similar belt keeper was found at the Šebastovce cemetery as part of a lavish Avar belt set in horseman's grave 131<sup>34</sup> although the method of fabricating the decoration differs.

The decoration motif is the S-tendrill with pointed leaves (*S-Ranke mit spitzen Blättern*), which is a quite frequent basic decoration type, one that appears in a great number of combinations and designs. It is a very frequent decoration at the Orosháza-Bónum cemetery – especially similar is that on a belt strap end from grave 56.<sup>35</sup> The Orosháza-Bónum cemetery is dated from the later 7<sup>th</sup> to the last third of the 8<sup>th</sup> century, and grave 56 is numbered among a group that the author places in the first half of the 8<sup>th</sup> century.<sup>36</sup> The decoration itself is similar to that on a belt strap end from grave 203 at the Vac-Kavicsbanya site.<sup>37</sup>

The decoration consisting of a double tendrill (S-tendrill, spiral vine, S-vine) draws its roots from Byzantine goldsmithing (teardrop) – the motif was further developed among Avar gold-

<sup>33</sup> Zabožnik 1991, 321.

<sup>34</sup> Budinsky-Krička, Točik 1991 T. XVIII-26.

<sup>35</sup> Juhász 1995, T. IV-6, T. XXV-5.

<sup>36</sup> Juhász 1995, 65.

<sup>37</sup> Tettamanti 2000, T. 10-7, T. 37-8.

<sup>38</sup> Gabor 2005, 212, 213.

<sup>33</sup> Zabožnik 1991, 321.

<sup>34</sup> Budinsky-Krička, Točik 1991 T. XVIII-26.

<sup>35</sup> Juhász 1995, T. IV-6, T. XXV-5.

<sup>36</sup> Juhász 1995, 65.

<sup>37</sup> Tettamanti 2000, T. 10-7, T. 37-8.

vitica,<sup>39</sup> a uporaba S-vitice datira iz sve tri faze kasnoavarskog razdoblja.<sup>40</sup> Naš ukras predstavlja nešto jednostavniju inačicu vitice pa se, prema svemu sudeći, može datirati od kraja srednjeavarskog doba, oko 710. godine pa do kraja kasnoavarskog doba II, odnosno oko 760. godine.

Osim toga vrlo vrijednog nalaza, pronađeno je još nekoliko metalnih nalaza. To je već spomenuta željezna pločica (T. 5-4, vjerojatno dio oplata sa zakovicom), brončani ukrasni okov (T. 5-6), vršak željeznog noža (T. 5-9), igle (T. 5-8) i šila (T. 5-7, T. 7-7).

Brončanom ukrasnom okovu (T. 5-6) nije lako odrediti točnu namjenu, mada se može pretpostaviti kako je bio apliciran na kožni remen. Također, teško ga je datirati. S obzirom na to kako ovakav ukras nije poznat iz bizantske ili avarske metalurgije, moguće je da je riječ o nekoj kasnoantičkoj aplici koja je ušla u ponovnu upotrebu u ranome srednjem vijeku. Također, moguće je da je zapravo riječ o donjem dijelu kasnoantičkog jezičca vojnog pojasa. Naš okrugli predmet s rupom u sredini nalikuje donjem dijelu jezičca s kružnom pločicom narebrenog ruba, a koji su posebice česti u Galiji i podunavskim provincijama tijekom 4. stoljeća.<sup>41</sup>

Dio željeznog noža (T. 5-9) u potpunosti odgovara onovremenim oblicima vrha noža, a taj je predmet i jedan od najčešćih metalnih nalaza u grobljima pa i u naseljima toga doba. Na osnovu sačuvanog dijela nije ga moguće preciznije datirati.

Što se igala tiče, zapravo su vrlo rijedak nalaz u objavama s ranosrednjovjekovnih nalazišta uopće. No s obzirom na iskustva s Brezja i Šarnjaka, gdje su se koristile naprednije tehnike iskopavanja – mokro sijanje, metal detekcija nalaza itd., pokazalo se kako je bilo tankih igala, i to ne samo većih s kvadratnim presjekom (šila, T. 5-7, T. 7-7) već i vrlo malih te tankih igala oblog pre-

smiths.<sup>38</sup> Zabožnik enumerates as many as seventeen types of tendrils,<sup>39</sup> and the use of S-tendrils dates to all three phases of the late Avar period.<sup>40</sup> Our decoration is a somewhat simpler version of the tendril and, based on the available data, it can be dated from the end of the middle Avar period about AD 710 to the end of the late Avar period II, i.e. to AD 760.

Several other metal finds were discovered along with this very valuable find. These are the already mentioned small iron plate (T. 5-4, likely part of the plating with rivet), a decorative bronze fitting (T. 5-6), the tip of an iron knife (T. 5-9), a needle (T. 5-8), and an awl (T. 5-7, T. 7-7).

The exact use of the decorative bronze fitting (T. 5-6) cannot easily be determined, although it can be presumed that it was applied to a leather belt. It is also hard to date precisely. Given that this kind of decoration is not known to us from Byzantine or Avar metalworking, it may be a late Roman appliqué that was reused in the early Middle Ages. It is also possible that it is in fact part of the lower section of a late Roman military belt strap end. Our round object with a perforation at its centre is suggestive of the lower part of a belt strap end with round plate of ribbed edge that is particularly frequent in Gaul and the Danubian provinces in the 4<sup>th</sup> century.<sup>41</sup>

The section of an iron knife (T. 5-9) is entirely consistent with the knife tip forms of the time, and the artefact is one of the most frequent metal finds in graves and settlements of the period. It cannot be precisely dated based solely on the preserved fragment.

With regard to needles, they are in fact a very rare find among published materials from Early Medieval sites in general. Given, however, the experience from Brezje and Šarnjak, where more advanced excavation techniques were applied – water sieving, metal detectors and so forth – it was discovered that there were in fact thin needles present at the site, and not only fairly large ones with square cross-sections (awls, T. 5-7, T. 7-7), but also very small and thin needles of

<sup>39</sup> Zabožnik 1991, 230,231.

<sup>40</sup> Daim 1984, Abb.1.

<sup>41</sup> Radman-Livaja 2004, 98, kat. 358.

<sup>38</sup> Gabor 2005, 212, 213.

<sup>39</sup> Zabožnik 1991, 230,231.

<sup>40</sup> Daim 1984, Abb.1.

<sup>41</sup> Radman-Livaja 2004, 98, kat. 358.

sjeka (T. 5-8).<sup>42</sup> Par igala / šila otkriveno je i tijekom istraživanja oko Torčeca.<sup>43</sup> Pronalazak ovakvih igala daje nam za pravo da zaključimo kako je odjeća vrlo vjerojatno šivana s mnogo pažnje, možda i s ušivenim ukrasom, izvedenim finim vezom.

U nekim ranosrednjovjekovnim objektima, koji su bili vidljivi na površini nakon oranja, uočeni su i ostaci taljenja željeza, što je prilično česta pojava u naseljima 8. i 9. stoljeća.<sup>44</sup> Nažalost, u tri istražena objekta nisu pronađeni tragovi metalurške djelatnosti.

U ova tri objekta pronađeno je i nekoliko malih staklenih ulomaka na osnovu kojih se ne može odrediti kojem su tipu posude pripadali. Nejasna je i njihova datacija pa je moguće da je uglavnom riječ o rimskim ulomcima prikupljenim na ruševinama obližnje vile rustike.

Kao prvo, potrebno je razriješiti pitanje datacije ovih triju objekata. Na prvi pogled, prema keramičkim nalazima, ove se jame mogu odrediti u isto ili vrlo blisko razdoblje, najviše do jedne generacije udaljeno.

Za sva je tri objekta napravljena C14 analiza koja je pokazala datume calAD 710±39 za SJ 9, calAD 712±39 za SJ 20, kao ranije, i calAD 842±45 za SJ 10 kao dosta mlađi datum.<sup>45</sup> Na prvi pogled razlika je u cijelom stoljeću, međutim, kada se uvažava krajnji rasponi ovih datuma, dolazimo do razdoblja od 749. do 797. godine, u kojem bi sva tri objekta mogla funkcionirati ako su uistinu istovremeni.

Što se arheološke građe tiče, keramika se prema zadnjim istraživanjima može datirati u vrlo kasno 8. ili čak na početak 9. stoljeća, dok se avarska obujmica može datirati u drugu trećinu 8. stoljeća. Kontekstu-

<sup>42</sup> Igle i šila s Brezja su još neobjavljene.

<sup>43</sup> Sekelj-Ivančan 2010, kat. br. 24, 43, 120, 187, 263.

<sup>44</sup> Najbliže Torčec - Ledine (Doračić 2010, 404), inače na brojnim drugim primjerima u ranome srednjem vijeku srednje Europe.

<sup>45</sup> Vjerojatno je da se u prva dva slučaja radi o razmjerno čestom *old wood effect* sindromu kod mjerenja C14 radioaktivnog ugljika. Uzrok tomu je analiziranje uzorka dijela drveta koje je već davno odumrlo u doba korištenja.

rounded cross-section (T. 5-8).<sup>42</sup> A few needles/ awls were also discovered in the course of the investigation around Torčec.<sup>43</sup> Based on the find of these needles, we are justified in concluding that clothing was very likely sewn with great care, perhaps even with decorations of fine embroidery.

The remains of iron smelting were observed in some Early Medieval structures visible on the surface following ploughing – a quite frequent occurrence in settlements of the 8<sup>th</sup> and 9<sup>th</sup> centuries.<sup>44</sup> Traces of metallurgical activity were not, unfortunately, found in the three investigated structures.

Also found in these three structures were several small glass fragments on the basis of which it cannot be ascertained to what sort of vessel they belonged. Their dating is thus also unclear, and it is possible that they are for the most part Roman fragments collected from the ruins of the nearby *villa rustica*.

The issue of the dating of these three structures needs to be resolved first. An initial assessment of these pits on the basis of the ceramic finds would place them in the same or very proximate periods, at most one generation apart.

C14 radiocarbon analysis was performed for all three structures yielding dates of calAD 710±39 for SU 9 and calAD 712±39 for SU 20 as earlier dates, and calAD 842±45 for SU 10 as a significantly later date.<sup>45</sup> At first glance we have a difference of an entire century, but when we consider the full range of these dates we arrive at a period from AD 749 to AD 797 in which all three structures would have been in function, if they were in fact contemporaneous.

In terms of the archaeological material, the pottery, based on the latest investigation, can be dated to the very late 8<sup>th</sup> or even the start of the 9<sup>th</sup> century, while the Avar belt keeper can

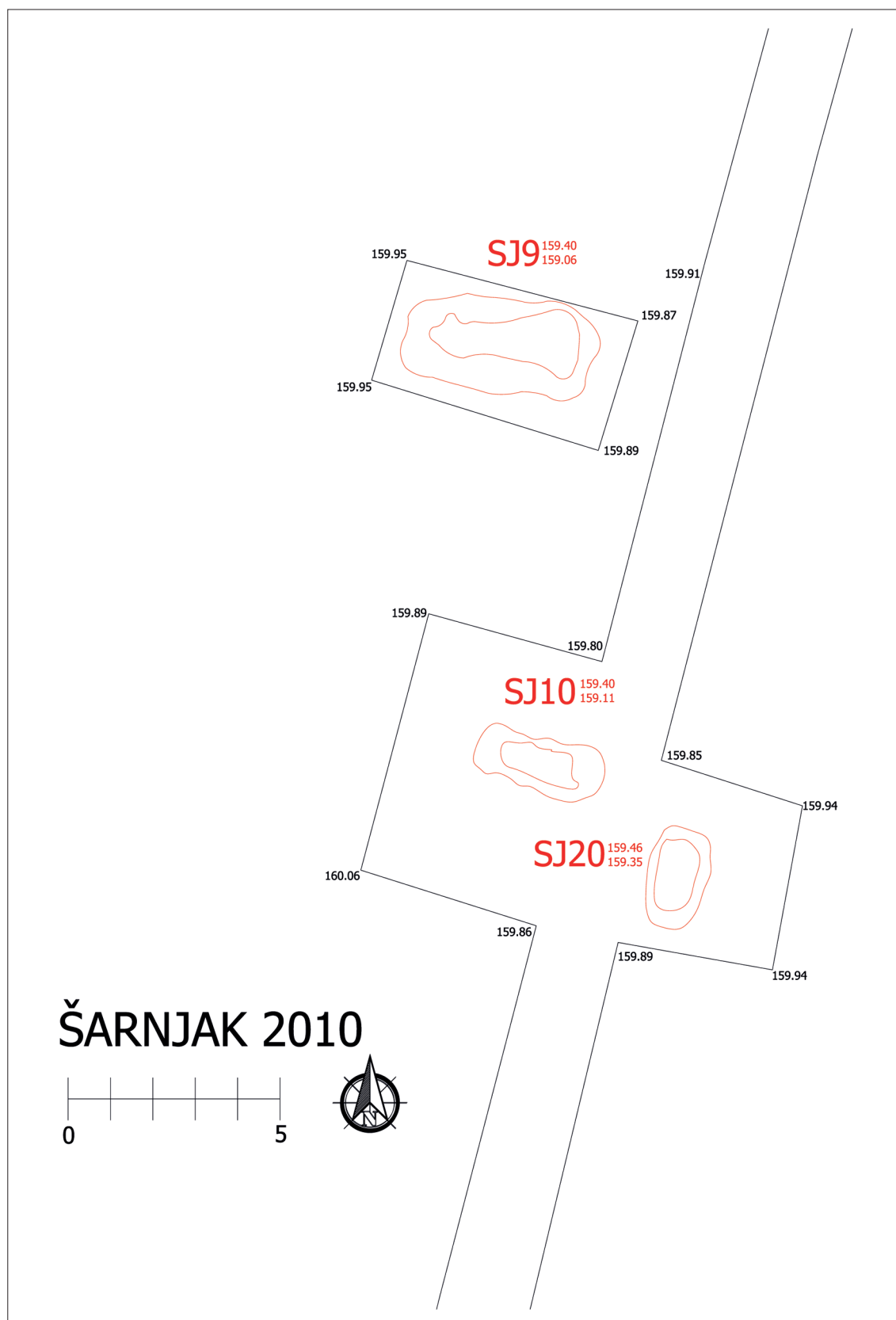
<sup>42</sup> The needles and awls from Brezje are as yet unpublished.

<sup>43</sup> Sekelj-Ivančan 2010, cat. nos. 24, 43, 120, 187, 263.

<sup>44</sup> The closest is Torčec-Ledine (Doračić 2010, 404), otherwise at numerous other examples in Early Medieval Central Europe.

<sup>45</sup> It is quite possible that in the first two cases what we see is the relatively frequent "old wood effect", a syndrome when measuring C14 radioactive carbon. The cause is in sampling wood that was dead long before the time of its use.





Slika / Fig. 5. Tloris dijela nalazišta s ranosrednjovjekovnim jamama / Ground plan of a part of the site with medieval pits (izradio / drawn by D. Jakopović)

alno gledano, to je moguće jer se obujmica vjerojatno čuvala duže vremena, posebice ako imamo u vidu kako je riječ o izdvojenome dijelu pojase garniture, odnosno o samo dijelu nekadašnjeg kompleta.

Na taj način i razdoblje od 749. do 797. godine čini se vrlo zadovoljavajućim odgovorom na datiranje ovih triju objekata.

Na kraju, postavlja se pitanje tko su bili ljudi koji su živjeli na obalama rijeke Plitvice u drugoj polovini 8. stoljeća? Prema svedu sudeći, riječ je o pripadnicima nekoga slavenskog naroda, a prema predmetima koje su koristili, svakako su bili povezani s prostorom Moravske i Ugarske (pokrajina Zala), a primjetne su i brojne analogije s nalazima materijalne kulture Hrvata u Dalmaciji.

Stoga je najsigurnije reći kako su stanovnici Šarnjaka bili uključeni u Vojnomirovu kneževinu (791. – 810.), ili barem da su bili pod njegovim vodstvom, te kako su vrlo vjerojatno sudjelovali u borbama s Avarima, odakle su mogli opisano avarsku obujmicu donijeti kao plijen. S obzirom na to kako na Šarnjaku zasad nema nalaza koji se mogu datirati nakon doba kneza Ljudevita Posavskog (810. – 823.), očigledno je kako su se tamošnji stanovnici nekamo odselili u doba sukoba s Francima.<sup>46</sup> Ako se to nije dogodilo tada, Šarnjak je mogao biti naseljen najkasnije do bugarsko-franačkih sukoba, u vrijeme kneza Ratimira (829. – 823.).

<sup>46</sup> Iako arheološka iskopavanja na Šarnjaku nisu obuhvatila čitavo ranosrednjovjekovno naselje, kasnijih nalaza nema ni u površinskim nalazima koji su sustavno prikupljeni na području cijeloga Šarnjaka nakon oranja, tijekom više godina. Stoga, iako s dozom opreza, zasad možemo predmnijevati kako je Šarnjak napušten početkom 9. stoljeća. Zanimljivo je primijetiti kako je i naselje iz 7. i 8. stoljeća, Murska Sobota - Nova Tabla, napušteno upravo u istome razdoblju (Guštin, Tiefengraber 2002, 62).

be dated to the second third of the 8<sup>th</sup> century. In terms of context this is possible, as the belt keeper was likely kept for a much longer period, especially if we bear in mind that this is a separate part of a belt set, i.e. only part of what was once a complete set.

Thus the period from AD 749 to AD 797 appears to be a very satisfactory resolution to the question of the dating of these three structures.

Finally, there is the question of who these people living on the banks of the Plitvica River in the second half of the 8<sup>th</sup> century were? By all accounts, they were members of a Slavic tribe, and by the artefacts they used were certainly connected with the area of Moravia and Hungary (the Zala region), and we can see numerous analogies with finds of the material culture of early Croats in Dalmatia.

It is, then, for the moment safest to say that the inhabitants of Šarnjak were part of Vojnomir's duchy (AD 791–AD 810) or at least under his leadership, and that they very likely participated in the battles with the Avars, from which they could have taken the Avar belt keeper described here as booty. Given that there are, for now, no finds from Šarnjak that could be dated to after the period of Duke Ljudevit Posavski (AD 810–AD 823), it is evident that the local inhabitants moved elsewhere during the conflicts with the Franks.<sup>46</sup> If that did not happen within that time frame, Šarnjak could have been inhabited at the latest up to the Bulgarian-Frankish wars in the time of Duke Ratimir (AD 829–AD 823).

<sup>46</sup> Although archaeological excavations at Šarnjak did not encompass the entire Early Medieval settlement, there are also no finds from later periods among the surface finds that have been systematically collected across the whole of the Šarnjak area following ploughing over the course of a number of years. We can, then, although with a measure of uncertainty, postulate that Šarnjak was abandoned in the early 9<sup>th</sup> century. It is interesting to note that the 7<sup>th</sup> and 8<sup>th</sup> century settlement at Murska Sobota - Nova Tabla was also abandoned during the same period (Guštin, Tiefengraber 2002, 62).

## KATALOG NALAZA

## CATALOGUE OF FINDS

Tabla 1. Šarnjak jug, SJ 10.

1. Ulomak posude izrađene doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, drobljenih kvarcita i keramike, izvana i iznutra svjetlosmeđe, u prijelomu sive boje.
2. Ulomak posude izrađene doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, drobljenih kvarcita i keramike, izvana i iznutra svjetlosmeđe, u prijelomu sive boje.
3. Ulomak posude izrađene doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, drobljenih kvarcita i keramike, izvana svijetlo do smeđe, iznutra svjetlosmeđe, a u prijelomu tamnosive boje.
4. Ulomak posude izrađene doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, drobljenih kvarcita i keramike, izvana i iznutra svjetlosmeđe, u prijelomu crne boje. Vjerojatno odgovara jednom od prethodna tri gornja dijela.
5. Ulomak posude izrađene doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, drobljenih kvarcita i keramike, izvana svjetlosmeđe do tamnosive, smeđe do crvene, u prijelomu tamnosive, a iznutra svjetlosmeđe boje. Vjerojatno odgovara jednom od prethodna tri gornja dijela.

Tabla 2. Šarnjak jug, SJ 10

1. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa raznih kamenčića koji se truse, izvana svjetlosmeđe boje, u prijelomu i iznutra sive boje.
2. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića koji

Table 1. Šarnjak jug (Šarnjak south), SU 10

1. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, crushed quartz, and grog temper. Inside and outside surfaces light brown, core grey.
2. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, crushed quartz, and grog temper. Inside and outside surfaces light brown, core grey.
3. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, crushed quartz, and grog temper, outside surface light to brown, inside surface light brown, core dark grey.
4. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, crushed quartz, and grog temper. Inside and outside surfaces light brown, core black. Likely belongs with one of the previous three upper sections.
5. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, crushed quartz and grog temper, outside surface light brown to dark grey, brown to red, core dark grey, inside surface light brown. Likely belongs with one of the previous three upper sections.

Table 2. Šarnjak jug (Šarnjak south), SU 10

1. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of various pebbles that crumble, outside surface light brown, core and inside surface grey.
2. Potsherd, reworked on a wheel, abundant temper of various pebbles that crumble. Inside

se truse, izvana i iznutra svjetlosmeđe, a u prijelomu crne boje.

3. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića, izvana svjetlosmeđe boje, u prijelomu i iznutra crne boje.

4. Ulomak posude izrađene doradom na kolu ili prostoručno, vidljivi tragovi doljepljivanja dna, primjese raznih riječnih kamenčića, izvana svjetlosmeđe do tamnosmeđe boje, u prijelomu i iznutra crne boje.

Tabla 3. Šarnjak jug, SJ 10

1. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa riječnih kamenčića i pijeska, izvana svjetlosmeđe do sive, u prijelomu sive i iznutra svjetlosmeđe boje.

2. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa raznih kamenčića, crne boje.

3. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića koji se truse, izvana svjetlosmeđe do narančaste, iznutra svjetlosmeđe do sive, a u prijelomu sive boje.

4. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, primjese raznih kamenčića, izvana i iznutra svjetlosmeđe, a u prijelomu sive boje.

5. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja dna, puno primjesa raznih kamenčića koji se truse, svjetlosmeđe boje.

6. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja dna, puno primjesa raznih kamenčića koji se truse, izvana svjetlosmeđe boje, u prijelomu i iznutra sive boje.

and outside surfaces light brown, core black.

3. Potsherd, reworked on a wheel, abundant temper of various pebbles, outside surface light brown, core and inside surface black.

4. Potsherd, reworked on a wheel or freehand. Visible traces of bonding of the base, temper of various river pebbles, outside surface light to dark brown, core and inside surface black.

Table 3. Šarnjak jug (Šarnjak south), SU 10

1. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of river pebbles and sand, outside surface light brown to grey, core grey, inside surface light brown.

2. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of various pebbles, black.

3. Potsherd, reworked on a wheel, abundant temper of various pebbles that crumble, outside surface light brown to orange, inside surface light brown to grey, core grey.

4. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, temper of various pebbles, inside and outside surfaces light brown, core grey.

5. Potsherd, reworked on a wheel, visible traces of bonding of the base, abundant temper of various pebbles that crumble, light brown.

6. Potsherd, reworked on a wheel, visible traces of bonding of the base, abundant temper of various pebbles that crumble, outside surface light brown, core and inside surface grey.



Tabla 4. Šarnjak jug, SJ 10

1. Ulomak posude izrađene doradom na kolu, puno primjesa raznih drobljenih kamenčića i keramike, izvana svjetlosmeđe, u prijelomu i iznutra crne boje.
2. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, malo primjesa raznih kamenčića, izvana tamnosmeđe, u prijelomu crne i iznutra tamnosmeđe boje.
3. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa raznih kamenčića, izvana svjetlosmeđe do tamnosmeđe, u prijelomu tamnosive i iznutra svjetlosmeđe boje.
4. Ulomak posude izrađene prostoručno, rupičaste strukture, izvana i u prijelomu crne, a iznutra svjetlosmeđe boje.
5. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja dna, puno primjesa raznih kamenčića koji se truse, svjetlosmeđe boje.
6. Ulomak posude izrađene doradom na kolu, primjese riječnog pijeska, smeđe boje.
7. Ulomak posude izrađene doradom na kolu, puno primjesa riječnih kamenčića, izvana svjetlosmeđe boje.
8. Glineni pršljen, prepaljen i izobličen, sive boje.

Tabla 5. Šarnjak jug, SJ 10

1. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića, izvana i iznutra smeđe, u prijelomu crne boje.
2. Ulomak posude izrađene doradom na kolu, primjese raznih kamenčića, izvana smeđe, iznutra svjetlosmeđe i tamnosmeđe, a u prijelomu crne boje.
3. Ulomak posude izrađene doradom na kolu, puno primjesa kamenčića koji se truse, izvana svjetlosmeđe boje, u prijelomu i iznutra sive boje.

Table 4. Šarnjak jug (Šarnjak south), SU 10

1. Potsherd, reworked on a wheel, abundant temper of various crushed pebbles and grog, outside surface light brown, core and inside surface black.
2. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, sparse temper of various pebbles, outside surface dark brown, core black, inside surface dark brown.
3. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of various pebbles, outside surface light to dark brown, core dark grey, inside surface light brown.
4. Potsherd, freehand fabricated, vesicular fabric, outside surface and core black, inside surface light brown.
5. Potsherd, reworked on a wheel, visible traces of bonding of the base, abundant temper of various pebbles that crumble, light brown.
6. Potsherd, reworked on a wheel, temper of river sand, brown.
7. Potsherd, reworked on a wheel, abundant temper of river pebbles, outside surface light brown.
8. Clay spindle whorl, scorched and deformed, grey.

Table 5. Šarnjak jug (Šarnjak south), SU 10

1. Potsherd, reworked on a wheel, abundant temper of various pebbles, outside surface and inside surface brown, core black.
2. Potsherd, reworked on a wheel, temper of various pebbles, outside surface brown, inside surface light and dark brown, core black.
3. Potsherd, reworked on a wheel, abundant temper of pebbles that crumble, outside surface light brown, core and inside surface grey.
4. Part of an iron plate with traces of sawdust and bits of wood on the surface. SF 18.

4. Dio željezne oplata s tragovima piljevine i drvaca na površini. PN 18.
5. Ulomak posude izrađen doradom na kolu, vidljivi tragovi ručnog modeliranja, puno primjesa raznih kamenčića, izvana svjetlosmeđe do crvene, u prijelomu sive, a iznutra svjetlosmeđe boje.
6. Brončana aplikacija s rupom za zakovicu u sredini. PN 14.
7. Dio željezne igle kvadratnog presjeka.
8. Dio željezne igle oblog presjeka.
9. Vršak željeznog noža.
10. Ulomak zelenkastog stakla s mjehurićima u strukturi. PN 12.
11. Dno zelenkaste staklene posudice. PN 11.
12. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja dna, puno primjesa sitnih riječnih kamenčića, izvana svjetlosmeđe boje, iznutra smeđe, a u prijelomu crne boje.
13. Željezna obujmica sa srebrnom pločicom, ukrašenom rovašenjem. PN 13 a + b.

#### T. 6. Šarnjak jug, SJ 20.

1. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa raznih kamenčića, svjetlosmeđe do tamnosmeđe boje.
2. Ulomak posude izrađene doradom na kolu, vidljivi tragovi doljepljivanja gornjeg dijela, puno primjesa raznih drobljenih kamenčića, smeđe boje.
3. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića koji se truse, izvana i iznutra svjetlosmeđe do tamnosmeđe i crne, a u prijelomu crne boje.
4. Ulomak posude izrađene doradom na kolu, puno primjesa raznih sitnih kamenčića, izvana i iznutra smeđe, a u prijelomu crne boje.
5. Ulomak posude izrađene doradom na kolu, puno primjesa raznih riječnih i drobljenih kamenčića, izvana svjetlosmeđe do tamnosmeđe boje, iznutra svjetlosmeđe, a u prijelomu smeđe boje.

5. Potsherd, reworked on a wheel, visible traces of hand modelling, abundant temper of various pebbles, outside surface light brown to red, core grey, inside surface light brown.
6. Bronze appliqué with centrally placed rivet hole. SF 14.
7. Part of an iron needle of square cross section.
8. Part of an iron needle of round cross section.
9. Tip of an iron knife.
10. Shard of greenish glass with bubbles in the structure. SF 12.
11. Base of a small greenish glass vessel. SF 11.
12. Potsherd, reworked on a wheel, visible traces of bonding of the base, abundant temper of fine river pebbles, outside surface light brown, inside surface brown, core black.
13. Iron belt keeper with silver plate with knurling decoration. SF 13 a + b.

#### Table 6. Šarnjak jug (Šarnjak south), SU 20

1. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of various pebbles, light to dark brown.
2. Potsherd, reworked on a wheel, visible traces of bonding of the upper section, abundant temper of various crushed pebbles, brown.
3. Potsherd, reworked on a wheel, abundant temper of various pebbles that crumble, outside surface and inside surface light to dark brown and black, core black.
4. Potsherd, reworked on a wheel, abundant temper of various fine pebbles, outside surface and inside surface brown, core black.
5. Potsherd, reworked on a wheel, abundant temper of various river and crushed pebbles, outside surface light to dark brown, inside surface light brown, core brown.

## T. 7. Šarnjak jug, SJ 20.

1. Ulomak posude izrađene doradom na kolu, puno primjesa raznih sitnih drobljenih kamenčića, smeđe do crne boje.
2. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića, izvana smeđe boje, iznutra i u prijelomu tamnosmeđe boje.
3. Ulomak posude izrađene doradom na kolu, primjese raznih sitnih kamenčića, smeđe boje.
4. Ulomak posude izrađene doradom na kolu, primjese raznih drobljenih kamenčića, svjetlosmeđe boje.
5. Ulomak posude izrađene doradom na kolu, puno primjesa raznih kamenčića koji se truse, izvana sive, u prijelomu tamnosive, a iznutra narančaste do crne boje.
6. Ulomak zelenkastog stakla, mutne strukture i mat površine.
7. Dio željezne igle kvadratastog presjeka. PN 17.

## Table 7. Šarnjak jug (Šarnjak south), SU 20

1. Potsherd, reworked on a wheel, abundant temper of various fine crushed pebbles, brown to black.
2. Potsherd, reworked on a wheel, abundant temper of various pebbles, outside surface brown, inside surface and core dark brown.
3. Potsherd, reworked on a wheel, temper of various fine pebbles, brown.
4. Potsherd, reworked on a wheel, temper of various crushed pebbles, light brown.
5. Potsherd, reworked on a wheel, abundant temper of various pebbles that crumble, outside surface grey, core dark grey, inside surface orange to black.
6. Shard of greenish glass of cloudy structure and matte surface.
7. Part of an iron needle of square cross section. SF 17.

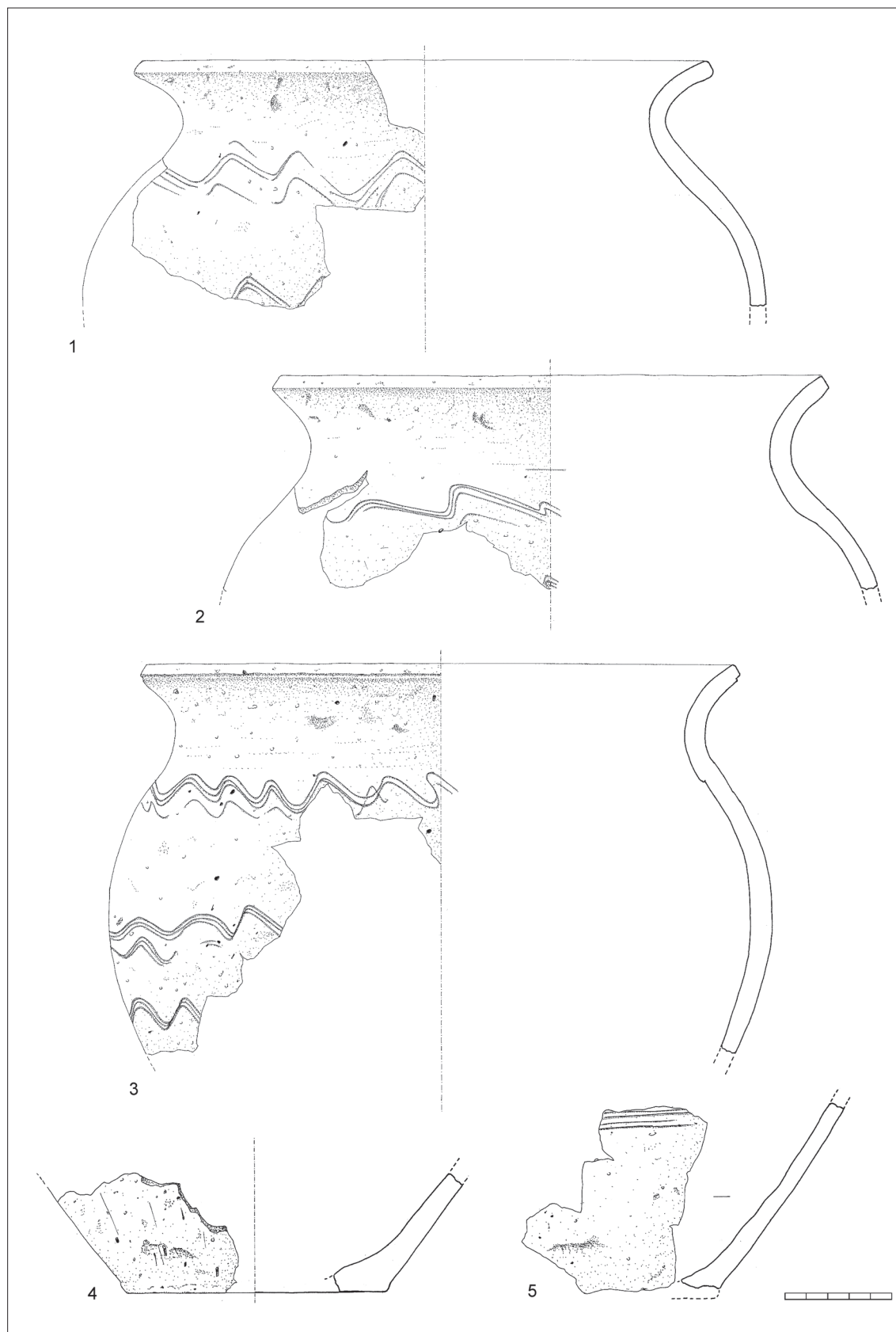


Tabla / Table 1. Šemovec-Šarnjak, SJ 10 (crtež / drawing by L. Bekić).





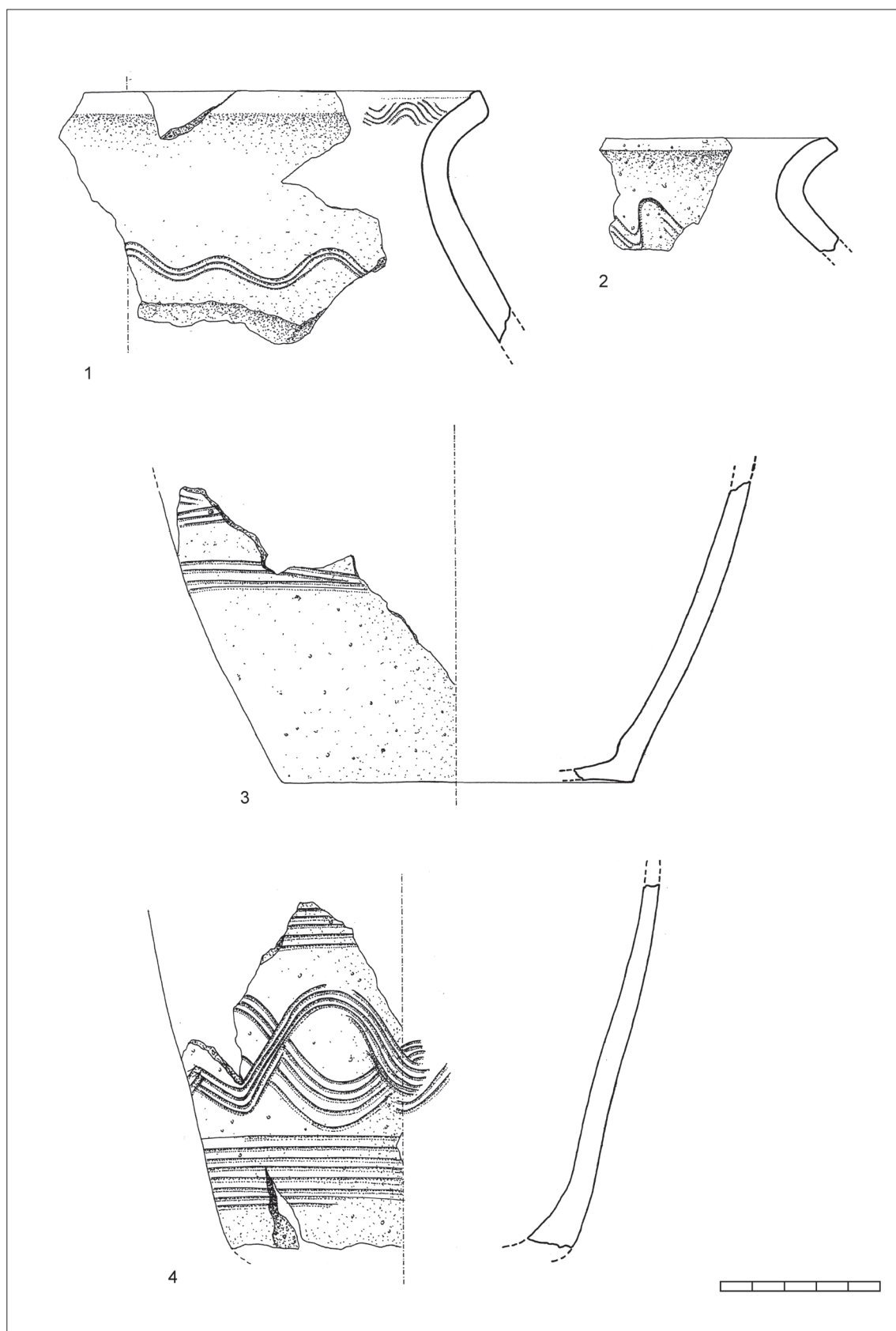


Tabla / Table 2. Šemovec-Šarnjak, SJ 10 (crtež / drawing by L. Bekić).



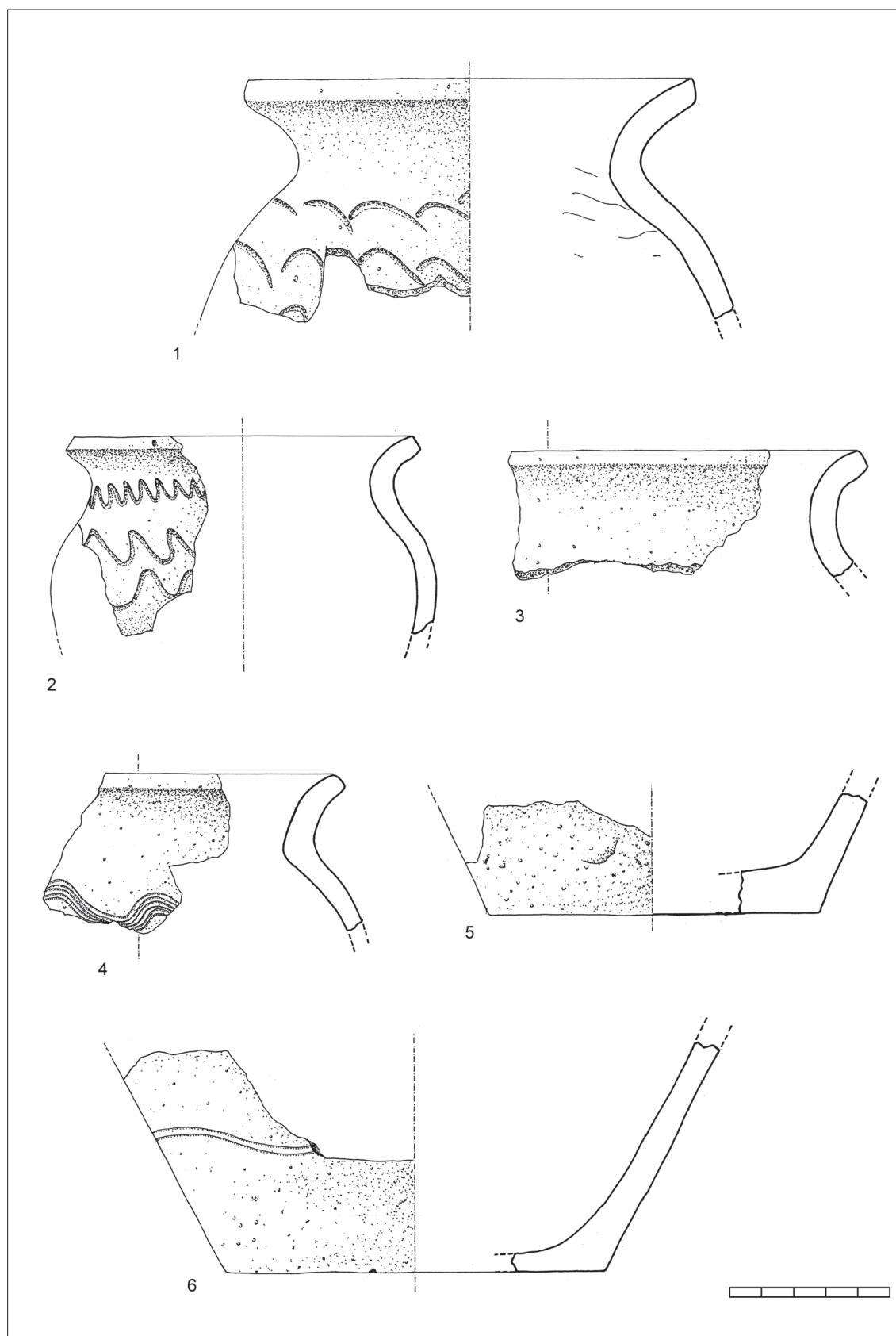


Tabla / Table 3. Šemovec-Šarnjak, SJ 10 (crtež / drawing by L. Bekić).



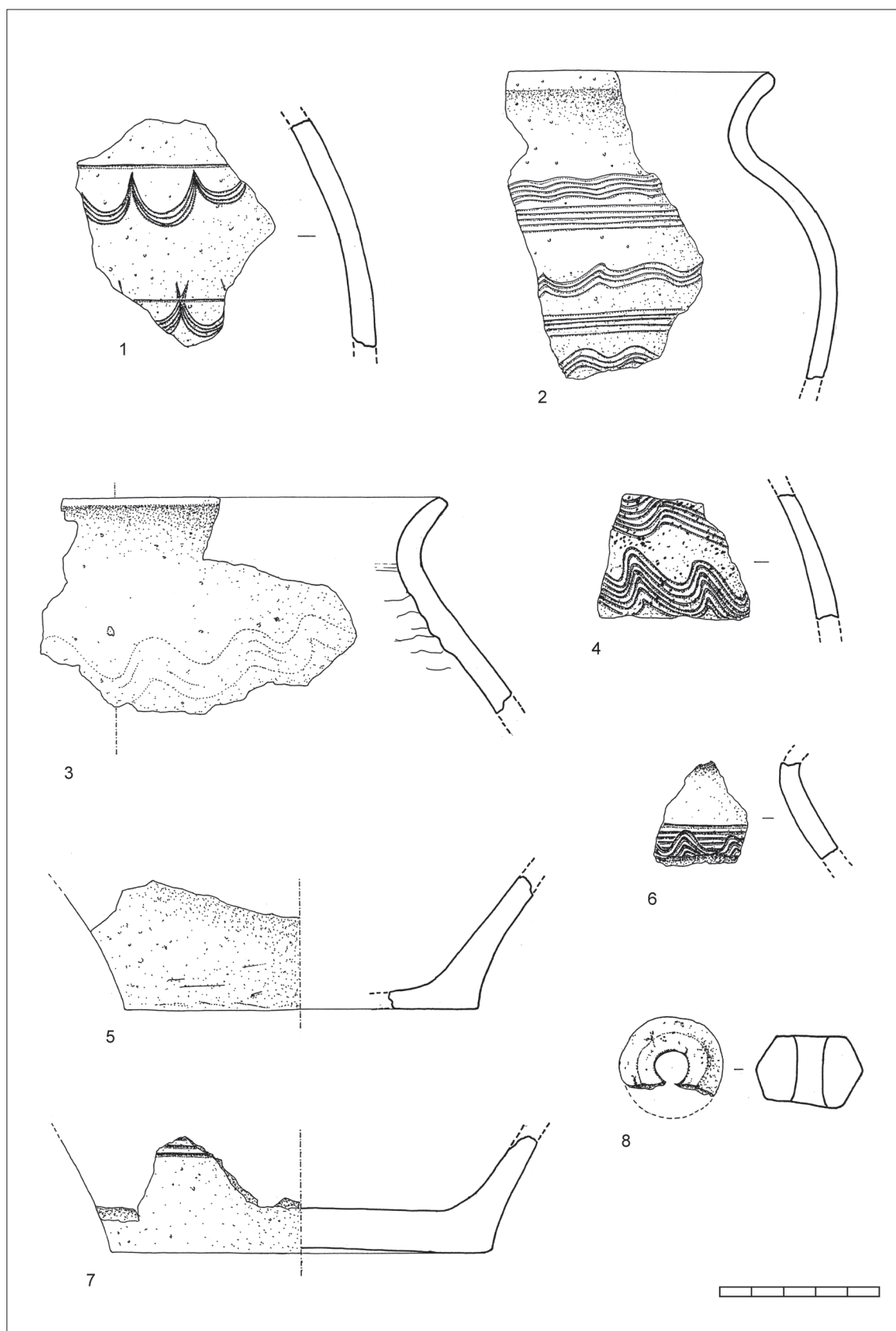


Tabla / Table 4. Šemovec-Šarnjak, SJ 10 (crtež / drawing by L. Bekić).



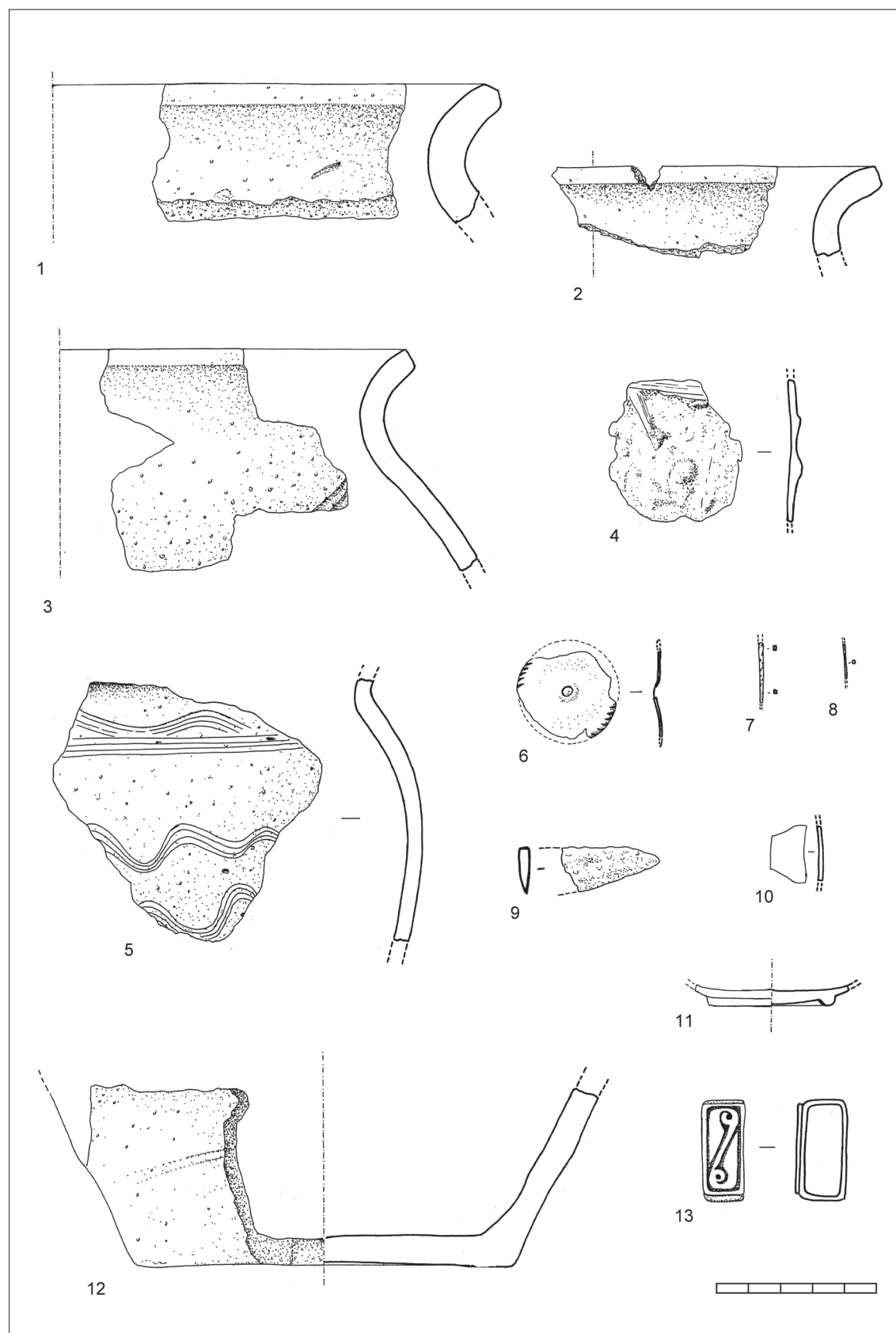


Tabla / Table 5. Šemovec-Šarnjak, SJ 10 (crtež / drawing by L. Bekić).





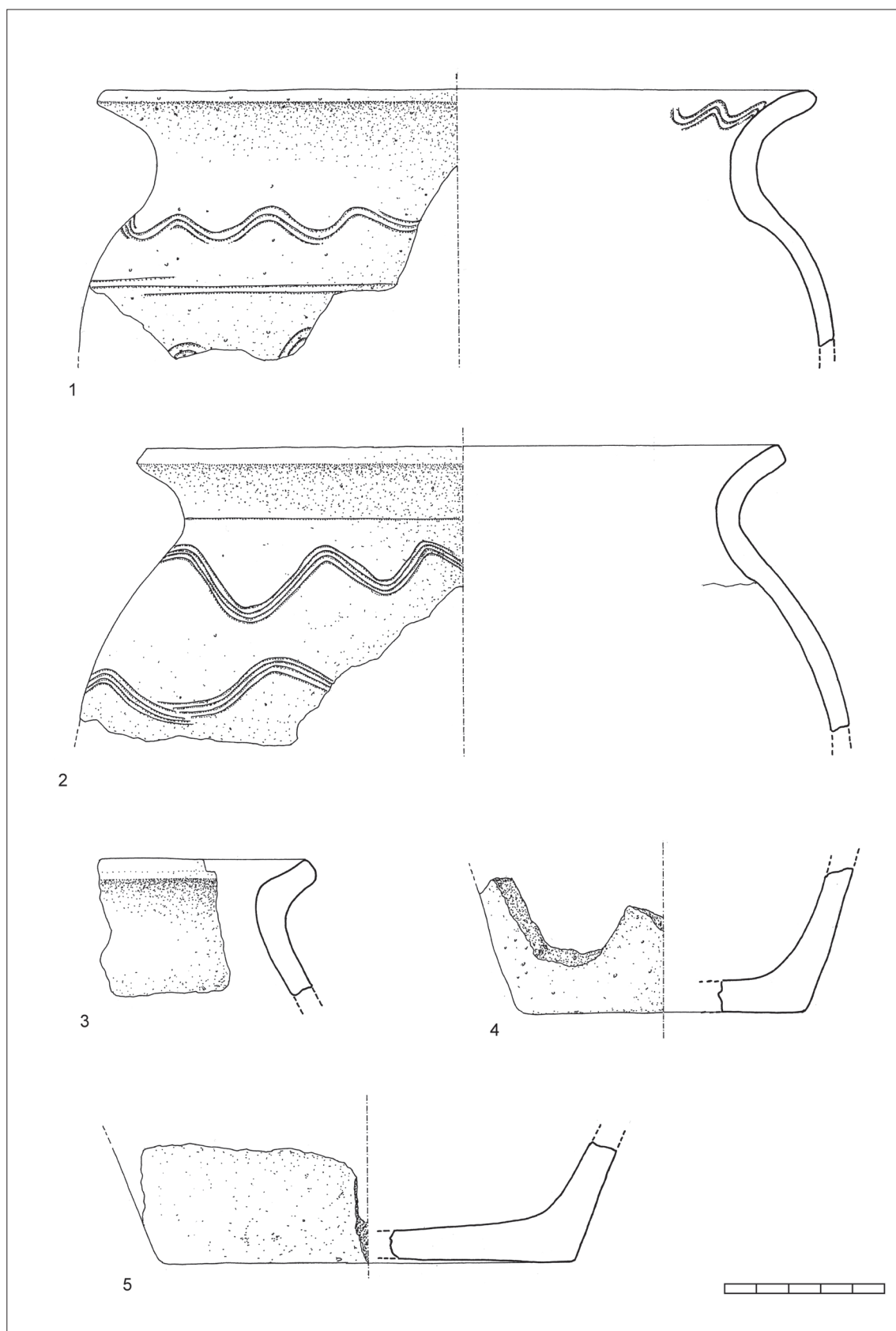


Tabla / Table 6. Šemovec-Šarnjak, SJ 20 (crtež / drawing by L. Bekić).



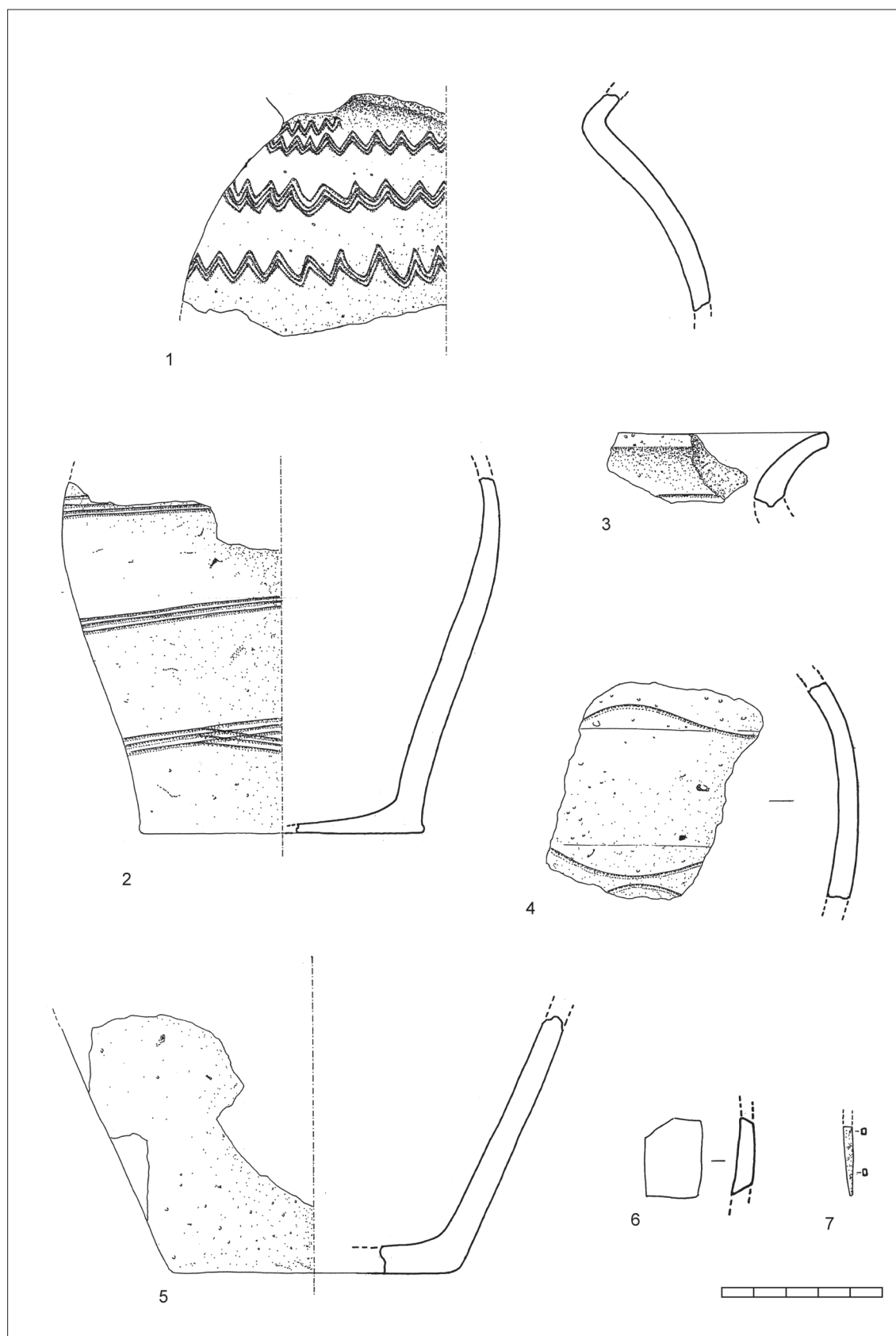


Tabla / Table 7. Šemovec-Šarnjak, SJ 20 (crtež / drawing by L. Bekić).



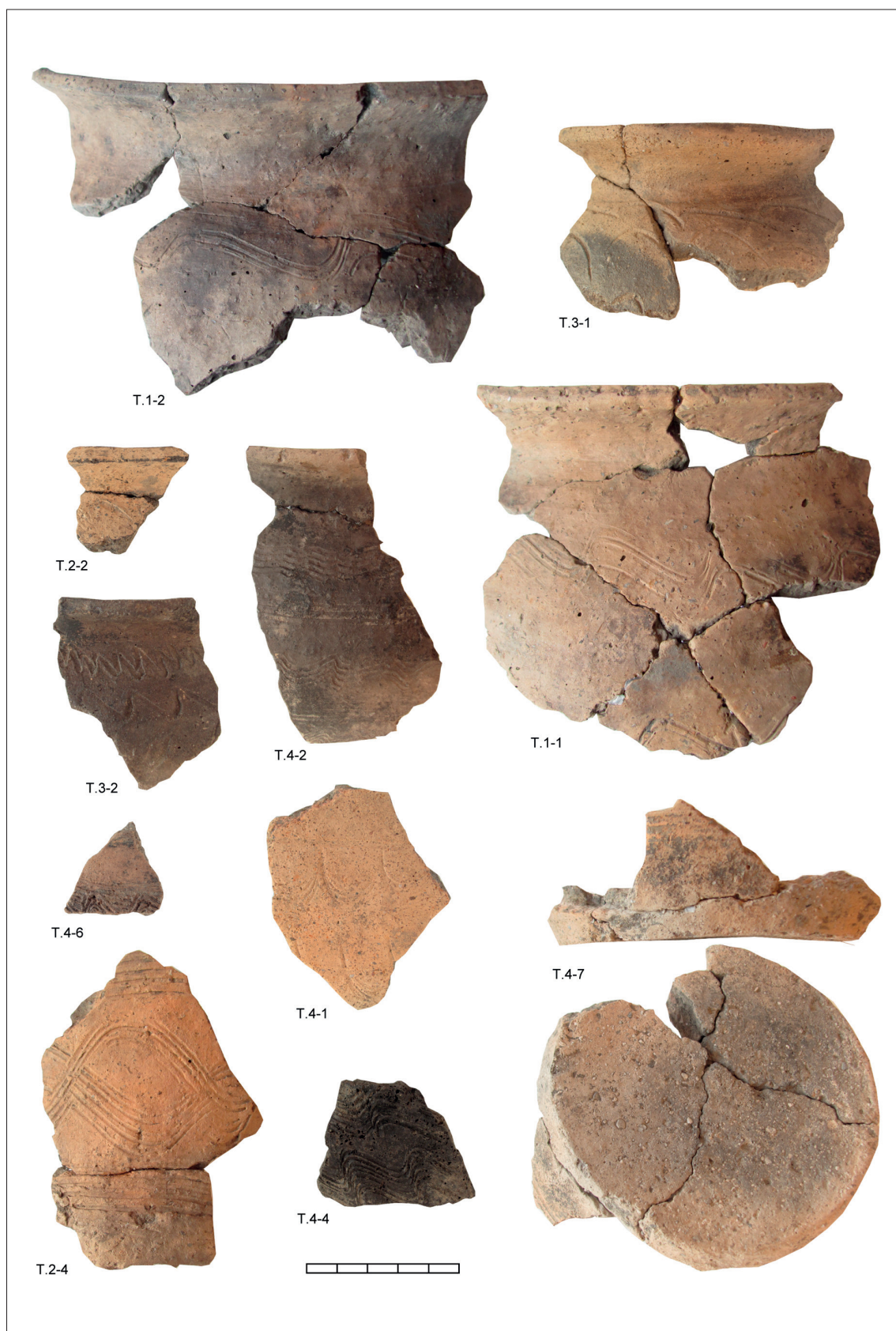


Tabla / Table 8. Šemovec-Šarnjak, SJ 10 (foto / photo by L. Bekić).







Tabla / Table 9. Šemovec-Šarnjak, SJ 20 (foto / photo by L. Bekić).





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# Srednjovjekovno naselje na položaju Stara Vodenica kod Jurjevca Punitovačkog

## The mediaeval settlement at the location of Stara Vodenica near Jurjevac Punitovački

UDK / UDC: 902.2(497.5 Slavonija)"653"

Izvorni znanstveni rad / Original scientific paper

*Na dionici autoceste Đakovo – Osijek 2008. godine istražen je višeslojni lokalitet na položaju Stara Vodenica, kod Jurjevca Punitovačkog, u Osječko-baranjskoj županiji. U radu se donosi pregled keramičkog posuđa i tri metalna nalaza iz srednjovjekovnog horizonta na temelju čijih se odlika ostaci ovoga ruralnog naselja datiraju u 12. i početak 13. stoljeća.*

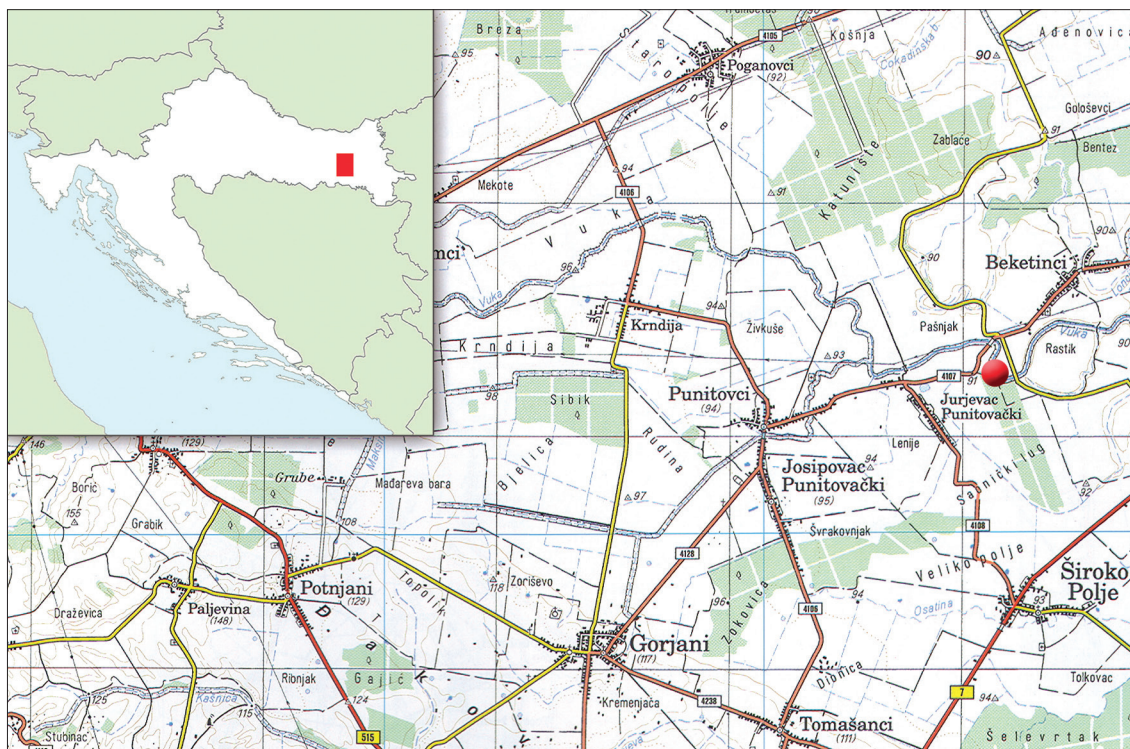
*Ključne riječi: Slavonija, zaštitno istraživanje, razvijeni srednji vijek, naselje, bunar, keramika, metal*

*In 2008, a multistrata site at the location of Stara Vodenica, near Jurjevac Punitovački in the county of Osijek-Baranja was excavated on the section of the Đakovo – Osijek motorway. This work presents an overview of pottery and three metal finds from the mediaeval period, on the basis of which the remains of this rural settlement can be dated to the 12<sup>th</sup> and early 13<sup>th</sup> century.*

*Keywords: Slavonia, rescue excavation, High Middle Ages, settlement, well, pottery, metal*

Arheološko istraživanje na položaju Stara Vodenica kod Jurjevca Punitovačkog, u plodnoj ravnicu između Đakova i Osijeka, obavljeno je u proljeće 2008. godine u vrijeme intenzivnih radova na brojnim lokalitetima na trasi autoceste Beli Manastir –

The archaeological research of the site at Stara Vodenica near Jurjevac Punitovački, located in the fertile valley between Đakovo and Osijek, was conducted in 2008 during the period of intensive works on numerous localities located on the section of the Beli Manastir – Osijek – Svilaj



Slika / Figure 1: Položaj lokaliteta / Position of the site (prema / according to: *Veliki atlas Hrvatske*, Zagreb, Mozaik knjiga, 2002, M 1:100 000)

Osijek – Svilaj (sl. 1).<sup>1</sup> Na površini od 16.000 m<sup>2</sup> pronađeni su ostaci naselja iz razdoblja eneolitika, brončanog doba i srednjeg vijeka.<sup>2</sup> Srednjovjekovni objekti, iako raspršeni, više su koncentrirani u sjevernom dijelu iskopa, s pretpostavkom da je dio objekata ostao neistražen izvan zadane trase u smjeru zapada (sl. 2).<sup>3</sup> Na temelju pokretnih nalaza i radiokarbonskih analiza, evidentirano je 44 manjih ili većih, uglavnom plitkih jama i jedan bunar. O samoj strukturi naselja nije moguće donositi čvrste zaključke budući da je ono definirano samo djelomično. Zbog strogo ograničene površine iskopa, riječ je o uobičajenoj pojavi koja je zabilježena na ve-

motorway (Figure 1).<sup>1</sup> Remains of a settlement from the period of the Copper Age, Bronze Age and Middle Ages were found on an area of 16,000 m<sup>2</sup>.<sup>2</sup> Although dispersed, the mediaeval objects are largely concentrated in the northern part of the excavation site, assuming that one part of the objects remained unexcavated beyond the designated section in the direction of the west (Figure 2).<sup>3</sup> On the basis of mobile finds and radiocarbon analyses, 44 pits (of differing size, most of them shallow) and one well were recorded. As for the structure of the settlement itself, it is not possible to come to any definite conclusions as the settlement has been defined

<sup>1</sup> Ispred Arheološkog muzeja u Zagrebu voditeljica istraživanja bila je dr. sc. Jacqueline Balen kojoj zahvaljujem na ustupljenoj građi i terenskoj dokumentaciji. Crteže keramike (T. 1-10), kao i uzorke ukrasa u akvarelu (T. 11), izradio je Krešimir Rončević, osim crteža na T. 5: 7 i T. 10: 4-6 koje je izradila Miljenka Galić.

<sup>2</sup> Balen 2008, 33, 34; 2009, 56, 58.

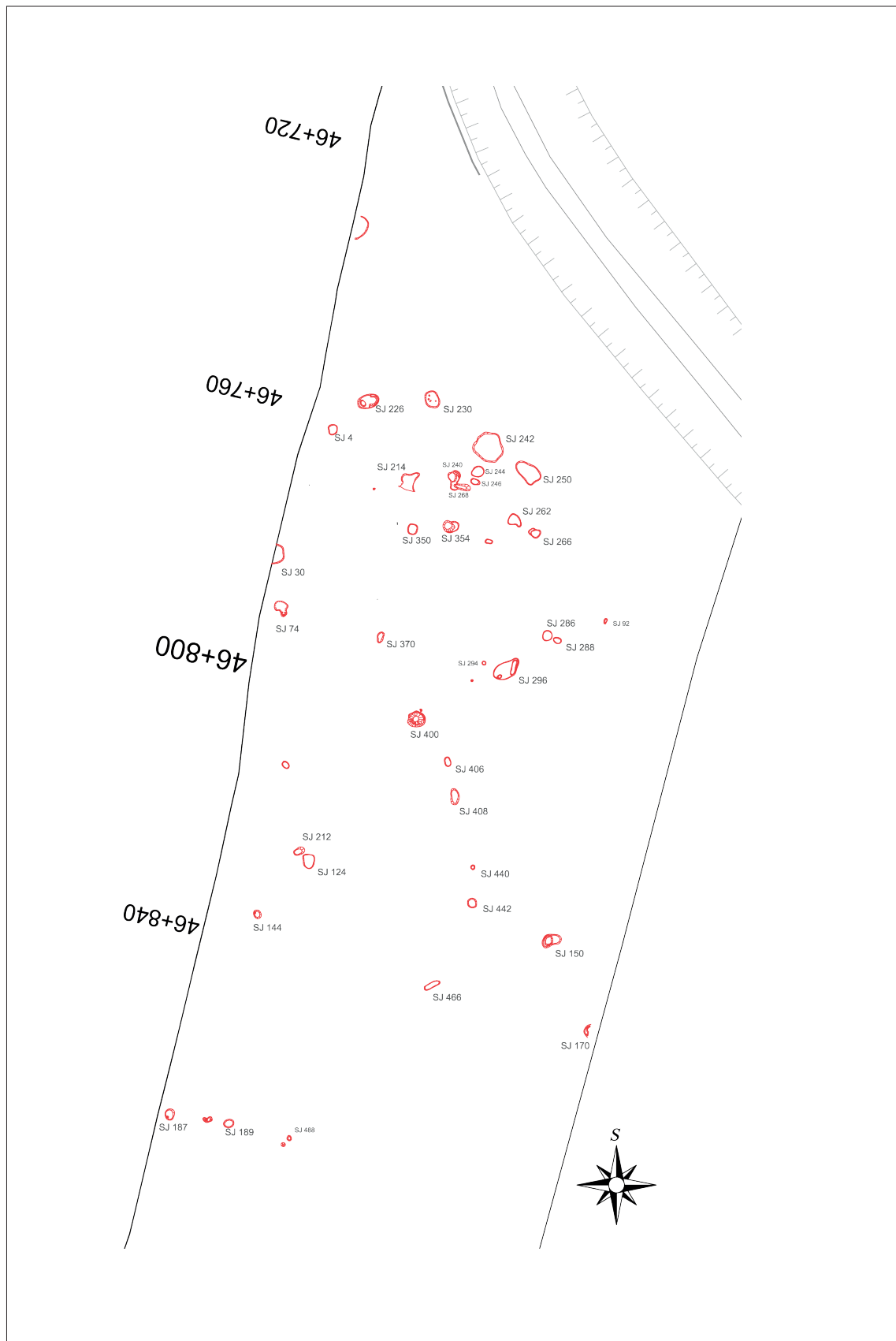
<sup>3</sup> Na planu se nalazi broj stratigrafske jedinice ukopa objekta, koji je uvijek za jedan broj veći od zapune istog objekta, čiji se brojevi navode uz table. Prikazani su samo srednjovjekovni objekti. Cjelokupan plan istraženog lokaliteta prikazan je u Bunčić 2012, 196, sl. 2.

<sup>1</sup> In front of the Archaeological Museum in Zagreb, the research leader was dr. sc. Jacqueline Balen, who I would like to thank for the materials and field documentation she provided. The pottery drawings (Pl. 1-10) and the sketches of the ornamentations in watercolour (Pl. 11) were created by Krešimir Rončević, with the exception of the drawings on Pl. 5: 7 and Pl. 10: 4-6, which were created by Miljenka Galić.

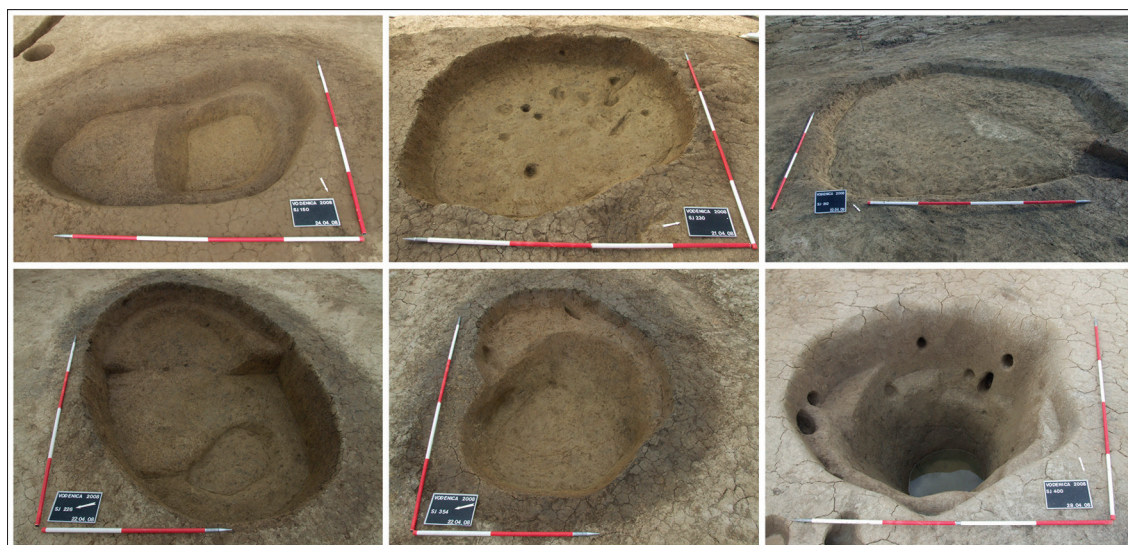
<sup>2</sup> Balen 2008, 33, 34; 2009, 56, 58.

<sup>3</sup> The plan provides the number of the stratigraphic unit of the object burial, which is always greater than the fill of the same construction by one, the numbers of which are stated by the tables. Only mediaeval objects are depicted. The entire plan of the researched locality is shown in Bunčić 2012, 196, Fig. 2.





Slika / Figure 2: Plan naselja / Settlement plan (izradila / created by A. Solter)



Slika 3: Oblici objekata / Structure shapes (Sj 150, 230, 242, 226, 354, 400) (snimila / photo by I. Turčin)

ćini lokaliteta takvoga tipa.<sup>4</sup> Prethodni poljoprivredni radovi, kao i strojno uklanjanje humusa, također su djelomično pridonijeli uništavanju originalnih srednjovjekovnih površina. Posljedica toga je mali broj evidentiranih stupova, a kada se govori o vrstama objekata, također je teško precizno odrediti njihovu namjenu. Dodatno pitanje otvara se i zbog sadržaja jama, odnosno velike količine keramičkih projektila u njima, zbog kojih je i ranije proizašla interpretacija o perifernom dijelu nekoga većeg naselja ili o privremenom staništu.<sup>5</sup>

Riječ je uglavnom o okruglim, ovalnim ili izduženim ukopanim objektima, s ravnim ili lagano zakošenim stijenama, najčešće ravnim dnom i ukopanim stupom ili manjom jamom u jednom dijelu objekta. Dubine istraženih objekata iznose od 20 cm do pola metra, osim bunara čija dubina prelazi 2 m. Smješten je otprilike u sredi-

only partially. Due to the strictly limited area of the excavation site, this is a commonplace occurrence that has been recorded at most localities of this type.<sup>4</sup> Previous agricultural works and the machine removal of humus also contributed to the devastation of the original mediaeval areas. The small number of recorded posts is a consequence of this, and it is also difficult to ascertain the purpose of certain types of objects. The content of the pits, i.e. the large quantities of clay projectiles found inside them, open additional questions – ones from which the hypothesis of it being a peripheral part of a larger settlement or temporary habitat has already stemmed.<sup>5</sup>

These are mostly round, oval or elongated sunken structures with straight or mildly slanted walls, mostly with flat bottoms and a dug post or smaller pit in one part of the structure. The depth of the examined objects is between 20 cm and half a metre, with the exception of the

<sup>4</sup> U Peštanskoj županiji (Mađarska) ustanovljena je situacija koja se djelomično može usporediti i sa situacijom na našim autocestama. Istraženo je mnogo lokaliteta, osobito onih iz ranog i razvijenog srednjeg vijeka, koji se pojavljuju svakih nekoliko stotina metara te je teško reći gdje jedno naselje počinje, a gdje završava. No tamo je ustanovljen naseobinski fenomen velikog intenziteta, grupiranje kuća koje zajedno čine središta obližnjih nalazišta ili veće naseobinske jedinice. Karakterizira ih i sustav pravokutnih kanala koji su okruživali kuću ili nekoliko njih (Racz 2010, 79). Općenito, objekti su puno jasnije definirani i bolje sačuvani.

<sup>5</sup> Bunčić 2012, 207.

<sup>4</sup> In the Pest County (Hungary), a situation that is, in part, similar to the condition on our motorways has been ascertained. Numerous sites were investigated, particularly localities from the Early and High Middle Ages, which appear every several hundred metres and make it difficult to determine where one settlement begins and the other ends. However, a settlement phenomenon of great intensity was determined there, with house groupings that create the centres of the nearby finding sites or larger settlement units. They are also characterised by a system of rectangular canals that surrounded one or several houses (Racz 2010, 79). Generally speaking, the objects are much more clearly defined and better preserved.

<sup>5</sup> Bunčić 2012, 207.

ni lokaliteta, dok se prema jugu smanjuje intenzitet objekata. Bunar je jednostavna okrugla jama (vel. 2,3 x 2,7 m), bez čvrste unutarnje konstrukcije, odnosno oplata, ali s nekoliko rupa za kolce u gornjem dijelu koji su vjerojatno bili sastavni dio sustava za vađenje vode. S obzirom na problem izbijanja vode prilikom iskopa, on je ispraznjen do dubine od 2,23 m.<sup>6</sup> Iako su izvori blizu, bunari se kopaju u naseljima, i to često uz izvore. Također, nije neobično da se u jednome naselju nalazi više bunara. Na trasi su spomenute autoceste pronađeni bunari istoga tipa u obližnjim Stružanima (iako bez konkretne datacije i plana naselja, gdje bismo vidjeli u kojem je odnosu prema pretpostavljenim stambenim objektima)<sup>7</sup> i u Beketincima (naselju koje je kronološki mlađe, ali su bunari tipološki isti – bez sačuvane drvene konstrukcije).<sup>8</sup> Izravne analogije potječu i s istraživanja kod mjesta Lebeny (okolica Győra, Mađarska), gdje su pronađeni srednjovjekovni bunari istoga oblika – kružni tlocrt i cilindričan ukop bez drvene konstrukcije, a čije su dubine iznosile između tri i pet metara. Prema sadržaju zapuna, njihov se nastanak smješta najranije na prijelaz s 11. u 12. stoljeće. Nekoliko je takvih objekata u kojima se pojavljuje i keramika koja se datira i do početka 13. stoljeća.<sup>9</sup> U srednjovjekovnom naselju kod Kiskunfélegyháze (Bačko-kiškunska županija, Mađarska) istražena su četiri bunara dati-

well whose depth exceeds 2 metres. It is located near the centre of the site, and the intensity of structures decreases towards the south. The well is a simple round pit (dimensions 2.3 x 2.7 m) without any solid interior construction, i.e. lining, though it features several holes for stakes on the upper part, which were most likely a part of the system for grabbing water. To resolve the problem of water spurting out during excavation, the well was emptied down to a depth of 2.23 m.<sup>6</sup> Although sources are located nearby, wells are dug in villages, and often in close proximity to a source. Likewise, it is not unusual for one settlement to have several wells. Wells with the same features were discovered on the section of the aforementioned motorway, in the nearby settlement of Stružani (through without any definite dating or settlement plan that would provide insight into its relationship with the assumed residential objects)<sup>7</sup> and Beketinci (a settlement that is chronologically later, but has the same type of wells – without any preserved wooden construction).<sup>8</sup> Direct parallels can be drawn to the research near the site of Lebeny (Győr surroundings, Hungary), where mediaeval wells of the same shape were found – circular layout and cylindrical hole without a wooden construction, and with a depth between three and five metres. According to the content of the fill, their creation can be dated to the turn of the 12<sup>th</sup> century. There are several

<sup>6</sup> Bunčić 2012, 196, Sl. 3. Bunari su u posljednje vrijeme postali jednim od standardnih interpretacijskih pitanja srednjovjekovnih naselja. Značaj bunara (njihova brojnost, raznolikost oblika i struktura, kronološki okviri i sl.) posebno je istaknut zahvaljujući iskopavanjima velikih površina na zaštitnim istraživanjima – pokazalo se to osobito u Mađarskoj, ali i u Hrvatskoj. Stoga je bilo moguće na temelju velikog uzorka napraviti morfološku klasifikaciju bunara prema nekoliko kriterija (Vaday 2003, 25, 30, 31; Takács 2010, 67).

<sup>7</sup> Pronađeno je ukupno 6 bunara ovalnih u tlocrtu, promjera 2 – 2,5 m i dubine 3 – 5 m. Često su ljevkasti prema dnu. Većina je bez unutrašnje konstrukcije dok uokolo imaju stupove – dakle, postojala je neka nadzemna konstrukcija. Samo je jedan imao unutrašnju drvenu oplatu. Lozok 2011, 21, 22.

<sup>8</sup> Istraženo je pet bunara u radioničkom dijelu naselja. Tlocrtno su kružni, promjera 1,5 – 2 m, bez drvene konstrukcije. Međutim, i oni su iskopani samo do 1,5 m dubine, što otvara mogućnost da su oplata ipak postojale jer je u tome periodu ipak njihova pojava češća (primjerice, u Starim Perkovcima, Petrijevcima i Josipovcu – Filipec 2009, 31, 55, 63). Minichreiter, Marković 2013, 232.

<sup>9</sup> Nemeth-Takacs 2003, 104, 107.

<sup>6</sup> Bunčić 2012, 196, Fig. 3. Recently, wells have become one of the standard questions of interpretation when it comes to mediaeval settlements. The importance of wells (their number, differences in shape and structure, chronological framework etc.) is particularly prominent due to the excavation of large areas as part of rescue excavations – and this has proven to be the fact both in Hungary and in Croatia. Thus, owing to the size of the sample, it was possible to create a morphological classification of wells according to several criteria (Vaday 2003, 25, 30, 31; Takács 2010, 67).

<sup>7</sup> A total of 6 oval wells were found in the layout, with diameters ranging between 2 and 2.5 m and a depth of 3 to 5 m. They are often funnel-shaped towards the bottom. Most of them do not feature any internal construction and are surrounded by posts – meaning that some kind of above-ground construction had existed. Only one of the wells featured a wooden lining. Lozok 2011, 21, 22.

<sup>8</sup> Five wells in the workshop part of the settlement were investigated. They feature a circular layout and a diameter ranging between 1.5 to 2 metres, without any wooden constructions. However, they were excavated only down to a depth of 1.5 metres, which opens the possibility that a lining existed after all, as they began appearing more frequently during this period (for example, in Stari Perkovci, Petrijevcima and Josipovac – Filipec 2009, 31, 55, 63). Minichreiter, Marković 2013, 232.

rana u drugu polovinu 12. stoljeća. Njihove su konstrukcije sadržavale oplata od pletera i dasaka,<sup>10</sup> a bunari su bili smješteni dalje od kuća. Zanimljiva je činjenica da su zapune tih bunara oskudijevale materijalom, što prije svega ukazuje na važnost njihova čišćenja kako bi se održala čistoća vode za stanovništvo i stoku.<sup>11</sup> U tome smislu, kada je riječ o bunaru iz naselja na Staroj Vodenici, može se ustanoviti da je bio namjerno zatrpan. Sadržavao je više od deset kila keramičkih projektila, više od 300 ulomaka keramike te manji broj kamenog i koštanog materijala.<sup>12</sup> Razlozi zatrpanja mogu biti razni, a pojedine su mađarske situacije dokazale da su zatrpanje ili kontaminacije bunara vezane uz određene ratne epizode.<sup>13</sup>

Ulomci keramičkog posuđa čine najbrojniju skupinu nalaza u zapunama objekata iako njihova zastupljenost u odnosu na veličinu objekta nije uvijek proporcionalna. Tako su, primjerice, pojedini objekti, koji se mogu opisati kao srednje veliki (Sj 370, 406, 408) ili veliki (Sj 296), sadržavali manje od 10 ulomaka keramike.<sup>14</sup> Kao specifičnost, u ovome se naselju ističu velike količine cijelih i fragmentiranih keramičkih projektila za praćku koji su bili tema zasebnog rada pa se o njima ovdje neće raspravljati.<sup>15</sup> Zastupljeni su još i rijetki metalni (karičica, nož, strelica) i keramički (ulomci pršljena) nalazi.

Najviše je keramičkog materijala pronađeno u zapuni bunara (Sj 399) smještenoga u sredini istražene površine, a uokolo njega, iako udaljene, upravo su se nalazile gore navedene jame s vrlo malo keramike. Kao najbogatija zatvorena cjelina, s četvrtinom

<sup>10</sup> Upravo je ovaj tip bunara najčešći u razdoblju od 10. do 13. stoljeća i, prema M. Takácsu, pripada drugoj skupini (Takács 2010, 67).

<sup>11</sup> Somogyvari 2003, 187, 190.

<sup>12</sup> Bunčić 2012, 196-199.

<sup>13</sup> Vaday 2003, 42.

<sup>14</sup> Ukupno je 36 objekata sadržavalo keramičke ulomke, od kojih je u 16 bilo manje od 10 ulomaka.

<sup>15</sup> Bunčić 2012. U tome se radu donose detaljniji podaci o ovome lokalitetu, a koji se stoga neće ovdje ponavljati, barem ne u potpunosti. Primjerice, popis drugih srednjovjekovnih lokaliteta u okolici, tablica s popisom objekata i nalaza unutar njih i sl.

such structures that feature pottery that can be dated to the early 13<sup>th</sup> century.<sup>9</sup> In the mediaeval settlement near Kiskunfélegyháza (Bács-Kiskun County, Hungary), four wells dating to the second half of the 12<sup>th</sup> century were excavated. Their constructions featured a lining made of wicker and planks,<sup>10</sup> while the wells themselves were located at a distance from the houses. It is interesting that the fills of these wells were scarce in material which, above all, indicates the importance that was bestowed upon their cleaning in order to keep water for human and cattle consumption uncontaminated.<sup>11</sup> In this sense, when it comes to the well from the settlement in Stara Vodenica, it can be said that it was filled on purpose. It contained more than ten kilos of clay projectiles, over 300 pottery sherds and a smaller amount of stone and bone material.<sup>12</sup> The reasons for its filling can be numerous, while some examples from Hungary proved that the filling or contamination of wells was related to certain military events.<sup>13</sup>

Pottery sherds comprise the most numerous group of finds in the object fills, though their presence in relation to the size of the structure is not always proportional. Thus, for example, certain structures that can be described as medium-size (Sj 370, 406, 408) or large (Sj 296), contained less than 100 pottery sherds.<sup>14</sup> A specific feature by which this settlement distinguishes itself is the large amount of whole and fragmented clay projectiles for slings, which were the topic of a separate paper and therefore shall not be discussed here.<sup>15</sup> Few metal (circuit, knife, arrow) and ceramic (spindle whorls) finds were also present.

Most of the ceramic finds were discovered in the fill of the well (Sj 399) located in the centre of the excavated area while, at a certain distance

<sup>9</sup> Nemeth-Takacs 2003, 104, 107.

<sup>10</sup> This type of well appeared most frequently between the 10<sup>th</sup> and 13<sup>th</sup> century and, according to M. Takács, belongs to the second group (Takács 2010, 67).

<sup>11</sup> Somogyvari 2003, 187, 190.

<sup>12</sup> Bunčić 2012, 196-199.

<sup>13</sup> Vaday 2003, 42.

<sup>14</sup> A total of 36 structures contained pottery sherds, out of which 16 contained less than 20 sherds.

<sup>15</sup> Bunčić 2012. This paper provides more detailed information on this site, and therefore I will not reproduce all this information here, at least not in its entirety. It, for example, provides a list of other mediaeval sites in the vicinity, a table with a list of finds discovered in them, etc.





Slika / Figure 4: Rekonstruirani lonci iz zapune bunara / Reconstructed pots from the well fills (Sj 399) (snimila /photo by M. Bunčić)

ukupno pronađene keramike,<sup>16</sup> ovaj bunar daje dobar pregled zastupljenosti oblika i ukrasa na posuđu. Od 309 ulomaka keramike, 60 ih pripada rubovima, 218 ulomcima tijela, a 28 je ulomaka dna posuda. Tri su lonca koje je moguće rekonstruirati (T. 1: 1-3). Rubovi su lonaca jednostavne profilacije, ravno ili koso odrezani prema van, a pojavljuju se i raščlanjeni rubovi s plitkim žlijebom i zaobljenom donjom usnom (T. 1-3). Prevladava grublja faktura, kao uostalom i u cjelokupnom inventaru, s primjesama većih ili manjih kamenčića. Boje su posuda pretežno tamnije, smeđe ili tamnosive, no površine lonaca često su neujednačene i imaju širok spektar boja i nijansi. Od funkcionalnih oblika najzastupljeniji su lonci koji mogu imati najveću širinu u gornjem dijelu, na prijelazu ramena u trbuh ili na sredini (T. 1: 1-2, 4, 5; T. 2:7) te izduženi oblici s nenaglašenim trbuhom (T. 1: 3; T. 2: 6; T. 3: 4). Razlikuju se svojim dimenzijama pa se mogu izdvojiti mali lonci (T. 1: 7, 8; T. 2: 2, 4; T. 3: 2, 6), srednje veliki lonci (T. 1: 1-3; T. 2: 3, 5-9; T. 3: 3) i veliki lonci (T. 1: 6; T. 3: 1, 4, 5, 8, 9).<sup>17</sup> Više od polovice rubnih ulomaka lonaca imaju dovoljne dimenzije za izmjeru promjera posude (38 kom.), stoga je najveća količina rubova svrstana u kategoriju

<sup>16</sup> Ulomci posuđa iz bunara znatno su veći u odnosu na većinu ulomaka iz drugih objekata pa, iako brojčano oni čine četvrtinu ukupnog broja ulomaka, volumenom je njihov odnos podjednak.

<sup>17</sup> Mali lonci imaju promjer otvora manji od 15 cm, srednje veliki 15 – 20 cm, a veliki veći od 20 cm. Podjela je malo pojednostavljena u odnosu na podjelu prema Sekelj et al. 2005, 150, gdje je uključena još jedna kategorija između srednjih i velikih lonaca.

around it, the aforementioned pits containing a very small amount of pottery were located. As the richest closed unit that contained a quarter of all of the discovered pottery,<sup>16</sup> this well provides a good overview of the representation of pottery forms and decorations. Out of the 309 pottery sherds, 60 of them are rim sherds, 218 are body sherds and 28 are base sherds. Three pots can be reconstructed (Pl. 1: 1-3). The pot rims are of a simple profile, cut straight or at an outwards angle, while fragmented rims with a shallow groove and rounded lower lip also appear (Pl. 1-3). As in the entire inventory, a coarser facture dominates, with the admixture of smaller and larger pebbles. The vessels are largely darker in colour, i.e. brown or dark grey, but the pot surfaces are often irregular and feature a broad spectrum of colours and shades. When it comes to the functional forms, pots that are widest in the upper part, at the transition from the shoulder to the body or at the centre (Pl. 1: 1-2, 4, 5; Pl. 2:7) and elongated forms with an unaccentuated body (Pl. 1: 3; Pl. 2: 6; Pl 3: 4) appear most frequently. They are of different dimensions and can be grouped into small pots (Pl. 1: 7, 8; Pl. 2: 2, 4; Pl. 3: 2, 6), medium-size pots (Pl. 1: 1-3; Pl. 2: 3, 5-9; Pl. 3: 3) and large pots (Pl. 1: 6; Pl. 3: 1, 4, 5, 8, 9).<sup>17</sup> More than a half of the rim sherds of the pots are large enough to measure the diameter of the

<sup>16</sup> The pottery sherds from the well are significantly larger than that from other structures and therefore, though they number only one quarter of the total number of fragments, they are equal in volume.

<sup>17</sup> The diameter of the opening is under 15 cm on the smaller pots, between 15 to 20 cm on the medium pots and over 20 cm on the larger ones. This is a somewhat simpler classification than that by Sekelj et al. 2005, 150, which includes another category between medium and large pots.

srednjih lonaca (16), dok je udio malih i velikih jednak (11). Kod velikih lonaca ističu se pak dva vrlo velika lonca (pitosa) za čuvanje hrane (T. 3: 8, 9). Drugi oblik posuđa, koji se pojavljuje u ovoj cjelini, ali i u nekim drugima, jest poklopac (T. 4: 1-3). Riječ je o jednostavnim koničnim formama, s ravnim vrhom bez drške, a takvo je posuđe moglo imati dvostruku funkciju i služiti također kao zdjela.<sup>18</sup> Najviše je ulomaka ukrašeno jednostrukom valovnicom, dok su u manjoj mjeri prisutni ukrasi jednostruke vodoravne linije, kotačića i oznake na dnu lonca u obliku križa. Radiokarbonska analiza načinjena je iz dva uzorka zapune bunara koja su dala vrlo širok raspon od početka 10. do sredine 13. stoljeća (95% vjerojatnosti), odnosno od kraja 10. do početka 13. stoljeća (68% vjerojatnosti) (tab. 2).

Ukratko, slijedi još kratak pregled objekata koji su sadržavali veći broj keramičkih ulomaka. Jama, koja se nalazila u jugoistočnom dijelu lokaliteta (Sj 150), također je, kao i bunar, prilično izolirana. Ovalnog je oblika, s dubljim ukopom u zapadnom dijelu (sl. 3). Dužine 3 m i širine 1,6 m, orijentirana je u smjeru istok – zapad. U zapuni jame (Sj 149) pronađeno je 85 ulomaka keramike, od kojih je 17 rubova, 62 ulomka tijela i 6 dna posuda. Profilacija rubova također je jednostavna, koso su odrezani prema van ili s blagim žlijebom. Zastupljeni su lonci manjih (T. 4: 10) i srednjih dimenzija (T. 4: 9, 11) i jedan vrlo veliki s promjerom većim od 30 cm (T. 4: 8). Četiri rubna ulomka pripadaju dvama poklopcima (T. 4: 5, 7). Od ukrasa prevladava valovnica, a tek je nekoliko ulomaka ukrašeno vodoravnom linijom i jedan s njihovom kombinacijom. Radiokarbonska analiza za ovaj je objekt također dala širok raspon s najstarijim datumom od sredine 11. stoljeća te najmlađim oko sredine 13. stoljeća (95% vjerojatnosti) odnosno 1160. – 1220. godine (68% vjerojatnosti) (tab. 2).

<sup>18</sup> O ovome će biti još kasnije riječi, no činjenica je kako su posrijedi malobrojni nalazi, i to uglavnom ulomci. Prema M. Takácsu, svi navedeni pripadali bi vjerojatnije zdjelama tipa 1 i 2, a ne poklopcima čiji se razvoj intenzivnije prati od 13. stoljeća, iako se već i ranije na unutrašnjim stranama lonaca pojavljuju utori za poklopce. Takács 1996, 163, 167, 179-181, 184, Abb. 19.

pot (38 pieces), thus the greatest part of the rims were sorted into the category of medium-size pots (16), while the number of small and large pots is equal (11). Out of the large pots, two very large pots (pithoi) for storing food distinguish themselves (Pl. 3: 8, 9). The other form of pottery that appears in this unit (and some other units, as well), is the lid (Pl. 4: 1-3). These are very simple conical forms with a flat top and without a handle, and such vessels might have been dual-purpose and also served as bowls.<sup>18</sup> A greater part of the sherds are decorated with a single wavy line, while single horizontal line ornaments, wheel and cross-shaped marks at the bottom of the pot are present to a lesser extent. Radiocarbon analysis was performed for two well fill samples, and the results indicated a wide time frame – from the early 10<sup>th</sup> century to the mid-13<sup>th</sup> century (95% probability), i.e. from the late 10<sup>th</sup> century to the early 13<sup>th</sup> century (68% probability) (Table 2).

To summarise, a short overview of the structures that contained the greater part of the pottery sherds will now be presented. The pit that was located in the southeast part of the site (Sj 150) was, just like the well, quite isolated. Its shape is oval, deeper dug in the western part (Fig. 3). Its length is 3 m and its width is 1.6 m, and it is oriented east to west. 85 pottery sherds were found in the fill of the pit (Sj 149), out of which 17 were rim sherds, 62 were body sherds and 6 were bottom sherds. The profiling of the rims is simple, they are cut at an outwards angle or with a slight groove. Smaller (Pl. 4: 10) and medium-size pots (Pl. 4: 9, 11), together with one very large pot with a diameter over 30 cm (Pl. 4: 8) are represented. Four rim sherds belong to two lids (Pl. 4: 5, 7). Wavy lines dominated in the ornamentation, with only several sherds decorated with a horizontal line, and one decorated with a combination of the two. Radiocarbon analysis for this object also yielded a wide time frame, with the oldest period dating to the mid-11<sup>th</sup> century and the youngest dating to approximately the mid-13<sup>th</sup> century (95%

<sup>18</sup> There will be more word about this later, but the fact remains that these finds are few, and most of them are sherds. According to M. Takács, all of the aforementioned would most likely be classified as type 1 and 2 bowls, and not lids, as the development of the latter became more intense in the 13<sup>th</sup> century, though grooves for lids appear on the inside of pots earlier than this, as well. Takács 1996, 163, 167, 179-181, 184, Abb. 19.

U sjevernom je dijelu lokaliteta koncentrirano nekoliko objekata. Najveći je među njima Sj 242, plitko (28 cm) ukopana velika jama (vel. 4,78 x 4,34 m) ravnog dna i blago ukošenih stijenki. Od 104 keramička ulomka u zapuni jame (Sj 241), opet najveći broj pripada ulomcima tijela posuda (83), dok su rubni (13) i dna (8) zastupljeni u manjem broju. Rubovi lonaca i ovdje su jednostavne forme – ravno odrezani ili s plitkim žlijebom, ali je prisutan i jedan zaobljeni rub (T. 5: 7). Lonci pripadaju skupini srednje velikih, a jedan manji ulomak finije fature, ukrašen plitkom češljastom valovnicom, mogao bi pripadati poklopcu (T. 5: 3). U ovom je objektu, uz prevladavajuću valovnicu, prisutno ukrašavanje vodoravnom linijom i gustim linijama utisnutog kotačića. Radiokarbonska je analiza uzorka iz ove zapune ovoga puta dala nešto manji raspon datuma od početka 11. do druge polovine 12. stoljeća (tab. 2).

Uz istočni rub sjevernog dijela naselja smjestila se plitka (34 cm), ovalna jama (Sj 250), dužine 3,94 m i širine 2,98 cm, pružajući se u smjeru sjeveroistok – jugozapad. Zapuna je jame (Sj 249) sadržavala 114 ulomaka keramike od kojih samo 10 rubova i 10 dna, dok je ostalih 94 pripadalo dijelovima tijela posuda. Rubovi lonaca i jednog poklopca (ili zdjele) najjednostavnije su forme – izvučeni i koso su odrezani prema van (T. 5: 8, 10; T. 6: 2) ili zaobljeni i malo zadebljani na vanjskoj strani (T. 5: 9; T. 6: 5). Dva su ulomka dio velikih lonaca, ali prisutni su i ulomci srednje velikih te malih lonaca. Najučestaliji su ukras razne varijante valovnice (38), a slijede je vodoravni urezi (16) i ukras kotačićem (3). Faktura je pojedinih ulomaka nešto drugačija od većine, mekša je i s primjesama više sitnijih kamenčića te rupicama od pljeve.

Objekt, koji se oblikom razlikuje od okolnih, nepravilnog je oblika, sastavljen od dvije spojene jame smjera sjever – jug (Sj 240) i istok – zapad (Sj 268), dubine ukopa pola metra. Ukupno su sadržavale 82 ulomka keramike, od kojih 20 pripada rubnim dijelovima posuda, 4 dnima posuda, a 58 ulomaka

probability) i.e. to the period 1160 – 1220 (68% probability) (Table 2).

Several structures are concentrated in the northern part of the site. The largest among them is Sj 242, a shallowly (28 cm) sunken large pit (dimensions 4.78 x 4.34 m) with a flat bottom and mildly slanted walls. Out of the 104 pottery sherds in the fill of the pit (Sj 241), the majority once again belong to body sherds (83), while rim (13) and bottom (8) sherds are represented to a lesser extent. These pot rims are also simple in form – cut straight or with a shallow groove, though there is also one rounded rim (Pl. 5: 7). The pots belong to the group of medium-size pots, and one sherd with a finer fature, decorated with a shallow, comb-shaped wavy line, could belong to a lid (Pl. 5: 3). In addition to the dominant wavy lines, ornamentation with horizontal lines or thick lines impressed with wheels is also present. This time around, radiocarbon analysis for the samples from this fill yielded a somewhat more limited time frame, between the early 11<sup>th</sup> century to the second half of the 12<sup>th</sup> century (Table 2).

Along the eastern border of the northern part of the settlement, there is a shallow (34 cm), oval-shaped pit (Sj 250) with a length of 3.94 m and a width of 2.98 cm that stretches in the direction northeast-southwest. The fill of the pit (Sj 249) contained 114 pottery sherds, out of which only 10 were rim sherds and 10 were base sherds, while the remaining 94 were body sherds. The rims of the pots and one lid (or bowl) are very simple in form – inverted and cut at an outwards angle (Pl. 5: 8, 10; Pl. 6: 2) or rounded and slightly thickened on the exterior (Pl. 5: 9; Pl. 6: 5). Two of the sherds are part of large pots, but there are also sherds from medium-size and small pots. Different variations of the wavy line (38) are the most common ornamentation, followed by horizontal engravings (16) and wheel decorations (3). The fature of certain fragments differs to that of the others, as it is softer and features a greater number of smaller pebbles and chaff holes.

The structure, which differs from the surrounding structures, is of irregular shape and composed of two connected pits oriented north to south (Sj 240) and east to west (Sj 268), with a



dijelovi su tijela posuda. Uz samo 3 ulomka ukrašena vodoravnim linijama i jednog s kotačićem, svi ostali (39) ukrašeni su valovnicom. Lonci malih i srednjih dimenzija jednostavnih su profila, rubova odrezanih ravno ili koso prema van (T. 6: 6, 8-11, 13). Jedan je ulomak trbuha vjerojatno pripadao posudi s ručkom (T. 6: 12).

U krajnjem sjeverozapadnom dijelu lokaliteta dva su ovalna objekta sličnih dimenzija, ali drugačije orijentacije, koja svojim keramičkim inventarom ukazuju na mlađi horizont ovoga naselja. Zapadni (Sj 226), orijentiran zapad – istok dužine je 3,3 m i širine 2,14 m s najvećom dubinom od 64 cm u svome zapadnom dijelu, gdje je ukopana manja ovalna jama. Zapuna (Sj 225) je sadržavala 99 ulomaka keramike, od kojih je 17 rubova, 13 dna i 71 ulomak tijela posuda. Tipološki, zastupljeni su samo lonci, i to srednjih i velikih dimenzija. Rubovi su nešto razvedeniji, ali i dalje su prilično jednostavni (T. 9; T. 10: 1-2). Riječ je o tzv. kaležastim rubovima (njem. *Kelchförmig*) koji su izvijeni prema van i imaju zaobljenu donju usnu ili pak o onima s izvučenom donjom usnom (tzv. krag-n-rub).<sup>19</sup> Faktura ovih posuda, odnosno ulomaka, manje je gruba na dodir jer su izrađeni od pročišćenije gline s primjesama finog pijeska i tinjca. Ukrašeno je 59 ulomaka, a najzastupljeniji su ukras urezane, plitke, vodoravne linije i ukras izveden kotačićem. Prema loncu, koji je (u crtežu) rekonstruiran (T. 9: 1), vidljivo je da ukras počinje na ramenima i završava u donjoj polovici lonca, ispod najšireg dijela trbuha. Lonac je to koji ima dvije rupice na vratu, a koje su vjerojatno nastale kako bi se popravila napuklina. Motiv je valovnice potpuno iščezao. Istočni je objekt (Sj 230) orijentiran sjever – jug, dok su se na dnu, raspoređeni u polukrug, nalazili ukopi sedam stupova. Nepravilnog je ovalnog oblika, dubine 55 cm, dužine 2,68 i širine 2,12 cm. Sadržavala je znatno manje materijala (23 ulomka keramike) nego susjedna jama, ali značajke keramičkih ulomaka (T. 10: 2, 3) ukazuju na njihovu istovremenost.

<sup>19</sup> Sekelj Ivančan 2001, 235.

hole depth of half a metre. They contained 82 pottery sherds in total, out of which 20 were rim sherds, 4 were base sherds and 58 were body sherds. Three of the sherds are decorated with wavy lines and one of them with a wheel, while all the rest (39) are decorated with a wavy line. The profiles of the smaller and medium-size pots are simple, with rims that are cut straight or at an angle to the outside (Pl. 6: 6, 8-11, 13). One body sherd most likely belonged to a vessel with a handle (Pl. 6: 12).

At the far southwest end of the site, two oval structures with similar dimensions were found, but they were oriented differently, and the pottery finds suggests a settlement of a later date. The western one, (Sj 226) is oriented west to east and is 3.3 m long and 2.14 m wide, with a maximum depth of 64 cm in its western part, where a smaller oval pit has been dug. The fill (Sj 225) contained 99 pottery sherds, out of which 17 were rim sherds, 13 were base sherds and 71 were body sherds. Typologically, only pots are represented, and their size varies from medium to large. The rims are somewhat more developed, but still quite simple (Pl. 9; Pl. 10: 1-2). There are those featuring so called cup-shaped rims (*Kelchförmig* in German) that protrude outwards and have a rounded lower lip, or those with a drawn out lower lip (a so-called collar rim).<sup>19</sup> The fabric of these vessels, i.e. fragments is less coarse to the touch as they have been made from more purified clay, with the admixture of fine sand and mica. 59 of the sherds are decorated, and engraved shallow horizontal lines and wheel-made ornamentation dominate. According to the pot that has been reconstructed (in the drawing) (Pl. 9: 1), it is visible that the ornamentation begins at the shoulders and ends in the lower part of the pot, below the widest part of the body. This pot features two holes at the neck, which were most likely made to repair a crack. The wavy line motif is completely absent. The eastern structure (Sj 230) is oriented north to south while, with seven post holes placed semicircular at its bottom. It is of an irregular oval shape and 55 cm deep, 2.68 long and 2.12 cm wide. It contained significantly less finds (23 pottery sherds) than

<sup>19</sup> Sekelj Ivančan 2001, 235.



Sveukupno, lonci raznih dimenzija najzastupljeniji su keramički oblik. Njihove, ne tako značajne, razlike očituju se u oblikovanju ruba i obliku tijela, ovisno o položaju najveće širine lonca. Rubovi lonaca jednostavnih su formi, a razlikuju se u visini i načinu na koji je izvučen vrat. Može biti lučno izvučen, s manjim ili većim nagibom (npr. T. 1: 1-3; T. 2: 2; T. 3: 1; T. 10: 1) ili pod obično oštrim kutem (npr. T. 1: 7; T. 3: 5-7; T. 4: 8; T. 5: 1). Sam je rub zaobljen (T. 5: 7; T. 7: 5), ravno (T. 1: 1; T. 2: 6; T. 3: 8) ili koso odrezan prema van (T. 1: 7; T. 2: 3, 4, 7, 8; T. 3: 5, 6, 9 itd.). Kod razvijenijih rubova javlja se varijanta sa zaobljenom ili izvučenom donjom usnom (T. 1: 6; T. 3: 9; T. 7: 2, 8, 9; T. 9), a sam rub može imati plitki žlijeb (T. 1: 2; T. 3: 4; T. 4: 9, 11; T. 5, 2; T. 9: 2, 5, 7 itd.) ili također biti ravno odrezan. Sve su te vrste rubova karakteristične za rani i razvijeni srednji vijek.<sup>20</sup> Najveća širina lonaca u pravilu je u gornjoj polovici ili na samoj sredini, dok rijetki slučaj ukazuje da je to moguće i u donjem dijelu posude (T. 1: 3).

Samo je desetak rubnih ulomaka koji vjerojatno pripadaju poklopcima. Rubovi su, kao i kod lonaca, vrlo jednostavni – zaobljeni i koso ili ravno odrezani. Obično su ukrašeni valovnicom koja se može nalaziti i na unutrašnjoj strani (T. 7: 13). Neki su primjerci dodatno ukrašeni okomitim urezima duž cijeloga ruba (T. 7: 4, 13). Dva ulomka vjerojatno pripadaju gornjim dijelovima poklopca (T. 4: 1, 2).<sup>21</sup> Tipološki, riječ je o zvonolikim poklopcima koji nemaju vrh, odnosno bilo kakav oblik drške, već se dijele prema obodu koji priliježe na usta posude i one koji ulaze u posudu.<sup>22</sup> Svi primjerci imaju takav oblik i nagib ruba koji je mogao ući

<sup>20</sup> Sekelj Ivančan 2001, 234-236.

<sup>21</sup> Prilikom izbora ulomaka za crtanje, još 2011. godine, ta su dva ulomka izdvojena kao dna. Naknadnom obradom materijala pojavila se sumnja da bi moglo biti riječi upravo o gornjim dijelovima poklopca, a ne o dnu lonca. Usporedbom fature, boje i veličine ulomka ruba poklopca (T. 4: 3) i gornjeg dijela (T. 4: 1) ustanovljeno je da su dva ulomka s velikom vjerojatnošću dijelovi istoga poklopca. Treba također napomenuti da je moguće da su ti oblici dna pripadali zdjelama kako je to interpretirano za ulomke iz Vinkovaca (Sekelj Ivančan 2001, 86, 257, T. LXI, 381; 269, T. LXVI, 409; T. LXVIII, 430).

<sup>22</sup> Sekelj Ivančan 2001, 86; 2001a, 237.

the neighbouring pit, but the characteristics of the pottery sherds (Pl. 10: 2, 3) point towards their contemporaneity.

All in all, pots of various dimensions are the most common form of pottery. They do not differ that significantly between themselves, with most of the differences relating to rim and body shape, depending on the position of the greatest width of the pot. The pot rims are simple in form, and differ between themselves in the height and manner in which the neck has been drawn out. It is drawn out in an arch with a smaller or bigger curve (e.g. Pl. 1: 1-3; Pl. 2: 2; Pl. 3: 1; Pl. 10: 1) or at a regularly sharp angle (e.g. Pl. 1: 7; Pl. 3: 5-7; Pl. 4: 8; Pl. 5: 1). The rim itself is rounded (Pl. 5: 7; Pl. 7: 5), flat (Pl. 1: 1; Pl. 2: 6; Pl. 3: 8) or cut at an outwards angle (Pl. 1: 7; Pl. 2: 3, 4, 7, 8; Pl. 3: 5, 6, 9 etc.). Among the more developed rims, variants with a rounded or drawn out lower lip appear (Pl. 1: 6; Pl. 3: 9; Pl. 7: 2, 8, 9; Pl. 9), while the rim itself may have a shallow groove (Pl. 1: 2; Pl. 3: 4; Pl. 4: 9, 11; Pl. 5, 2; Pl. 9: 2, 5, 7 itd.) or also be cut straight. All these rim types are typical of the Early and High Middle Ages.<sup>20</sup> As a rule, the greatest width of the pot is in the upper part or right in the middle, while rare examples also indicate that this is possible in the lower part of the pot (Pl. 1: 3).

There are only about ten or so rim sherds that most likely belong to lids. These rims are, as with the pots, very simple – rounded and cut straight or at an angle. They are usually decorated with a wavy line that can also be located on the inside (Pl. 7: 13). Some examples are additionally decorated with vertical engravings along the entire rim (Pl. 7: 4, 13). Two of the sherds most likely belong to the upper parts of lids (Pl. 4: 1, 2).<sup>21</sup> Typologically speaking, they are bell-shaped lids without a top, i.e. without any kind of handle, and are divided into those lids

<sup>20</sup> Sekelj Ivančan 2001, 234-236.

<sup>21</sup> During the selection of sherds for drawing in 2011, these two sherds were selected as base sherds. After they were processed at a later date, the suspicion appeared that they could actually be upper parts of lids, and not pot bases. By comparison of the fatures, colours and sizes of the lid rim sherds (Pl. 4: 3) and the upper part (Pl. 4: 1), it was determined that these two shards most likely used to be part of the same lid. It should also be stressed that it is possible that these base forms used to belong to bowls, as it was interpreted for sherds from Vinkovci (Sekelj Ivančan 2001, 86, 257, Pl. LXI, 381; 269, Pl. LXVI, 409; Pl. LXVIII, 430).

u lonac. Gornji je dio ravan, što omogućava korištenje tih posuda i u drugu svrhu, kao zdjelu.<sup>23</sup> Najbliža analogija nalazi se u susjednom Josipovcu Punitovačkom.<sup>24</sup> Uz približno iste dimenzije, oblik, fakturu i ukras razlikuje ih sam rub koji je na josipovačkom primjeru izvučen i koso odrezan prema van. Promjer poklopca od nešto manje od 20 cm odgovarao bi srednje velikim loncima. Velika količina istoga tipa poklopaca pronađena je u Vinkovcima. Iako je na vinkovačkim primjercima rub češće zaobljen i uvijen prema unutra, a ukras bogatiji, izveden ili (češljastim) valovnicama ili snopovima vodoravnih linija, ima i onih s ravno odrezanim rubom i oblikom sličnijim vodeničkim. Datirani su od druge polovine 12. do sredine 13. stoljeća.<sup>25</sup>

Od ukupno 1043 ulomaka keramike,<sup>26</sup> ukrašeno ih je 530, odnosno 50,81%, i to tehnikama žljebljenja i utiskivanja (tab. 1). Najzastupljeniji je ukras valovnica koja se javlja samostalno, a samo je nekoliko primjera gdje je u kombinaciji s vodoravnom linijom ili kotačićem (T. 2. 3). Varijante ukrašavanja valovnicom su različite (T. 11), ovisno o njihovoj amplitudi i razmaku od sljedećeg niza. Nije neuobičajeno da se nizovi i preklapaju. Na dva se ulomka valovnica nalazi i na unutrašnjoj strani – na poklopcu (T. 7: 13) i na loncu iz Sj 211 (T. 7: 8).<sup>27</sup>

<sup>23</sup> Upravo su posude sličnih odlika i vremenskog okvira s obližnjeg lokaliteta Ivandvor – šuma Gaj (Balén et. al 2009, 48; 70, T. 9: 4; 71, T. 10: 3,4) interpretirane kao zdjele. One nisu rijetka forma u razvijenom i kasnom srednjem vijeku, no kada su sačuvani samo manji rubni ulomci posude, posebno je nezahvalno ispravno odrediti njihovu funkciju.

<sup>24</sup> Janeš 2010, 238, sl. 7; 245, T. 4: 1.

<sup>25</sup> Sekelj Ivančan 2001, 249, T. LVII, 363; 309, T. LXXXVI, 533; 273, T. LXVIII, 427; 2001a, 237, bilj. 8; 238; 267, T. III; 270, T. VI: 24, 25.

<sup>26</sup> Broj je keramičkih ulomaka uvećan za 29 u odnosu na podatke iz Bunčić 2012, 197, Tab. 1 jer je prilikom ponovnog pregleda materijala primijećeno da ranije pogreškom nisu ubrojani ukrašeni ulomci tijela posuda iz Sj 149.

<sup>27</sup> Ukrašavanje unutrašnje strane otvora lonca uobičajeno je za razdoblje ranog srednjeg vijeka i tada je najčešće riječ o češljastoj valovnici (Sekelj Ivančan 2001, 89; Filipec 2010, 262, sl. 4, 263, 281, T. 4). Ovdje je rub lonca ukrašen dvjema jednostrukim valovnicama s manjim razmakom. Nasuprot ranom datiranju te vrste ukrasa, primjer je iz Banata (Kovin, lok. Grad), gdje se u horizontu druge polovine 12. i 13. stoljeća pojavljuju ukrašeni unutrašnji otvori lonaca valovnicama ili zarezima (Zečević 2007, 186, 192, T. 1: 9, 11). Kao

whose rim sits on top of the pot opening, and those lids that were placed inside the pot.<sup>22</sup> All of the examples feature a form and rim tilt that indicates that they fit inside the pot. The upper part is flat, which allowed these vessels to also be used for another purpose – as bowls.<sup>23</sup> The closest analogy can be found in the neighbouring settlement of Josipovac Punitovački.<sup>24</sup> They feature very similar dimensions, shape, facture and ornamentation, with the only difference being the rims, which are drawn out and cut at an outwards angle in the Josipovac example. The lid diameter of slightly under 20 cm would correspond to pots of a medium size. A large number of the same type of lid was found in Vinkovci. Although the rim is more commonly rounded and curved to the inside in the Vinkovci specimens and their decorations are more lavish, executed either with (comb-shaped) wavy lines or groups of horizontal lines, there are also those with a straight cut rim and shape more similar to the examples from Vodenica. They have been dated to the period between the second half of the 12<sup>th</sup> century and the mid-13<sup>th</sup> century.<sup>25</sup>

Out of the total of 1043 pottery sherds,<sup>26</sup> 530 (i.e. 50.81%) of them are decorated with grooving and impressing techniques (Table 1). Wavy lines are the most common form of ornamentation and appear independently, and only in several examples are they combined with a horizontal line or wheel-made ornamentation (Pl. 2. 3). The variations of wavy line ornamentation are diverse (Pl. 11), with different amplitudes and spaces between rows. Overlapping rows are also not unusual. On two sherds, a wavy line is also located on the inside – on the lid (Pl. 7: 13)

<sup>22</sup> Sekelj Ivančan 2001, 86; 2001a, 237.

<sup>23</sup> Bowls with similar features and from a similar time frame from the nearby locality Ivandvor – Gaj forest (Balén et. al 2009, 48; 70, Pl. 9: 4; 71, Pl. 10: 3,4) were interpreted as bowls. This is not a form that appears seldom in the High and Late Middle Ages; however, as only smaller rim sherds of the vessel have remained preserved, determining their precise function is not an easy task.

<sup>24</sup> Janeš 2010, 238, Fig. 7; 245, Pl. 4: 1.

<sup>25</sup> Sekelj Ivančan 2001, 249, Pl. LVII, 363; 309, Pl. LXXXVI, 533; 273, Pl. LXVIII, 427; 2001a, 237, footnote 8; 238; 267, Pl. III; 270, Pl. VI: 24, 25.

<sup>26</sup> The number of pottery sherds is increased by 29 compared to the information found in Bunčić 2012, 197, Tab. 1 as, during the re-examination of materials, it was noted that the decorated body sherds from Sj 149 were not included by mistake.

Valovnica je često vrlo plitko urezana i slabo vidljiva na manjim ulomcima pa je ponekad teško razlučiti je li on ukrašen valovnicom ili linijom jer je očito korišten isti alat za ukrašavanje. Vodoravna linija kao ukras prisutna je na 26,6% ulomaka. Samo je pet objekata u kojima je ovaj ukras dominantan. Ukras obično započinje na samome vratu i ide gotovo do dna lonca u pravilnim razmacima između linija. Ukrašavanje utiskivanjem nazubljenog kotačića zastupljeno je na nešto manje od 10% ukrašenih ulomaka, i to isključivo na loncima. Kao i kod ostalih vrsta ukrasa, na nekim ulomcima djeluje manje ili više bogat, ovisno o razmaku između nizova. Budući da instrument kojim je ukras izveden nije sasvim precizno izrađen, a vjerojatno niti utiskivan uvijek istom jačinom, uzorci su na loncima kvadratični, pravokutni, trokutasti ili pak trapezoidni (T. 11). Jedan se ulomak ističe među njima jer je precizno i jednolično izveden utiskivanjem pomoću alata s trokutastim završetkom (T. 11, Sj 293). U kombinaciji s valovnicom također je prisutan samo na jednome ulomku ruba lonca. Iako ova vrsta ukrasa ima dugi vijek trajanja, nije riječ o primarnom ukrasu.<sup>28</sup>

jednostruka ili češljasta, pojavljuje se i u Zalskoj županiji, u Mađarskoj, u naselju datiranom na prijelaz s 11. u 12. stoljeće (Kvassay 2008, 104: 7,8).

<sup>28</sup> Kao primjere s nekih relativno obližnjih lokaliteta, treba spomenuti naselja u okolici Virovitice, gdje se ukras s kotačićem pojavljuje u objektima datiranima od druge polovine 9. do 10. stoljeća (Sekelj Ivančan, Tkalčec 2008, 117, 127: 29-31, 128: 35, 37, 38) i primjere susjedne Beketince, gdje se takav ukras pojavljuje i u ranosrednjovjekovnom horizontu (Minichreiter, Marković 2013, 167, T. 19: 4, 5, 170, 172, tab. bez broja). Iako najčešći u razdoblju razvijenoga srednjeg vijeka (Bekić 2010, 229, 236, T. 1, 237, T. 2), prisutan je, ponekad s drugačijom vrstom kotačića, i na kasnosrednjovjekovnim posudama (Balen 2009a, 47, 70, T. 9: 5; Minichreiter, Marković 2013, 261; T. 30, 273, T. 36, 279, T. 39, 3).

and on the pot from Sj 211 (Pl. 7: 8).<sup>27</sup>

Wavy lines are frequently very shallowly engraved and poorly visible on smaller sherds, thus it is sometimes difficult to determine whether a sherd has been decorated with a wavy or a regular line because the same ornamentation tool was obviously used. Ornamentation in the form of a horizontal line appears on 26.6% of sherds, and there are only five objects where this type of ornamentation dominates. The ornamentation most commonly begins at the neck and reaches almost to the bottom of the pot, with regular spaces between the lines. Decoration with a notched wheel is present in slightly under 10% of the decorated sherds, and exclusively on pots. As with other types of decorations, its lavishness differs between sherds, depending on the space between the rows. As the instrument with which the ornamentation was made was not entirely precise and was probably not always pressed with the same strength, the pot decorations are square, rectangular, triangular or trapezoid in shape (Pl. 11). One sherd among them particularly distinguishes itself, as its ornamentation has been precisely and evenly fashioned with a tool with a triangular ending (Pl. 11, Sj 293). In combination with a wavy line, it is also present on only one rim potsherd. Although this type of ornament has a long life, it is not the primary ornament.<sup>28</sup>

In addition to the previously described motifs,

<sup>27</sup> Decoration of the interior of the pot opening is commonplace for the period of the Early Middle Ages, and is usually in the form of a comb-shaped wavy line (Sekelj Ivančan 2001, 89; Filipec 2010, 262, Fig. 4, 263, 281, Pl. 4). Here the pot rim is decorated with two single wavy lines with a smaller space in between. In contrast to the early dating of this type of ornament, the example is from Banat (Kovin, -Grad), where in the horizon of the second half of the 12<sup>th</sup> century and the 13<sup>th</sup> century internal pot openings decorated with wavy lines or incisions (Zečević 2007, 186, 192, Pl. 1: 9, 11). As single or comb-shaped, it also appears in the Zala County in Hungary, in a settlement dated to the turn of the 12<sup>th</sup> century (Kvassay 2008, 104: 7,8).

<sup>28</sup> As examples from some sites located in the relative vicinity, it bears mentioning the settlements in the surroundings of Virovitica, where wheel-made ornaments appear on objects dated between the second half of the 9<sup>th</sup> century and the 10<sup>th</sup> century (Sekelj Ivančan, Tkalčec 2008, 117, 127: 29-31, 128: 35, 37, 38) and, for example, the neighbouring settlement of Beketinci, where this kind of ornament also appears in the period of the Early Middle Ages (Minichreiter, Marković 2013, 167, Pl. 19: 4, 5, 170, 172, numberless plate). Although most frequent in the period of the High Middle Ages (Bekić 2010, 229, 236, Pl. 1, 237, Pl. 2) it is also present on Late Mediaeval vessels, sometimes with a different type of wheel (Balén 2009a, 47, 70, Pl. 9: 5; Minichreiter, Marković 2013, 261; Pl. 30, 273, Pl. 36, 279, Pl. 39, 3).

UKRAS ORNAMENTATION	BROJ ULOMAKA NUMBER OF SHERDS	%
Valovnica / wavy line	339	63,96
Vodoravna linija / horizontal line	141	26,6
Kotačić / wheel	44	8,3
Ostalo / other	6	1,13

Tablica / Table 1: Pregled zastupljenih ukrasa na keramici / Overview of ornamentation on the pottery

Uz opisane prevladavajuće motive samo je nekoliko ulomaka koji nose neko drugačije obilježje. Dva dna u sredini imaju reljefno izveden tanki križ (T. 4: 4). Sličan je i na ulomku dna s lokaliteta Letenye – Korongy-tábla koje je datirano na prijelaz s 11. u 12. stoljeće.<sup>29</sup> Na velikom loncu / pitosu iz bunara (T. 3: 9) na vratu se nalazi urezan Andrijin križ, za koji je vjerojatnije da predstavlja neku oznaku nego isključivo ukras. Zanimljiva je poveznica s istim znakom na poklopcu koji je pronađen u nekoliko kilometara udaljenom Josipovcu Punitovačkom.<sup>30</sup> Na tome su poklopcu dva križa, jedan pored drugoga, a s obzirom na to da je sačuvan manji ulomak, nije jasno je li on ovdje ipak u funkciji ukrasa. U svakom slučaju, s obzirom na blizinu naselja i njihovu djelomično istu vremensku odrednicu, sasvim je izvjesna mogućnost da je posuđe izrađivao isti majstor, odnosno radionica. Još jedan veći lonac (T. 8: 12) nosi specifičan ukras urezanih kosih linija koje su vjerojatno bile u kombinaciji s još nekim ukrasom.

Metalnih je nalaza vrlo malo, no zastupljeni su s po jednim primjerkom nakita, oruđa i oružja. S-karičica pronađena je u zapuni objekta (Sj 240) u sjevernom dijelu nase-

there are only several other sherds that bear some kind of different feature. Two bases have a thin cross motif in relief in the centre (Pl. 4: 4). A similar feature can be found on the base sherd from the locality of Letenye – Korongy-tábla dated from the turn of the 12<sup>th</sup> century.<sup>29</sup> On the neck of the large pot/pithos from the well (Pl. 3: 9) a St Andrew's cross is engraved, and more probably served merely as decoration than as some kind of marking. It is interesting to connect it with the same marking on a lid that was found several kilometres away in Josipovac Punitovački.<sup>30</sup> This lid features two crosses, one next to the other, and since the smaller sherd has remained preserved, it is unclear whether it serves as decoration here. In any case, considering the proximity of the settlement and their relatively identical time frame, it is quite likely that this pottery was created by the same craftsman, i.e. workshop. Another large pot (Pl. 8: 12) bears the specific decoration of engraved slanted lines, which were probably combined with some other ornamentation.

Metal finds are very few, but they are represented with one example of jewellery, one tool and one weapon. An S-circllet was found in the fill of the structure (Sj 240) in the northern part of the

<sup>29</sup> Kvassay 2008, 106: 17, 18. Na mađarskim se lokalitetima (Zapadna Transdanubija) takvi znakovi na dnu posuda obično ne pojavljuju nakon sredine 12. stoljeća (Takács 1996, 156).

<sup>30</sup> Janeš 2009, 238, sl. 7; 245, T. 4: 1.

<sup>29</sup> Kvassay 2008, 106: 17, 18. At Hungarian sites (Western Transdanubia), such symbols on vessel bases do not usually appear after the mid-12<sup>th</sup> century (Takács 1996, 156).

<sup>30</sup> Janeš 2009, 238, Fig. 7; 245, Pl. 4: 1.



lja. Riječ je o velikoformatnoj (G. I, 10/2)<sup>31</sup> brončanoj karičici okrugloga presjeka, s oštećenjima na krajevima (T. 10: 5). Pojava takvih karičica nije neuobičajena početkom 12. stoljeća.<sup>32</sup> Na groblju u Đakovu – Župna crkva u nekoliko su grobova pronađene karičice sličnih dimenzija.<sup>33</sup> Željezni nož s trnom, kojemu je oštećen vrh sječiva, pronađen je u zapuni jame (Sj 243) nepravilnoga kružnog oblika ravnih stijenki i dna, koja se nalazila u sjevernom dijelu lokaliteta, zapadno od objekta u kojoj je pronađena strelica. Dužina noža iznosi 17,2 cm, širina sječiva 1,8 cm, a debljina sječiva 1,5 cm (T. 10: 6).<sup>34</sup> Prema istovjetnim nalazima pronađenima na mađarskom lokalitetu Kána (u Budimpešti), moguće ga je datirati u vremenski raspon od sredine 12. do sredine 13. stoljeća.<sup>35</sup> U okolici su slični noževi pronađeni na lokalitetu Beketinci – Bentež (manje dimenzije), u starijem (sjeveroistočnom) dijelu naselja koje se datira od sredine 13. stoljeća<sup>36</sup> i (također manjih dimenzija) u Đakovu na lokalitetu Župna crkva, unutar objekta koji egzistira u 12. ali i u 13. stoljeću.<sup>37</sup> Dvoroga strelica s trnom za nasad nalazila se u zapuni jame (Sj 249) u sjeverozapadnom dijelu lokaliteta (T. 10: 4). Na prijelazu plosnatoga rašljastog lista u trn okruglog presjeka nalazi se (slabo očuvan) prsten. Ukupna dužina iznosi 7,418 cm, najveća širina rogova 3,26 cm, a promjer trna 0,637 cm.<sup>38</sup> Prema Ruttkayevoj tipologiji, pripada tipu B-5b. Ovakve su se strelice uglavnom koristile za lov, a najčešće se pojavljuju u 9. i 10. stoljeću.<sup>39</sup> No različite varijante strelica s listom rašljastog oblika

settlement. This is a large-format (G. I, 10/2)<sup>31</sup> bronze circllet with a round cross-section, with damaged endings (Pl. 10: 5). The appearance of such circllets is not unusual for the early 12<sup>th</sup> century.<sup>32</sup> At the cemetery in Đakovo – Parish Church, hoops with similar dimensions were found in some of the graves.<sup>33</sup> An iron hilt tang knife with a damaged blade tip was found in the fill of the pit (Sj 243) of an irregular circular shape with flat walls and bottom that was located in the northern part of the locality, to the west of the object where the arrow was found. The length of the knife is 17.2 cm, the width of the blade is 1.8 cm, and the thickness of the blade is 1.5 cm (Pl. 10: 6).<sup>34</sup> According to equivalent finds discovered at the Hungarian site of Kána (in Budapest), it can be dated to the time frame between the mid-12<sup>th</sup> and mid-13<sup>th</sup> century.<sup>35</sup> In the vicinity, similar knives were found at the site of Beketinci – Bentež (smaller dimensions), in the older (northeast) part of the settlement that is dated to the mid-13<sup>th</sup> century,<sup>36</sup> and (also of smaller dimensions) in Đakovo at the locality of Parish Church, within the object that exists both in the 12<sup>th</sup> and 13<sup>th</sup> century.<sup>37</sup> A two-horned arrow with a tang for hafting was located in the fill of the pit (Sj 249) in the northwest part of the site (Pl. 10: 4). At the transition of the flat forked leaf into the tang with a circular cross-section there is a (poorly preserved) ring. The total length is 7.418 cm, the greatest prong width is 3.26 cm, and the tang diameter is 0.637 cm.<sup>38</sup> According to Ruttkay's typology, it can be classified as type B-5b. Arrows of this type were mostly used for hunting, and they largely appear in the 9<sup>th</sup> and 10<sup>th</sup> century.<sup>39</sup> However, different variations of arrows with a forked leaf would go

<sup>31</sup> Giesler 1981, 40, sl. 7a. Dimenzije karičice iznose: vel. 3,45 x 3,24 cm, pr. žice 0,17 cm i tež. 1,504 g.

<sup>32</sup> Giesler 1981, 105, 106.

<sup>33</sup> Grobovi 93A, 321, 391, 397a. Filipec 2012, 51, 77, 85, 86.

<sup>34</sup> Bunčić 2012, 207, bilj. 90.

<sup>35</sup> Terei, Horváth 2007, 240, sl. 17: 29, 245, 246.

<sup>36</sup> Minichreiter, Marković 2013, 314, 315, Z. 50: 1, 362, 364.

<sup>37</sup> Filipec 2012, 171, 178, sl. 78: 4, 206.

<sup>38</sup> Zbog oštećenosti i konzervatorskog zahvata, nije mjerena težina jer podatak ne bi bio valjan.

<sup>39</sup> Ruttkay 1976, 327, sl. 54, 330, 331. Jedna je takva strelica pronađena na groblju bjelobrdске kulture u Vukovaru na položaju Lijeva Bara (Demo 2009, 215, 429).

<sup>31</sup> Giesler 1981, 40, Fig. 7a. The dimensions of the circllet are: 3.45 x 3.24 cm, wire diameter 0.17 cm, weight 1.504 g.

<sup>32</sup> Giesler 1981, 105, 106.

<sup>33</sup> Graves 93A, 321, 391, 397a. Filipec 2012, 51, 77, 85, 86.

<sup>34</sup> Bunčić 2012, 207, footnote 90.

<sup>35</sup> Terei, Horváth 2007, 240, Fig. 17: 29, 245, 246.

<sup>36</sup> Minichreiter, Marković 2013, 314, 315, Z. 50: 1, 362, 364.

<sup>37</sup> Filipec 2012, 171, 178, sl. 78: 4, 206.

<sup>38</sup> Due to damage and conservation interventions, the weight was not measured as the results would not have been valid.

<sup>39</sup> Ruttkay 1976, 327, sl. 54, 330, 331. One such arrow was found at the cemetery of the Bijelo Brdo Culture in Vukovar, at the site of Lijeva Bara (Demo 2009, 215, 429).

pojavljuju se sve do 14. stoljeća, kada dobivaju tuljac za nasad umjesto trna.<sup>40</sup> Strelica istoga tipa pronađena je i na lokalitetu Beketinci – Bentež.<sup>41</sup>

U neposrednoj okolici ovoga naselja istraženi su, ili pak samo registrirani, brojni lokaliteti iz istog, ali i ranijih i kasnijih srednjovjekovnih razdoblja.<sup>42</sup> Keramička građa, pronađena tijekom iskopavanja ovoga lokaliteta, uklapa se u tipičan kuhinjski inventar ruralnih naselja u razvijenom srednjem vijeku. O pojavi i razvoju pojedinih ukrasa, oblika rubova posuda, keramičkih oblika (npr. poklopaca) i o sličnim temama vezanim uz srednjovjekovnu keramiku, na nekoliko je mjesta opširno pisano pa se ovdje na taj način neće ponavljati.<sup>43</sup> Analogije s obližnjih lokaliteta u Đakovštini i Vinkovcima, uz radiokarbonske datume, čine temelj za smještaj naselja u vremenski okvir. Već je spominjano prostorno najbliže naselje koje se nalazilo u susjednom Josipovcu Punitovačkom, na položaju Veliko Polje I, gdje se uočava dosta sličnosti u keramičkom materijalu. Naselje je datirano u 13. stoljeće.<sup>44</sup> U naselju na položaju Župna crkva u Đakovu istraženo je više poluukopanih objekata, a keramički su se ulomci nalazili i u zasipima grobova te u tzv. srednjovjekovnom humusnom sloju.<sup>45</sup> Većina poluukopanih kuća datirana je u 14. ili 15. stoljeće, osim kuće J-67 koja datira od 11./12. do sredine 13. stoljeća, a potom je vjerojatno opet obnovljena.<sup>46</sup> U tom su objektu uočena dva sloja pa tako iz onoga starijeg potječe lonac<sup>47</sup> koji se može usporediti oblikom ruba i tijela te ukrasom s nekim ulomcima iz starije faze ovoga naselja (primjerice u Sj 399). Više je ulomaka

on to appear all the way up to the 14<sup>th</sup> century, when they obtained a socket for hafting in place of a tang.<sup>40</sup> An arrow of the same type was also found at the site of Beketinci – Bentež.<sup>41</sup>

In the immediate vicinity of this settlement, numerous sites from the same mediaeval period, as well as earlier and later periods, were either investigated or merely registered.<sup>42</sup> The ceramic materials discovered during the excavation of this site fit the typical kitchen inventory of rural settlements in the High Middle Ages. The appearance and development of certain ornaments, shapes of vessel rims, pottery forms (e.g. lids) and similar topics pertaining to mediaeval pottery have been described in great detail elsewhere, therefore it is not necessary to repeat everything here.<sup>43</sup> Analogies with neighbouring sites in the Đakovo area and Vinkovci, in addition to the radiocarbon dating, provide the foundation for placing the village within a certain time frame. The geographically closest settlement located in Josipovac Punitovački at the site of Veliko Polje I has already been mentioned, and quite a few similarities in the ceramic materials can be noted. The settlement is dated to the 13<sup>th</sup> century.<sup>44</sup> In the settlement at the site of Parish Church in Đakovo, several semi-sunken structures have been investigated, and pottery sherds were also found in the fills of the graves and the so-called mediaeval humus layer.<sup>45</sup> The majority of the semi-sunken houses are dated to the 14<sup>th</sup> or 15<sup>th</sup> century, with the exception of house J-67, which is dated between the 11<sup>th</sup>/12<sup>th</sup> century and the 13<sup>th</sup> century, after which it was most likely renovated once again.<sup>46</sup> Two strata were recorded for this feature, where a pot was found that dates from the older one,<sup>47</sup> and whose shape of rim and body and ornamenta-

<sup>40</sup> Ruttkay 1976, 327, sl. 54, 328; Medvedev 1966, 72, 73.

<sup>41</sup> Ta je strelica pronađena izvan konteksta, odnosno u sjevernom dijelu lokaliteta gdje je bilo smješteno prapovijesno naselje, pa se može, ali i ne mora, dovesti u izravnu vezu s ovdašnjim ranosrednjovjekovnim ili onim većim kasnosrednjovjekovnim naseljem. Minichreiter, Marković 2013, 348, 349, T. 67: 10.

<sup>42</sup> Bunčić 2012, 194.

<sup>43</sup> Takács 1996; Sekelj Ivančan 2001; 2001a; 2005.

<sup>44</sup> Janeš 2009.

<sup>45</sup> Filipec 2012, 158-208.

<sup>46</sup> Filipec 2012, 205, 206.

<sup>47</sup> Filipec 2012, 171, 173, Sl. 67: 1.

<sup>40</sup> Ruttkay 1976, 327, sl. 54, 328; Medvedev 1966, 72, 73.

<sup>41</sup> This arrow was found outside the context, i.e. in the northern part of the site where a prehistoric settlement was located, and therefore it may be directly related to the Early Mediaeval settlement at the same location or the later Late Mediaeval one, but not necessarily so. Minichreiter, Marković 2013, 348, 349, Pl. 67: 10.

<sup>42</sup> Bunčić 2012, 194.

<sup>43</sup> Takács 1996; Sekelj Ivančan 2001; 2001a; 2005.

<sup>44</sup> Janeš 2009.

<sup>45</sup> Filipec 2012, 158-208.

<sup>46</sup> Filipec 2012, 205, 206.

<sup>47</sup> Filipec 2012, 171, 173, Fig 67:1

iz mlađe faze<sup>48</sup> koji su također usporedivi s mlađom fazom ovoga naselja. Osim keramičkih ulomaka, drugi su nalazi, koji ukazuju na istovremenost đakovačkog objekta i naselja na položaju Stara Vodenica, keramički grijači<sup>49</sup> i dva željezna noža.<sup>50</sup> Ivandvor – šuma Gaj još je jedno naselje u okolini koje egzistira i u razvijenom srednjem vijeku, a uočljive su mnoge podudarnosti u oblikovanju i ukrašavanju keramičkih posuda.<sup>51</sup> S lokaliteta Borinci kod Vinkovaca potječe manji uzorak keramičkog materijala iz istovremenog naselja (12. i 13. stoljeće) u kojemu se, uz određene sličnosti u oblikovanju posuda i njihovih rubova, ipak uočava i razlika u ukrašavanju. Na Borincima, primjerice, nema ulomaka ukrašenih utiskivanjem kotačića, a također je primjetno da se preferira ukrašavanje većih površina, odnosno češljastih motiva.<sup>52</sup> Veliki korpus keramike ranog i razvijenoga srednjeg vijeka s područja međurječja Save i Drave objavljen je u monografiji T. Sekelj Ivančan, gdje je upravo najviše analogija moguće naći s ovdje predstavljenom građom.<sup>53</sup> Na osnovu keramičkih nalaza iz zapadnih dijelova Mađarske (Transdanubija), ovi se nalazi mogu usporediti sa srednjim horizontom Arpadovskog doba, odnosno razdobljem od 12. do početka 13. stoljeća.<sup>54</sup> To se odnosi na glavne karakteristike keramike, kao što su oblici lonaca i njihove jednostavne profilacije rubova<sup>55</sup> i ukrašavanje jednostavnim valovnicama ili vodoravnim linijama, ali i kotačićem (dakle, horizont gdje se već rijetko pojavljuju snopovi valovnica ili vodoravnih linija karakteristični za ranije horizonte, a još ne dolazi do reduciranja ukrasa i stan-

tion can be compared with certain sherds from the earlier phase of this settlement (for example in Sj 399). There are several sherds from the later phase<sup>48</sup> that are also comparable to the later phase of this settlement. Besides pottery sherds, other findings that also indicate the contemporaneity of the Đakovo object and the settlement on the site of Stara Vodenica are ceramic heaters<sup>49</sup> and two iron knives.<sup>50</sup> Ivandvor – šuma Gaj is another settlement in the vicinity that also exists in the High Middle Ages, and many similarities can be noted in the shape and ornamentation of pottery.<sup>51</sup> A smaller sample of ceramic material from a contemporaneous settlement (12<sup>th</sup> and 13<sup>th</sup> century) was found at the site of Borinci near Vinkovci and in which, alongside certain similarities in the shaping of vessels and their rims, differences in ornamentation can also be noted. At Borinci, for example, there are no sherds with wheel-made ornamentation, and it can also be noted that the ornamentation of larger surfaces is preferred, i.e. comb-shaped motifs.<sup>52</sup> The large body of pottery from the Early and High Middle Ages from the area between the rivers Sava and Drava has been published in the monograph of T. Sekelj Ivančan, and it is the materials that are presented here that are the most analogous to them.<sup>53</sup> Based on the pottery analyses from the western part of Hungary (Transdanubia), these findings can be compared with the middle period of the Arpad era, i.e. the period between the 12<sup>th</sup> and early 13<sup>th</sup> century.<sup>54</sup> This refers to the main features of the pottery, such as the shapes of pots and their simple rim profiles<sup>55</sup> and ornamentation with simple wavy lines or horizontal lines, and also with wheel-made ornaments (therefore, the horizon where groups of wavy lines or

<sup>48</sup> Filipec 2012, 174, Sl. 68: 1, 2; 175, Sl. 69: 4, 5; 176, Sl. 70: 2.

<sup>49</sup> Već je spomenuto da je unutar naselja Stara Vodenica pronađena iznimna količina te im je posvećen poseban rad, a autorica koristi termin projektili (Bunčić 2012).

<sup>50</sup> Filipec 2012, 171, 178, Sl. 72.

<sup>51</sup> Balen 2009, 70, T. 9, 71, T. 10, 1-4.

<sup>52</sup> Filipec 2010, 270, 271, T. I-III.

<sup>53</sup> Sekelj Ivančan 2001, 96-97 s referencama na katalog.

<sup>54</sup> Takács 1996, 143, 189.

<sup>55</sup> Takács 1996, 151, 152, Abb.5: 8-10, 154, Abb.7: 4, 7; 155, Abb.8: 1,2 – tip 1, 151, 157, 158.

<sup>48</sup> Filipec 2012, 174, Fig. 68: 1, 2; 175, Fig. 69: 4, 5; 176, Fig. 70: 2.

<sup>49</sup> It has been noted that, within the village of Stara Vodenica, an exceptional quantity of materials was found on the topic of which the author has written a separate paper, and there the author uses the term projectiles (Bunčić 2012).

<sup>50</sup> Filipec 2012, 171, 178, Fig. 72.

<sup>51</sup> Balen 2009, 70, Pl. 9, 71, Pl. 10, 1-4.

<sup>52</sup> Filipec 2010, 270, 271, Pl. I-III.

<sup>53</sup> Sekelj Ivančan 2001, 96-97 with references to the catalogue.

<sup>54</sup> Takács 1996, 143, 189.

<sup>55</sup> Takács 1996, 151, 152, Abb.5: 8-10, 154, Abb.7: 4, 7; 155, Abb.8: 1,2 – type 1, 151, 157, 158.

dardizacije, kao posljedice masovne proizvodnje od 13. stoljeća nadalje).<sup>56</sup>

Apsolutni su datumi dali širok raspon od 10. do druge polovine 13. stoljeća (tab.1).<sup>57</sup> S obzirom na to da neki datumi pokazuju 10. i 11. stoljeće, svakako je moguće korištenje ili formiranje ovoga naselja već u 11. stoljeću, dok za 10. stoljeće na osnovu pokretne građe nema valjanih argumenata. Oblici su, vidjelo se već, vrlo jednostavni, a njihovom usporedbom iz jama, koje imaju drugačije datume, uočljivo je da se određene forme dugo zadržavaju i da nisu toliko kronološki osjetljive. Keramika je prilično jednoobrazna pa jedino razlika u fakturi, koja se osjeća kod Sj 225 i 229, i postupna promjena u odnosu zastupljenosti ukrasa jasnije ukazuju na mlađu fazu 13. stoljeća. Iako ta dva objekta imaju manji uzorak keramike nego oni iz starije faze, uočljivo je da je valovnica kao ukras napuštena i da prevladava ukrašavanje urezanim vodoravnom linijom te kotačićem. U konačnici, na temelju iznesenih sličnosti sa susjednim lokalitetima i karakteristikama keramike razvijenoga srednjeg vijeka u Mađarskoj, određenih specifičnosti unutar objekata na samome nalazištu te apsolutnih datuma iz pojedinih stratigrafskih jedinica, datume koji pokazuju 10. stoljeće, ali i 11. trebalo bi odbaciti te prihvatiti one od 12. i 13. stoljeća i tako datirati naselje (12. i početak, tj. prva polovina 13. stoljeća), u kojemu je primjetna jasna distinkcija između starije i mlađe faze.

<sup>56</sup> Takács 1996, 158, 159.

<sup>57</sup> Serije datuma nisu rađene po obradi materijala, već neposredno nakon istraživanja pa tako, primjerice, dva objekta iz kojega su uzeti uzorci, nažalost, nemaju nikakvih nalaza, a njihovi su datumi upravo omogućili najuže datiranje unutar stotinjak godina, i to vrlo rani datum 10. i prva polovina 11. stoljeća te druga polovina 12. do druge polovine 13. stoljeća (tab. 2).

horizontal lines typical of earlier horizons start appearing infrequently, without the reduction of ornamentation and standardisation that was a consequence of mass production from the 13<sup>th</sup> century onwards).<sup>56</sup>

The absolute dates yielded a wide time frame between the 10<sup>th</sup> century and the second half of the 13<sup>th</sup> century (Table 1).<sup>57</sup> As certain dates indicate the 10<sup>th</sup> and 11<sup>th</sup> century, the use or formation of this settlement in the 11<sup>th</sup> century is certainly possible, while there are no valid arguments for dating it to the 10<sup>th</sup> century on the basis of the mobile finds. The forms are, as we have seen, very simple, and by comparing them to the pits, which are of a different date, it is evident that certain forms persist for a longer period of time and are not that chronologically sensitive. The pottery is quite uniform, therefore the only difference can be noted in the fabric, as can be seen in Sj 225 and 229, and in the gradual changes in the representation of ornaments, which clearly point towards the later phase of the 13<sup>th</sup> century. Although these two objects feature less pottery samples than those of the earlier phase, it is evident that the wavy line has been abandoned as a form of ornamentation, and that ornamentation with engraved horizontal lines and wheel-made ornaments dominates. Finally, on the basis of the similarities with the neighbouring sites and characteristics of the High Middle Ages in Hungary that have been presented, certain specific features within the objects on the site itself and the absolute dates from certain stratigraphic units, the dates that point towards both the 10<sup>th</sup> and 11<sup>th</sup> ought to be rejected, and those from the 12<sup>th</sup> and 13<sup>th</sup> century should be adopted, meaning that the village should thus be dated (to the 12<sup>th</sup> century and the beginning, i.e. first half of the 13<sup>th</sup> century) where there is a clear distinction between the earlier and later phase.

<sup>56</sup> Takács 1996, 158, 159.

<sup>57</sup> The series of dates were not created according to the processing of the materials, but immediately upon research. Therefore, no finds were, unfortunately, discovered in the two objects from which samples were taken, while their dates allowed for their dating to a period of about a hundred years – to the very early date of the 10<sup>th</sup> century and first half of the 11<sup>th</sup> century, and between the second half of the 12<sup>th</sup> century and the second half of the 13<sup>th</sup> century. (Plate 2).



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STRATIGRAFSKA JEDINICA STRATIGRAPHIC UNIT	LABORATORIJSKI BROJ/UZORKA SAMPLE NUMBER	$\delta^{13}C$	RADIOKARBONSKI DATUM CONVENTIONAL RADIOCARBON DATE	KALIBRIRANI DATUM 2 SIGMA CALIBRATION (95% VJEROJATNOSTI / PROBABILITY)	KALIBRIRANI DATUM 1 SIGMA CALIBRATION (68% VJEROJATNOSTI / PROBABILITY)	NALAZI FINDS
SJ / SU 149	Beta - 246769 (ugljen / charred material)	-25.4	860 +/- 40 BP	Cal AD 1040 to 1100 Cal AD 1120 to 1260	Cal AD 1160 to 1220	Pl. 4
SJ / SU 184	Beta - 246770 (ugljen / charred material)	-25.2	790 +/- 40 BP	Cal AD 1170 to 1280	Cal AD 1220 to 1270	/
SJ / SU 241	Beta - 246774 (kost / bone)	-20.9	960 +/- 40 BP	Cal AD 1010 to 1170	Cal AD 1020 to 1060 Cal AD 1080 to 1150	Pl. 5
SJ / SU 253	Beta - 246775 (ugljen / charred material)	-25.8	1040 +/- 40 BP	Cal AD 900 to 920 Cal AD 950 to 1040	Cal AD 980 to 1020	/
SJ / SU 399	Beta - 246780 (ugljen / charred material)	-25.2	1030 +/- 40 BP	Cal AD 900 to 920 Cal AD 960 to 1040	Cal AD 980 to 1030	Pl. 1-4
SJ / SU 399	Beta - 246779 (kost / bone)	-19.2	880 +/- 40 BP	Cal AD 1040 to 1240	Cal AD 1060 to 1080 Cal AD 1150 to 1210	Pl. 1-4

Tablica / Table 2: Apsolutni datumi dobiveni AMS metodom / Absolute dates obtained with the AMS method (Beta Analytic / Miami, FL, USA)

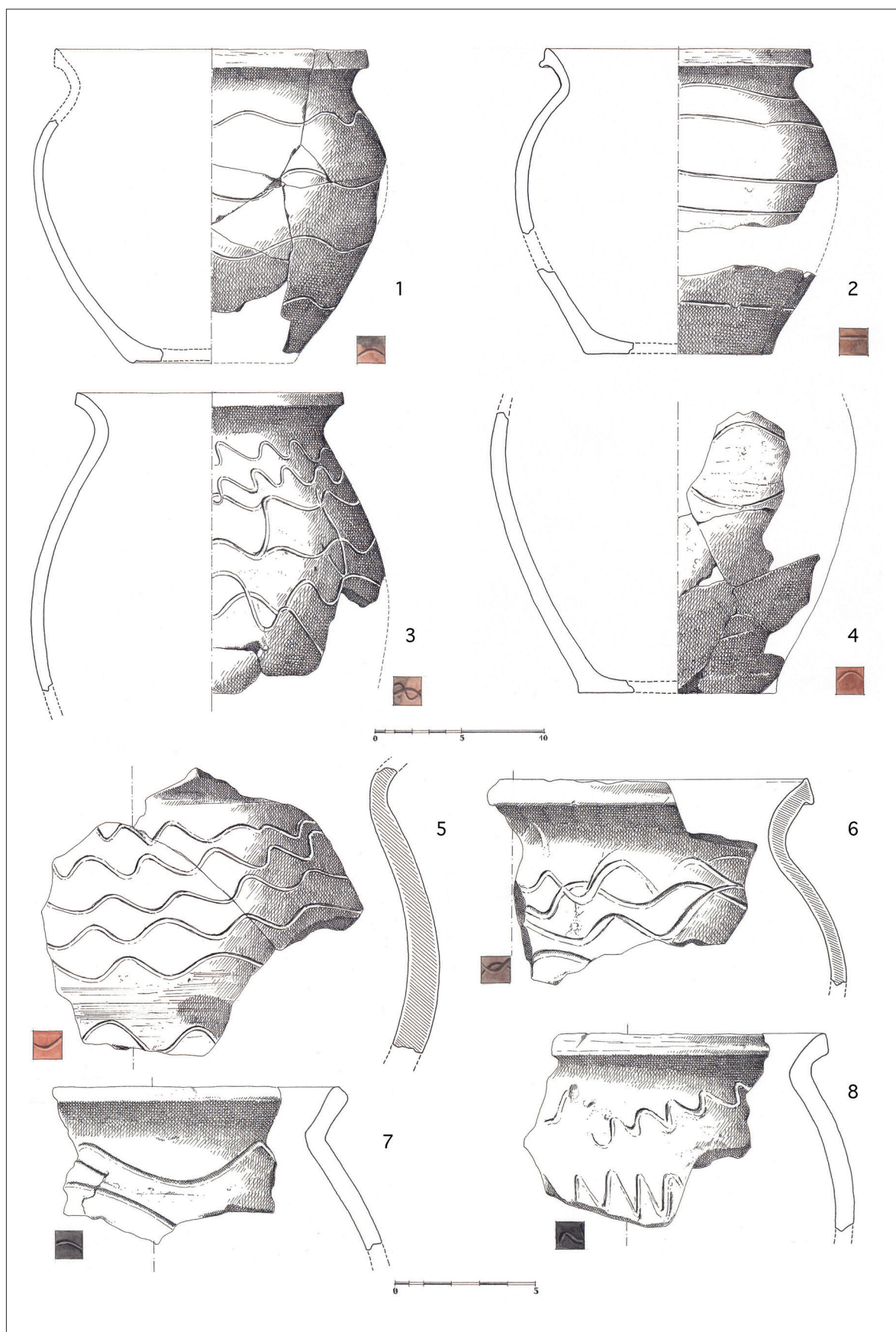


Tabla / Plate 1: 1-8 Sj 399





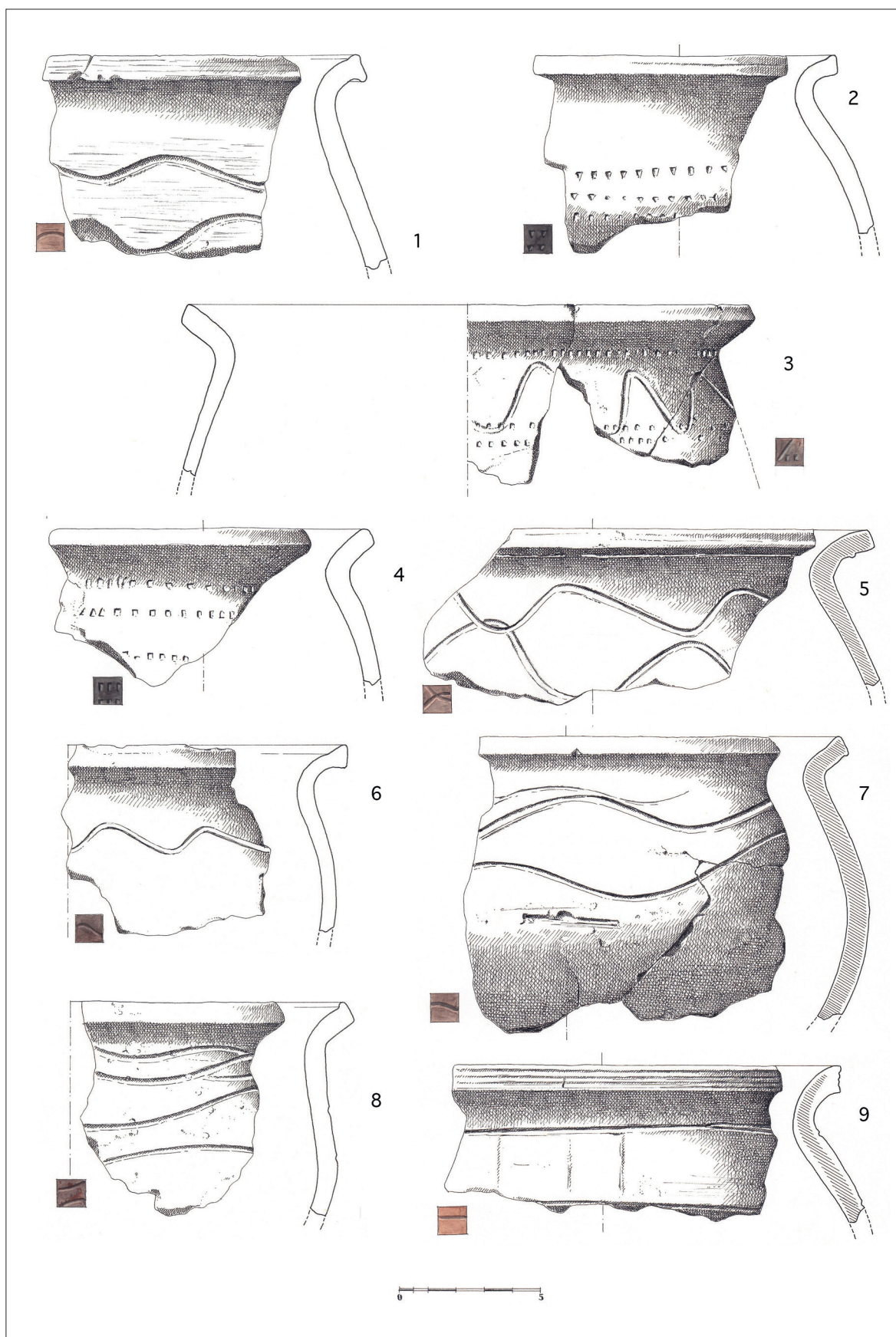


Tabla / Plate 2: 1-9 Sj 399





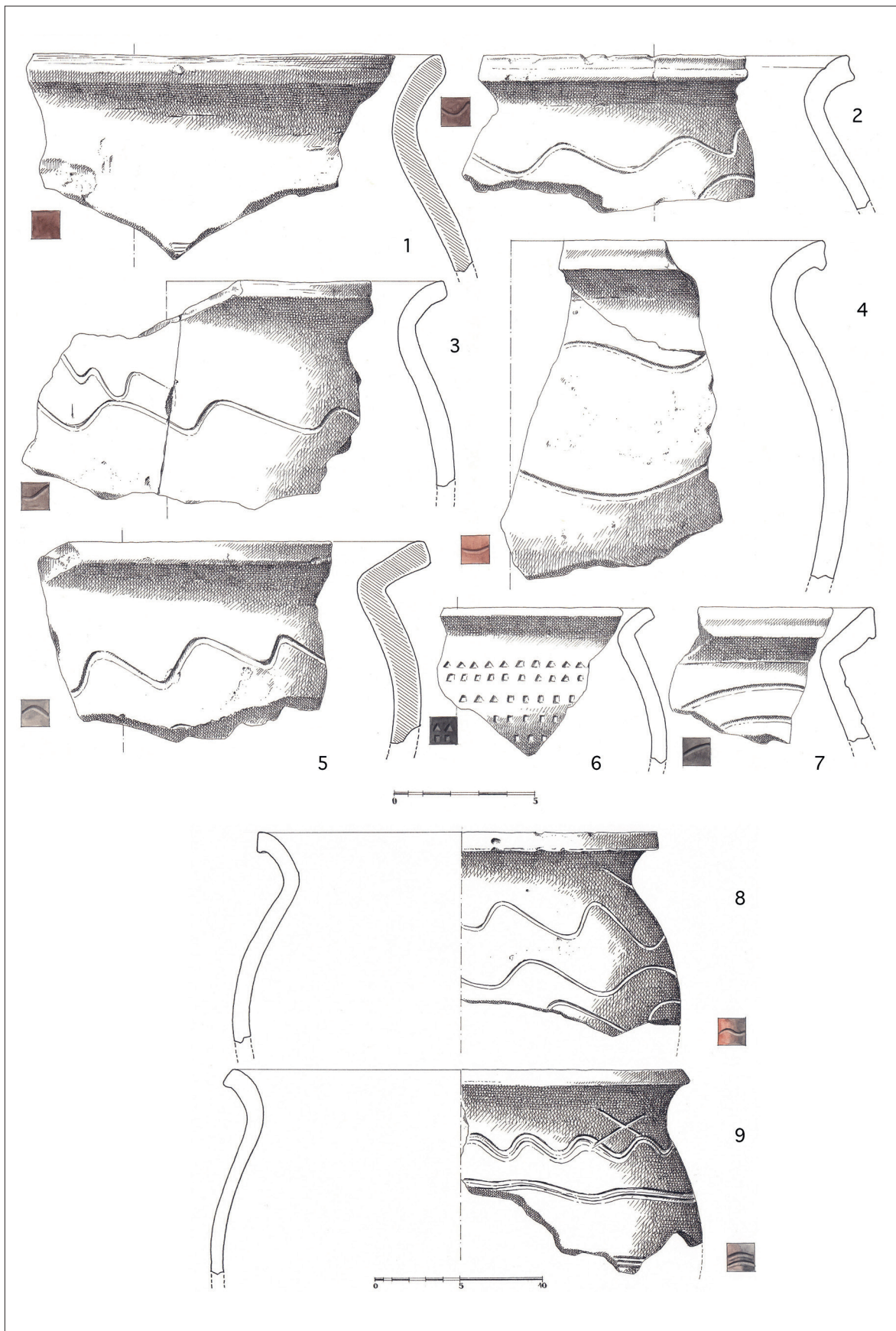


Tabla / Plate 3: 1-9 Sj 399

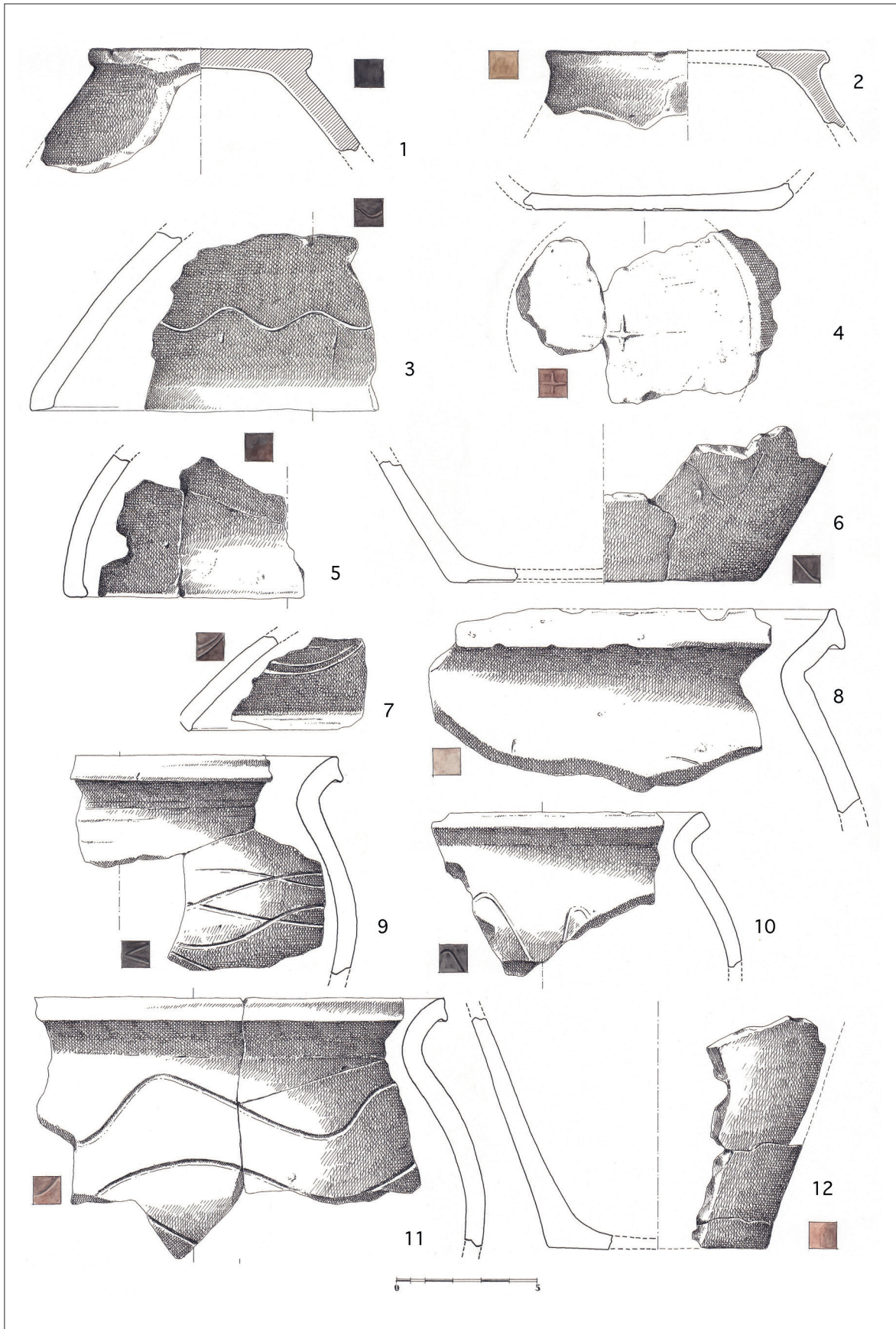


Tabla / Plate 4: 1-4, 6 Sj 399; 5, 7-12 Sj 149



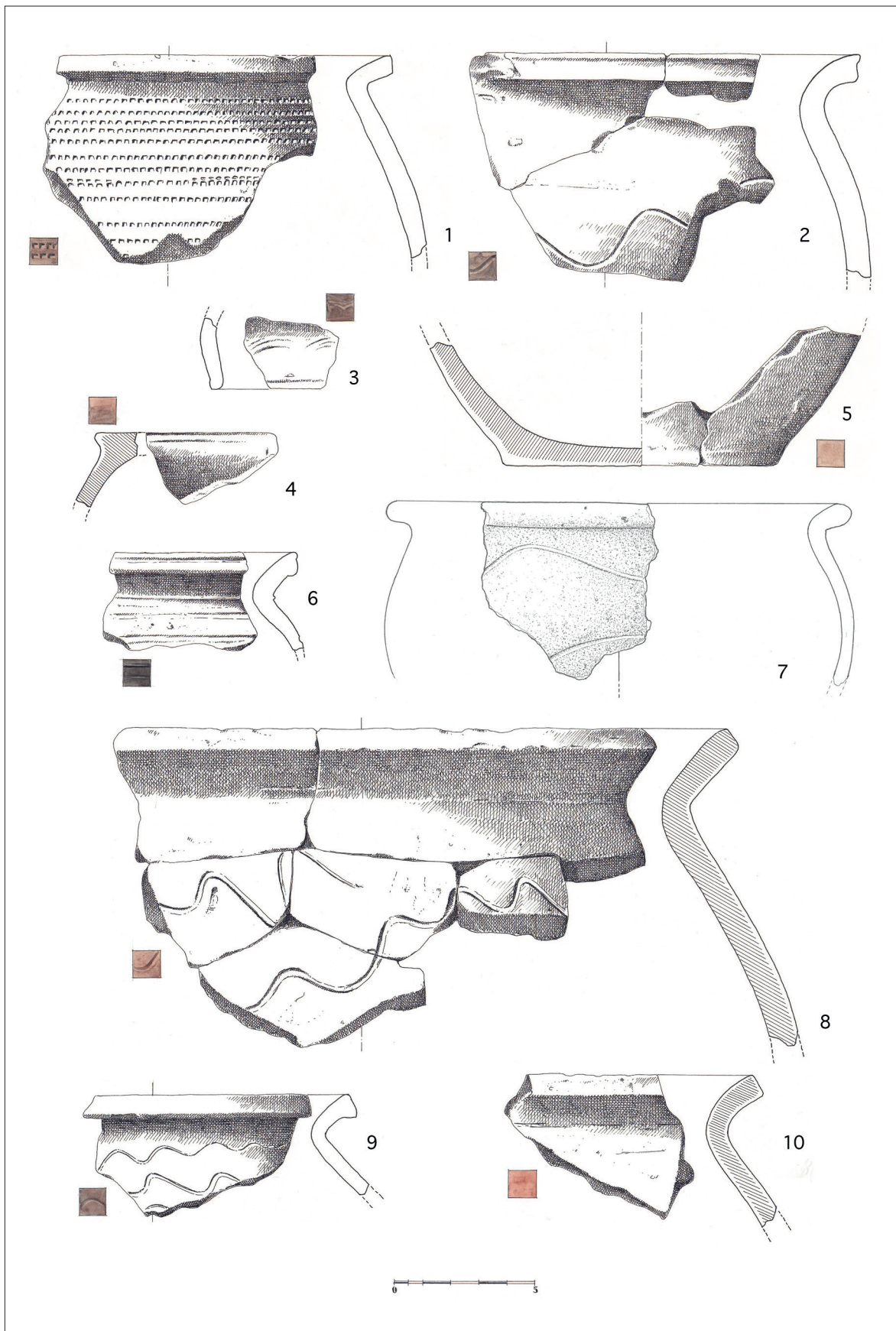


Tabla / Plate 5: 1-7 Sj 241; 8-10 Sj 249

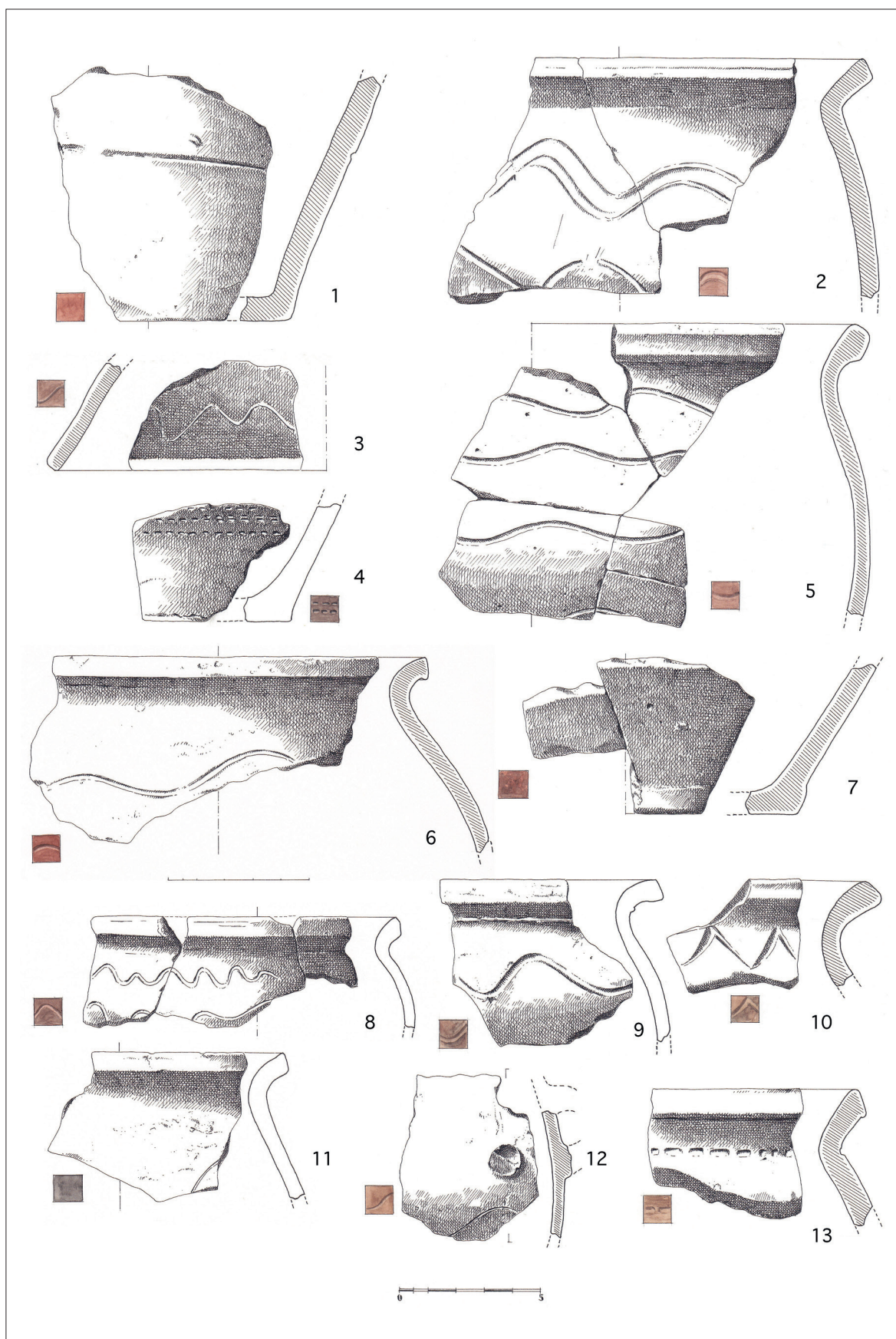


Tabla / Plate 6: 1-5, 7 Sj 249; 6, 8, 11 Sj 267; 9, 10, 12, 13 Sj 239





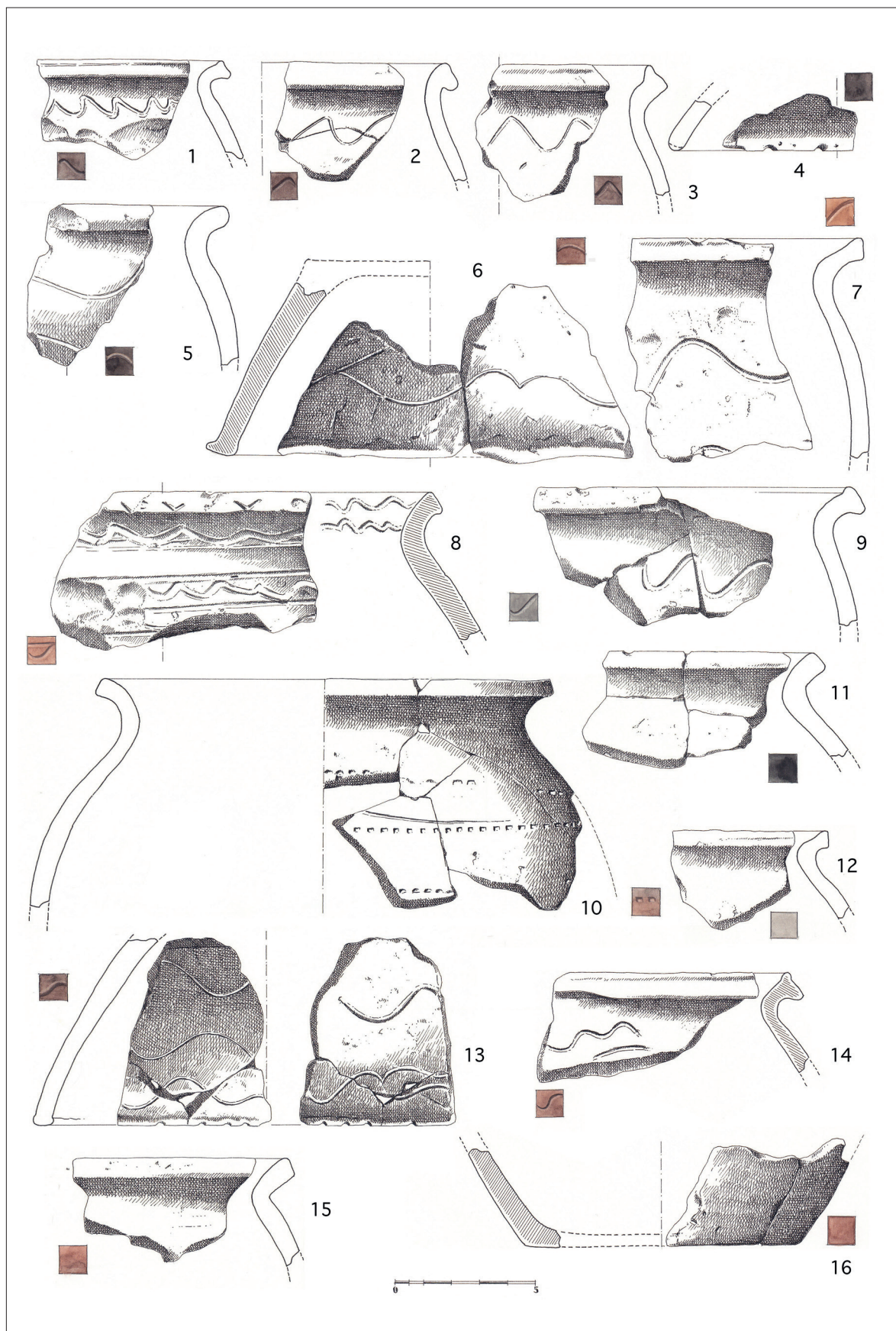


Tabla / Plate 7: 1 Sj 3; 2-4 Sj 123; 5-7 Sj 188; 8, 9, 11 Sj 211; 10, 12-16 Sj 213

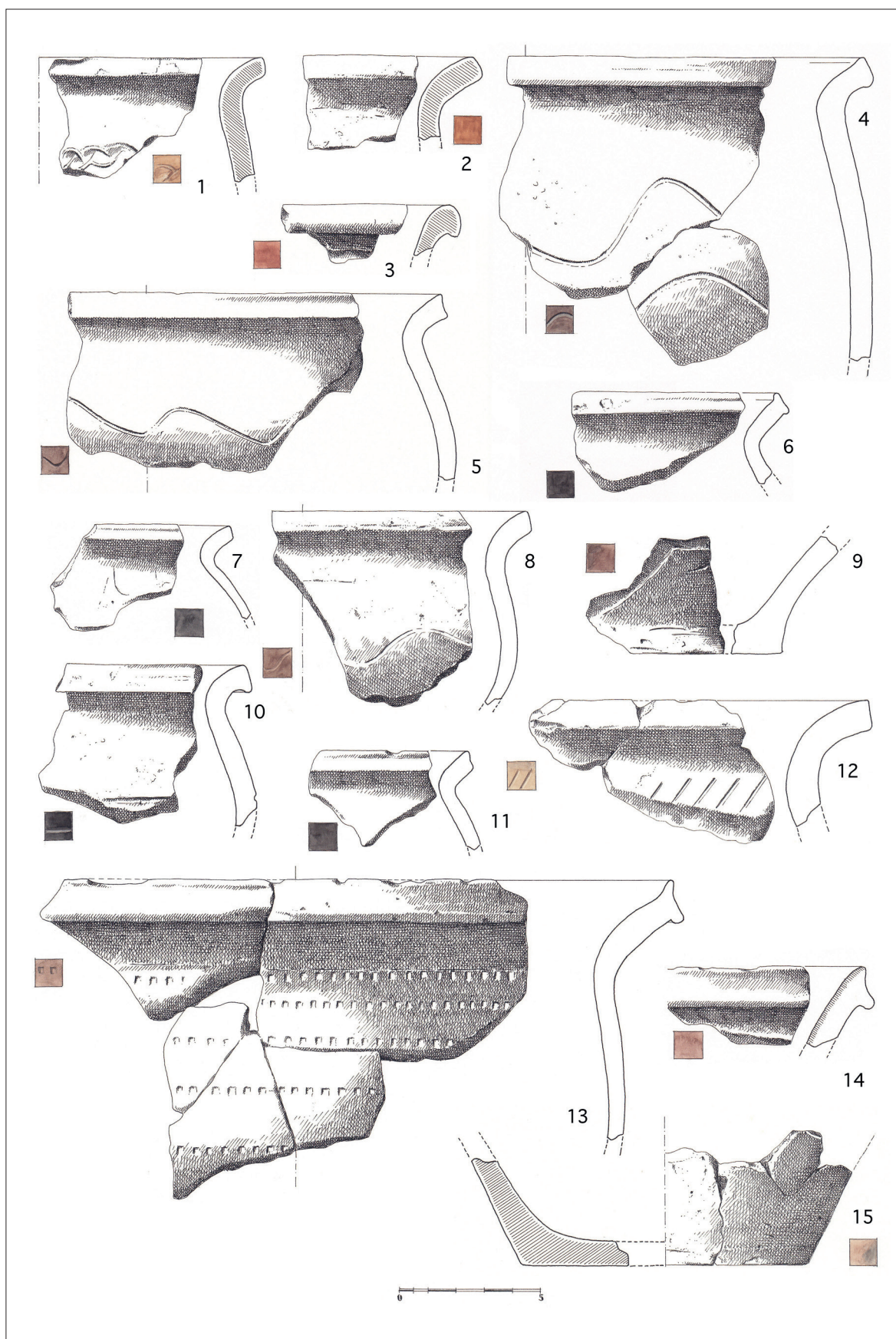


Tabla / Plate 8: 1 Sj 243; 2 Sj 245; 3,4 Sj 285; 5,6 Sj 293; 7 Sj 349; 9-11 Sj 353; 8 Sj 369; 12 Sj 487; 13 Sj 169; 14 Sj 73; 15 Sj 407





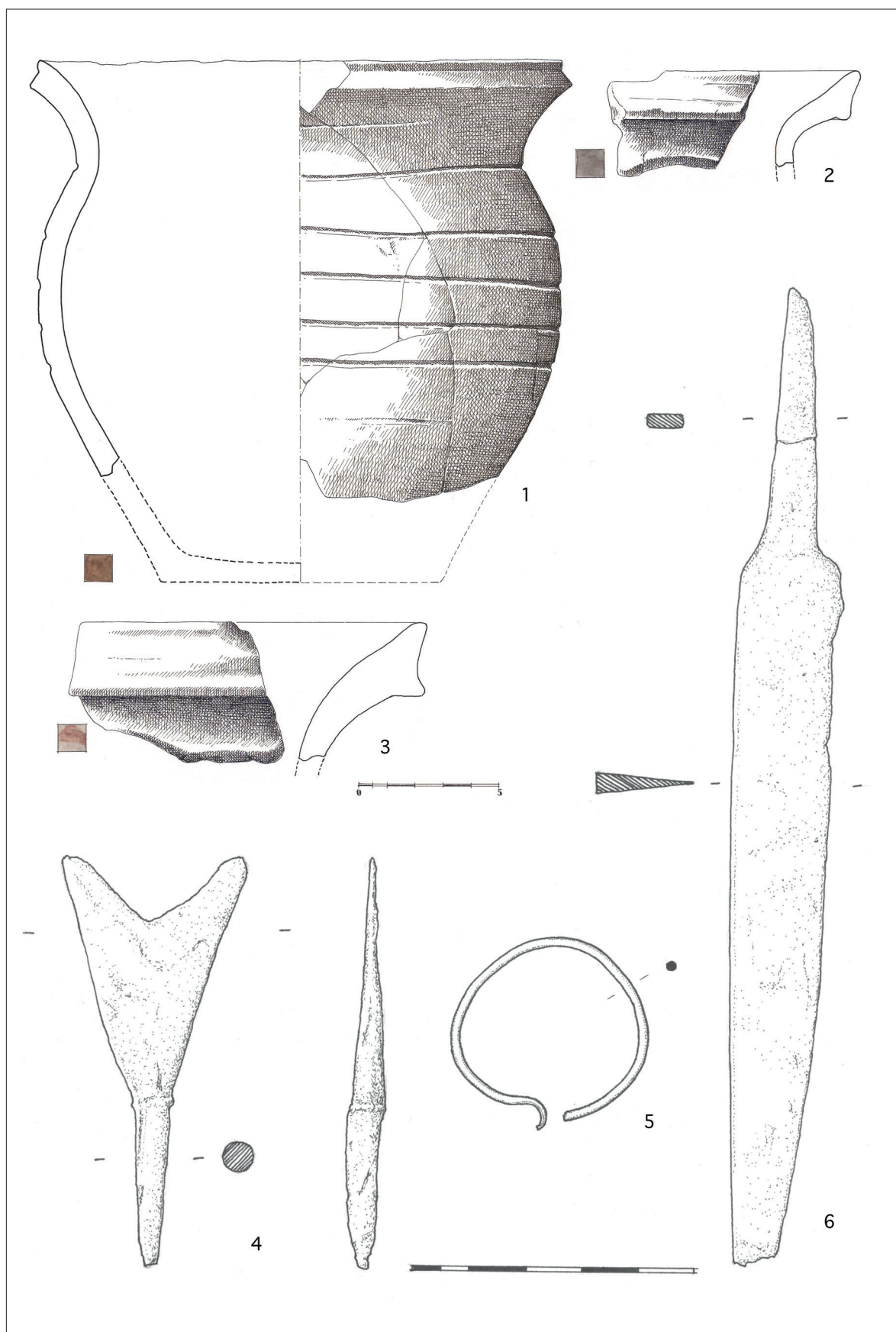


Tabla / Plate 9: 1-9 Sj 225



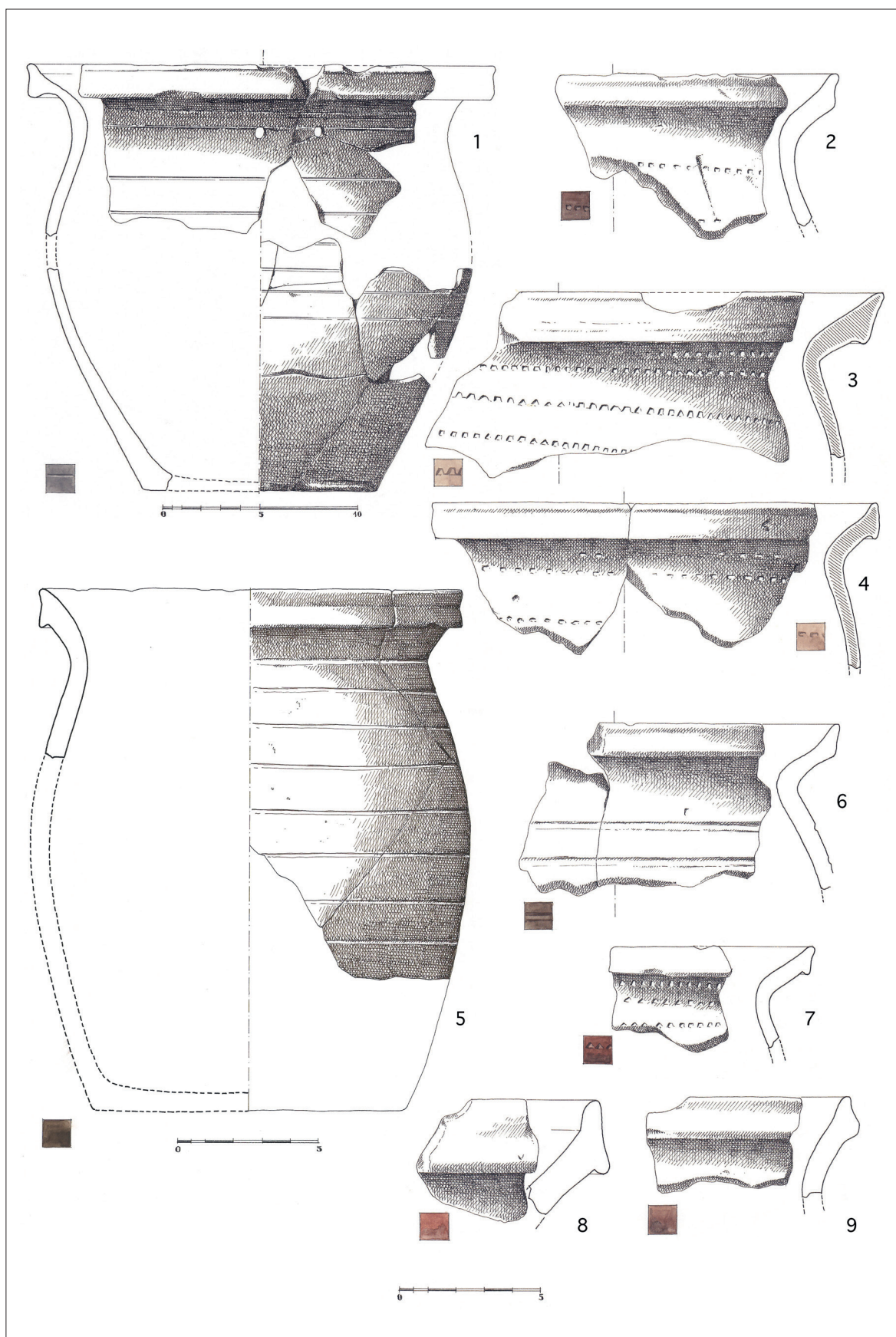


Tabla / Plate 10: 1 Sj 225; 2-3 Sj 229; 4 Sj 239; 5 Sj 243; 6 Sj 249





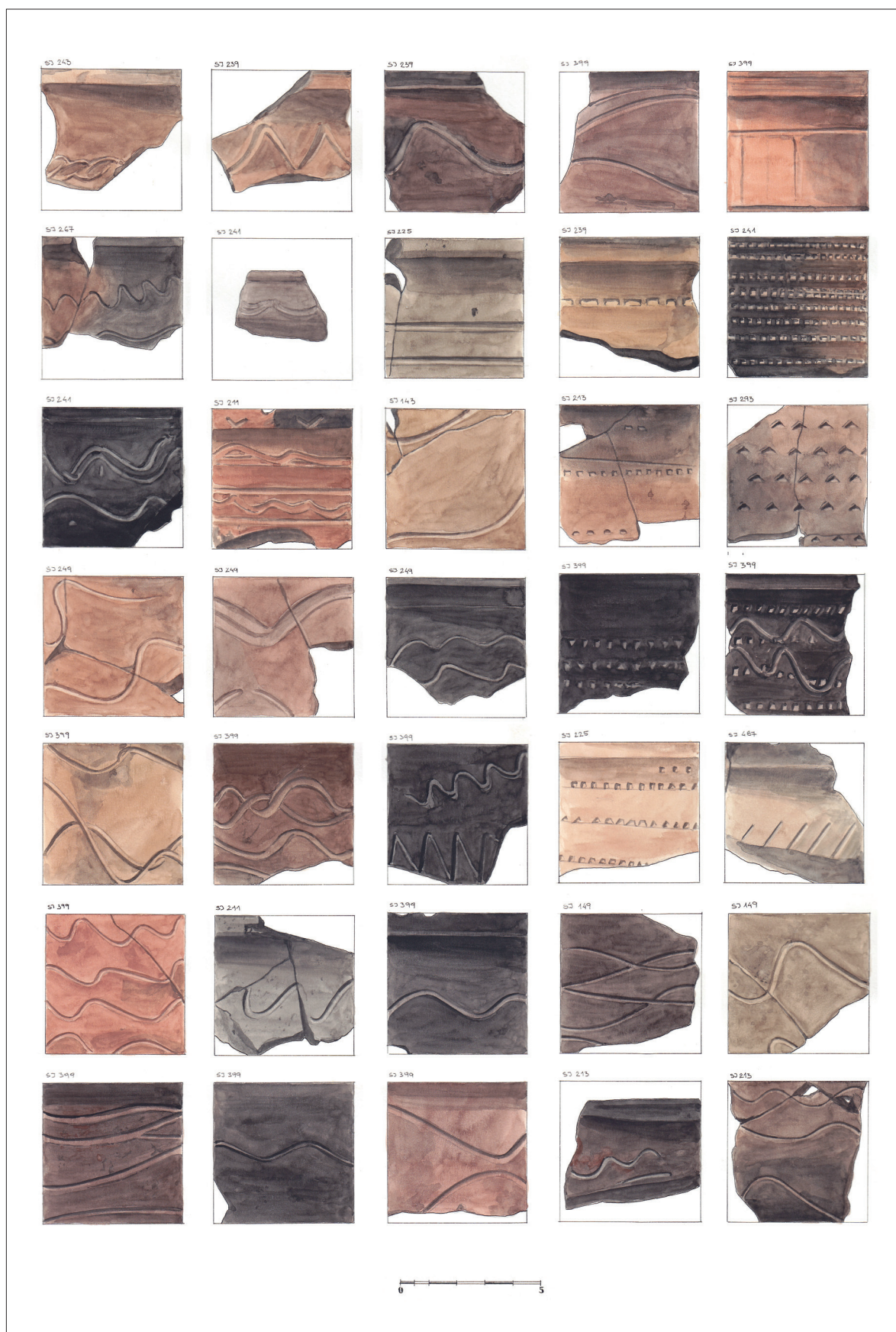


Tabla / Plate 11: Uzorci ukrasa na keramici / Ornamentation patterns on the pottery



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# Digitalizacija arheološke terenske dokumentacije Arheološkog muzeja u Zagrebu\*

## Digitalisation of the archaeological field documentation of the Archaeological Museum in Zagreb\*

UDK / UDC: 004:902(497.5)

Stručni rad / Professional paper

*Rezultat arheoloških istraživanja obično su velike količine tekstualne, fotografske i nacrtna građa, koja sve donedavno nije imala digitalni oblik, a sadrži ključne podatke o položaju nalazišta i utvrđenim arheološkim tvorevinama te pokretnim arheološkim nalazima. Kako je riječ o građi visoko podložnoj degradaciji i propadanju, osiguranje zaštite arheološke terenske dokumentacije temeljni je zadatak svake ustanove nadležne za njezinu pohranu i arhiviranje. Dugoročno osiguranje takvih ciljeva pružaju postupci digitalizacije koji daju jamstvo da će arheološka terenska dokumentacija, kao značajni segment arheološke baštine, biti dugotrajno*

*Archaeological research most often results in large quantities of material in the form of text, photographs and drawings. These materials have, up to recently, not been available in digital form, and contain key information on the location of sites, determined archaeological constructions and mobile archaeological findings. As this kind of material is highly susceptible to degradation and ruin, ensuring the protection of archaeological field documentation should be the main goal of every institution that is in charge of its storage and archiving. Digitalisation procedures allow for the long-term achievement of such goals, as they provide the guarantee that archaeological field documentation, as an im-*

\* Rad je nastao iz pismenog rada napisanog pod mentorstvom dokumentaristice savjetnice Vesne Dakić Horvat u sklopu stručnog ispita za zvanje dokumentarista. U prikazanom je postupku korištena dokumentacija s arheoloških istraživanja na položaju Trošmarija – Goričak, koje je tijekom 1983. i 1984. godine provela Ružica Drechsler-Bižić (ATD-AMZ, 059\_TRS-GRC; vidi i Balen-Letunić 2000).

\* This work is based on a paper written under the mentorship of documentarian advisor Vesna Dakić Horvat as part of the professional examination for the profession of documentarian. The procedure used documentation from archaeological research on the site of Trošmarija – Goričak, which was conducted by Ružica Drechsler-Bižić (ATD-AMZ, 059\_TRS-GRC; see also Balen-Letunić 2000) in 1983 and 1984.

očuvana i dostupna. Istodobno omogućuju olakšan pristup digitaliziranom sadržaju, njegovo povezivanje s drugim vrstama digitalnih podataka i različite načine upotrebe u skladu s trenutnim mogućnostima te budućim razvojem znanosti i tehnologije.

S druge strane, pohrana značajnog dijela takvog materijala nije predviđena u sklopu standardnih muzejskih fondova i digitalnih arhiva, što predstavlja izrazitu prepreku njezinu dugoročnom očuvanju i dostupnosti stručnoj te znanstvenoj obradi. Stoga je namjena predloženog postupka oblikovati jasan model digitalizacije građe prikupljene terenskim istraživanjima i organizirati je u smislenu bazu podataka, odnosno digitalni arhiv oblikovan u skladu sa suvremenim razumijevanjem i arheološkog i digitalnog podatka.

Ključne riječi: *arheološka terenska dokumentacija, digitalizacija, evidentiranje, pohrana*

*portant segment of archaeological heritage, will remain preserved and available for a longer period of time. Likewise, it provides easier access to digitalised content, the possibility of connecting this content with other forms of digital information and the opportunity to utilise it in different manners, all in accordance with the current possibilities and the future development of science and technology.*

*However, the storage of the greater part of such materials is not provided for by standard museum holdings and digital archives, which represents a challenging obstacle to achieving its long-term preservation and accessibility to professional and scientific processing. Therefore the purpose of the proposed procedure is to create a clear model for the digitalisation of materials collected through field research and to organise it into a coherent database, i.e. a digital archive organised in accordance with contemporary approaches to archaeological and digital data.*

Keywords: *archaeological field documentation, digitalisation, filing, storage*

## UVOD

Terenska istraživanja predstavljaju specifičan vid arheološke djelatnosti koju Arheološki muzej u Zagrebu provodi od kraja 19. stoljeća do danas. Rezultat tih istraživanja obično su velike količine tekstualne, fotografske i nacrtne građe, koja sve donedavno nije imala digitalni oblik, a sadrži ključne podatke o položaju nalazišta i utvrđenim arheološkim tvorevinama te pokretnim arheološkim nalazima. Kako je riječ o građi visoko podložnoj degradaciji i propadanju, osiguranje zaštite arheološke terenske dokumentacije temeljni je zadatak svake ustanove nadležne za njezinu pohranu i arhiviranje. Pohrana značajnog dijela takvog materijala nije predviđena u sklopu standardnih muzejskih fondova i digitalnih arhiva, što predstavlja izrazitu prepreku njezinu dugoročnom očuvanju i dostupnosti stručnoj te znanstvenoj obradi.

## INTRODUCTION

Field research represents a specific form of archaeological activity that the Archaeological Museum in Zagreb has been conducting since the 19<sup>th</sup> century to present day. This research most often results in large quantities of material in the form of text, photographs and drawings. These materials have, up to recently, not been available in digital form, and contain key information on the location of sites, determined archaeological constructions and mobile archaeological findings. As this kind of material is highly susceptible to degradation and ruin, ensuring the protection of archaeological field documentation should be the main goal of every institution that is in charge of its storage and archiving. However, the storage of the greater part of such materials is not provided for by standard museum funds and digital archives, which represents a challenging obstacle to achieving its long-term preservation and accessibility to professional and scientific processing.



Kriteriji za odabir toga tipa građe za sustavnu digitalizaciju obuhvaćaju baštinsku vrijednost i jedinstvenost u tom obliku sačuvanog sadržaja, mogućnost njegova dugoročnog očuvanja, proširenje mogućih načina pristupanja i korištenja te povijesni značaj koji ima za Arheološki muzej u Zagrebu. Kako je riječ o kompleksnom postupku, koji obuhvaća ne samo različite vrste originalne građe već i različite formate digitalnih podataka, u radu je s jedne strane razmotrena problematika pretvaranja ove temeljne arheološke građe u primjeren digitalni oblik. S druge strane, razmotrene su mogućnosti njezina usklađivanja s osnovnim formama suvremenih arheoloških podataka, ali i načini usklađivanja njezine pohrane sa suvremenim sustavima arhiviranja digitalne dokumentacije.

#### ARHEOLOŠKA TERENSKA DOKUMENTACIJA: OBLIK I SADRŽAJ GRAĐE

Većina arheoloških podataka dobiva se terenskim radom koji uključuje opažanje, bilježenje, prikupljanje i pohranu različitih vrsta materijalnih ostataka pa je arheološka terenska dokumentacija sintagma koja označava sve djelatnosti namijenjene bilježenju podataka o situacijama koje su rezultat primjene arheoloških metoda terenskog istraživanja.<sup>1</sup> Arheološka se terenska dokumentacija, pa time i građa pohranjena u Arhivu Arheološkoga muzeja u Zagrebu, može podijeliti na tri osnovna dijela: fotografsku, mjernu i tekstualnu dokumentaciju. Fotografska dokumentacija obuhvaća fotografije snimljene tijekom istraživanja koje predstavljaju vizualni dokument o njegovu tijeku i rezultatima. Mjerna dokumentaciju podrazumijeva sve vrste karata, planova, pojedinačnih tlocrta i presjeka te skice nastale tijekom arheoloških istraživanja. Riječ je o građi koja sadrži mjerne podatke o prostornom smještaju, prostornim odnosima i dimenzijama po-

<sup>1</sup> Novaković *et al.* 2007, 4–6.

The criteria for selecting material for systematic digitalisation include the heritage value and uniqueness of the content preserved in this form, the possibility of its long-term preservation, expanding possible methods of access and use and the historical importance of this material for the Archaeological Museum in Zagreb. As this is a complex procedure that encompasses not only different types of original materials, but also different formats of digital information, this work shall examine the problem of transforming original materials into an appropriate digital form. Likewise, it shall examine the possibilities for harmonising these materials with the basic forms of modern archaeological data, together with methods of harmonising their storage with modern systems for archiving digital documentation.

#### ARCHAEOLOGICAL FIELD DOCUMENTATION: FORM AND CONTENT OF THE MATERIALS

A majority of archaeological information is obtained through field work that involves the observation, recording, collection and storage of different types of material remains, thus the syntagm of archaeological field documentation refers to all activities that aim to record information on situations that are the result of the application of archaeological methods of field research.<sup>1</sup> Archaeological field documentation, and thus also the materials stored in the Archives of the Archaeological Museum in Zagreb, can be divided into three categories: photographic, textual and measurement documentation. Photographic documentation encompasses photographs that were taken during research, which represent visual evidence on the course and results of research. Measurement documentation includes all types of maps, plans, layouts, cross-sections and drawings created during archaeological research. These materials contain measurement data on the position in space, spatial relations and dimensions of mobile and immobile archaeologi-

<sup>1</sup> Novaković *et al.* 2007, 4–6.

kretnih i nepokretnih arheoloških ostataka. Tekstualna dokumentacija može imati oblik terenskoga dnevnika koji često prate dodatne bilješke, a obuhvaća i različite popise i opise utvrđenih situacija, izvještaje te stručne i znanstvene objave rezultata istraživanja.

Kako je većinom riječ o dokumentaciji nastaloj tijekom arheoloških iskopavanja, važno je istaknuti da je svako iskopavanje neponovljiv i invazivan postupak kojim se arheološki ostaci zauvijek uklanjaju s mjesta izvorne depozicije pa dokumentacija, koja je pratila proces njihova premještanja, predstavlja jedini dokaz o situaciji koja je prethodila uklanjanju. Stoga terenska dokumentacija predstavlja osnovni preduvjet provedbi svih oblika analiza i interpretacija arheoloških nalazišta<sup>2</sup> te treba pružiti dobru osnovu za stručno i znanstveno proučavanje prošlosti pa time i za sve oblike javne prezentacije prikupljenih spoznaja.<sup>3</sup> Interpretacija, kao kreiranje konteksta muzejskih predmeta, osnovna je zadaća muzejskih ustanova i može biti utemeljena tek u odnosu na muzejsku dokumentaciju.<sup>4</sup> Kako je i baštinski i znanstvenu vrijednost arheološke muzejske građe moguće odrediti samo u kontekstualnom međuodnosu predmeta i podatka, vrijednost terenske dokumentacije istovjetna je vrijednosti predmeta koji se čuvaju u muzejskom fondusu. U tome kontekstu terenska dokumentacija pohranjena u muzeju daje temeljni poticaj arheološkim istraživačkim aktivnostima u sklopu muzeja, kao najznačajniji čimbenik širenja i povećanja znanja o muzejskim predmetima i njihovu primarnom kontekstu.<sup>5</sup> Dakle, arheološka terenska dokumentacija predstavlja značajni segment arheološke baštine, kao jedinstven zapis o prethodnom stanju istraženih arheoloških nalazišta ili njihovih dijelova te o kontekstualnom značenju muzejskih predmeta.

<sup>2</sup> Novaković *et al.* 2007, 85; Heinz 2014, 11; Richards 2014, 17; Green, Niven, Field 2016, 2.

<sup>3</sup> Novaković *et al.* 2007, 4.

<sup>4</sup> Šojat-Bikić 2013, 97–89.

<sup>5</sup> Dallas 2007, 59.

cal remains. Textual documentation can be in the form of a field journal that is often accompanied by additional notes, and it encompasses various lists and descriptions of determined situations, reports and professional and scientific publications of research results.

As this kind of documentation is largely created during archaeological excavations, it is important to stress that every excavation represents a singular and invasive procedure by which archaeological remains are permanently removed from their original location, thus the documentation that recorded the relocation of these materials represents the only evidence on the situation that preceded their removal. Therefore, field documentation is the fundamental prerequisite for the conduction of all forms of the analysis and interpretation of archaeological sites<sup>2</sup> and should provide a quality foundation for professional and scientific investigations of history, and thus also for all forms of the public presentation of the knowledge gathered in this manner.<sup>3</sup> Interpretation, in the sense of creating a context for museum objects, is the fundamental task of museum institutions – one that can be established only in relation to museum documentation.<sup>4</sup> As the heritage and museum value of archaeological museum materials can be determined only through the contextual interrelationship between objects and information, the value of field documentation is equal to the value of the objects that are part of the museum's holdings. In this context, the field documentation stored in the museum provides an impetus for archaeological research within the operation of the museum, and represents the most important factor in the expansion and deepening of knowledge on museum objects and their primary context.<sup>5</sup> Therefore, archaeological field documentation, as a unique record of the previous condition of researched archaeological sites (or parts thereof) and the contextual meaning of museum objects, represents an important segment of archaeological heritage.

<sup>2</sup> Novaković *et al.* 2007, 85; Heinz 2014, 11; Richards 2014, 17; Green, Niven, Field 2016, 2.

<sup>3</sup> Novaković *et al.* 2007, 4.

<sup>4</sup> Šojat-Bikić 2013, 97–89.

<sup>5</sup> Dallas 2007, 59.

## DIGITALIZACIJA: SMJERNICE I CILJEVI POSTUPKA

Digitalizacija obuhvaća transformaciju analognih materijala u digitalne formate pri čemu je zadani cilj očuvanje autentičnosti i integriteta originalne informacije.<sup>6</sup> Digitalizacija je sustav očuvanja, održavanja, upravljanja i na kraju dodavanja vrijednosti digitaliziranim podacima<sup>7</sup> stoga je temeljni preduvjet slobodnoj cirkulaciji podataka.<sup>8</sup> Istovremeno, mogućnost upravljanja, analiziranja, istraživanja, prijenosa i prezentacije relevantnih podataka, bez aktivne potrebe za korištenjem fizičkih originala, predstavlja jednu od najznačajnijih prednosti digitaliziranih sadržaja.<sup>9</sup> U skladu s „Nacionalnim programom digitalizacije arhivske, knjižnične i muzejske građe“,<sup>10</sup> takvi postupci pružaju jamstvo da će građa, koja u ovome slučaju predstavlja značajni segment arheološke baštine kao konteksta i time suštinu muzejskoga predmeta, biti trajno očuvana i dostupna. U pozadini toga postupka nalazi se i ideja nesmetanog pristupa velikim količinama sirovih podataka koji otvaraju mogućnost različitih načina upotrebe i time dovode do novih spoznaja.<sup>11</sup>

Ipak, važno je naglasiti da se čuvanje elektroničkih zapisa opisuje kao kontinuirana mogućnost pristupa, razumijevanja i korištenja zapisa raspoloživom ili dostupnom tehnologijom pa je elektronički zapis sačuvan sve dok je dostupan, razumljiv i pouzdan.<sup>12</sup> Stoga je cilj digitalnog očuvanja održavanje sposobnosti upotrebe i prezentacije kolekcija digitalnih podataka uz pomoć prikladne tehnološke i organizacijske infrastrukture pa zahtjevi digitalnog očuvanja uključuju osiguranje kontinuirane upotrebljivosti kolekcija digitalnih presli-

<sup>6</sup> Puglia 2000, 94; Youngs 2001, 4; Canadian Council of Archives 2002, 1.

<sup>7</sup> Dallas 2007, 50–51.

<sup>8</sup> Costa *et al.* 2013, 450.

<sup>9</sup> Simpson 1998, 1.

<sup>10</sup> Baričević *et al.* 2006.

<sup>11</sup> Costa *et al.* 2013, 450; vidi i Green, Niven, Field 2016.

<sup>12</sup> Ivanović 2010b, 103.

## DIGITALISATION: GUIDELINES AND AIMS OF THE PROCEDURE

Digitalisation involves the transformation of analogue material into digital formats, in which the aim is to preserve the authenticity and integrity of the original data.<sup>6</sup> Digitalisation is the system of preserving, maintaining and managing digital information, together with the final result of adding to its value.<sup>7</sup> Thus, it represents a fundamental prerequisite for the free circulation of information.<sup>8</sup> At the same time, the possibility of managing, analysing, researching, transferring and presenting relevant information without the active need for using originals in physical form represents one of the greatest advantages of digitalised content.<sup>9</sup> In accordance with the “National Programme for Digitalising Archive, Library and Museum Materials”,<sup>10</sup> such procedures provide the guarantee that the materials – which, in this case, represent an important segment of archaeological heritage as the context, and therefore the essence, of a museum object – will remain permanently preserved and accessible. The notion of unimpeded access to large quantities of raw data, which opens the door to a variety of new uses and, therefore, also to new knowledge, also underlies this procedure.<sup>11</sup>

However, it is important to stress that the storage of electronic records is described as a continuous means of accessing, understanding and using records via the technology available, thus electronic records can be considered preserved as long as they remain accessible, intelligible and reliable.<sup>12</sup> Thus the aim of digital preservation is to maintain the possibility of the utilisation and presentation of digital information through the application of appropriate technological and organisational infrastructures, which means that the prerequisites

<sup>6</sup> Puglia 2000, 94; Youngs 2001, 4; Canadian Council of Archives 2002, 1.

<sup>7</sup> Dallas 2007, 50–51.

<sup>8</sup> Costa *et al.* 2013, 450.

<sup>9</sup> Simpson 1998, 1.

<sup>10</sup> Baričević *et al.* 2006.

<sup>11</sup> Costa *et al.* 2013, 450; see also Green, Niven, Field 2016.

<sup>12</sup> Ivanović 2010b, 103.

ka i održavanje njezine sigurnosti.<sup>13</sup> Iz toga razloga, a u skladu s formatima preporučenim u okviru projekta „Hrvatska kulturna baština“<sup>14</sup> te na osnovi zadanih organizacijskih i tehničkih normi, temeljni zahtjev postupka predstavlja izrada kvalitetnoga digitalnog sadržaja kojim će dugoročno biti osigurana zaštita i iskoristivost terenske dokumentacije s arheoloških istraživanja. S jedne strane, cilj je takvog postupka omogućiti dugoročno očuvanje temeljne arheološke građe, a s druge, stvoriti platformu za evidentiranje i pohranu podataka prikupljenih arheološkim istraživanjima i time lako dostupan digitalni sadržaj koji olakšava upotrebu, analizu i obradu pohranjenih podataka. Namjena je predloženog postupka oblikovati jasan model digitalizacije građe prikupljene terenskim istraživanjima i organizirati je u smislenu bazu podataka, odnosno digitalni arhiv oblikovan u skladu sa suvremenim razumijevanjem i arheološkog i digitalnog podatka. Takva bi pohrana trebala osigurati dostupnost građe u čitljivom i razumljivom obliku, dok je krajnji cilj omogućiti unošenje, ne samo dokumentacije s davno provedenih istraživanja već oblikovati kvalitetan sustav pohrane, sposoban prihvatiti podatke s novih istraživanja koji izvorno dolaze u digitalnom obliku.

<sup>13</sup> Kenney, Rieger, Entlich 2003; Šojat-Bikić 2013, 119.

<sup>14</sup> Ministarstvo kulture RH 2007.

of digital preservation include ensuring the continuous usability of collections of digital copies and their safety.<sup>13</sup> Due to this reason, and in accordance with the formats recommended as part of the project “Croatian Cultural heritage”<sup>14</sup> and on the basis of the prescribed organisational and technical norms, the fundamental prerequisite for the procedure is to create quality digital content that will enable the long-term preservation and usability of field documentation collected through archaeological research. On one hand, this procedure aims to preserve essential archaeological materials for a longer period of time while, on the other, also creating a platform for recording and storing data collected through archaeological research and thus, in turn, creating easily accessible digital content that facilitates the use, analysis and processing of the stored information. The purpose of the proposed procedure is to create a clear model for the digitalisation of materials collected through field research and to organise it into a coherent database, i.e. a digital archive organised in accordance with contemporary approaches to archaeological and digital data. Such a manner of storage aims to store materials in an easily readable and understandable form, with the end goal of not only enabling the input of documentation from research conducted long ago, but also of creating a quality storage system that is able to receive the born-digital data incoming from new research projects.

<sup>13</sup> Kenney, Rieger, Entlich 2003; Šojat-Bikić 2013, 119.

<sup>14</sup> Ministarstvo kulture RH 2007.



## DIGITALIZACIJA ARHEOLOŠKE TERENSKE DOKUMENTACIJE ARHEOLOŠKOG MUZEJA U ZAGREBU

Uspješna realizacija svakog postupka digitalizacije ovisi o pripremi građe<sup>15</sup> pa je proces digitalizacije organiziran prema sistematizaciji građe u Arhivu Arheološkog muzeja u Zagrebu i provodi se ovisno o razini njezine obrađenosti. U skladu sa zadanim uvjetima, djelatna se digitalizacija trenutno provodi na građi Pretpovijesnoga arhiva i prikaz je postupka utemeljen na evidentiranju u njemu pohranjene građe.

Pravilno je planiranje preduvjet uspješnosti svakog postupka digitalizacije pa je pri planiranju nužno utvrditi svrhu i utemeljenost izrade digitalnih preslika te prioritete i odgovarajuću tehniku.<sup>16</sup> Stoga se ključ uspješnih postupaka digitalne konverzije nalazi u međudnosu triju koncepata: svrsi kojoj će digitalni produkt služiti, karakteristikama izvorne građe i tehnološkoj infrastrukturi.<sup>17</sup> Uz to, svi postupci digitalizacije zahtijevaju i unaprijed razvijen tijek rada (engl. *workflow*) koji obuhvaća sve segmente izrade, evidentiranja i pohrane digitalnih preslika. Kako integritet sustava ovisi o skupu pravila koji određuje načine izvođenja pojedinih segmenata postupka,<sup>18</sup> postupak je podijeljen u tri osnovna segmenta koji obuhvaćaju stvaranje, evidentiranje i pohranu preslika.

Istovremeno, svi podaci, kako bi dugoročno ostali razumljivi, zahtijevaju neki oblik prateće dokumentacije pa definiranje standarda za bilježenje metapodataka predstavlja značajnu problematiku svih postupaka digitalizacije.<sup>19</sup> Naime, pripisane kontekstualne informacije o sustavu pohrane i pohranjenim podacima preduvjet su dugoročnom očuvanju korisnosti dokumentacije stoga je za svaki postupak digitalizacije potrebno razviti i dosljedno primjenjivati

<sup>15</sup> vidi Stančić 2009, 15–32.

<sup>16</sup> Baričević 2010, 196.

<sup>17</sup> Conway 2000, 15.

<sup>18</sup> Ivanović 2010, 57.

<sup>19</sup> Richard 2014, 18–19; vidi i Stančić 2009, 72–74.

## DIGITALISATION OF THE ARCHAEOLOGICAL FIELD DOCUMENTATION OF THE ARCHAEOLOGICAL MUSEUM IN ZAGREB

The successful execution of every digitalisation procedure depends on the preparation of the material,<sup>15</sup> thus the process of digitalisation is organised in accordance with the systematisation of the materials in the Archives of the Archaeological Museum in Zagreb and is conducted in accordance with the degree of processing. In line with the prescribed conditions, active digitalisation is currently conducted for the materials of the Prehistoric Archives and represents a procedure based on the filing of the materials stored within it.

Good planning is the prerequisite for the success of every digitalisation procedure; thus, while planning, it is necessary to determine the purpose and justifiability of creating digital copies, to set priorities and to determine the appropriate technique.<sup>16</sup> Therefore, the key to successful conversion procedures can be traced to the interrelationships between three concepts: the purpose that the digital product will serve, the characteristics of the original materials and the technological infrastructure.<sup>17</sup> In addition, all digitalisation procedures demand a workflow that is determined in advance and encompasses all the segments of the creation, filing and storage of digital copies. As the integrity of the system depends on the set of rules that defines the manner of execution of certain segments of the procedure,<sup>18</sup> the procedure is divided into three basic segments that include the creation, filing and storage of copies.

At the same time, all information requires some form of accompanying documentation in order to ensure its long-term intelligibility, thus defining standards for recording metadata represents an important issue in all digitalisation procedures.<sup>19</sup> The ascribed contextual information on the storage system and

<sup>15</sup> See Stančić 2009, 15–32.

<sup>16</sup> Baričević 2010, 196.

<sup>17</sup> Conway 2000, 15.

<sup>18</sup> Ivanović 2010, 57.

<sup>19</sup> Richard 2014, 18–19; see also Stančić 2009, 72–74.

sustav metapodataka o načinu i strukturi pohrane.<sup>20</sup> Pod metapodacima podrazumijevaju se različiti atributi digitalnih snimaka koji im pridaju značenje, kontekst i organizaciju te se koriste kako bi olakšali navigaciju, pretraživanje i upravljanje digitalnim podacima. Dakle, opširni metapodaci predstavljaju preduvjet osiguranju trajne pristupačnosti digitalnog podatka.<sup>21</sup>

Pripisivanje metapodataka omogućuje identifikaciju mjesta na kojem se jedinica dokumentacije nalazi<sup>22</sup> i, ovisno o načinu evidentiranja i stupnju obrađenosti snimljenog gradiva, može pružiti lak i precizan pristup izvornoj građi i digitalnom snimku.<sup>23</sup> Kako omogućuju uspostavu i održavanje veze između originalne građe i digitalne preslike, metapodaci trebaju obuhvaćati različite attribute obiju kategorija dokumenata. Iz toga je razloga postupak digitalizacije arheološke terenske dokumentacije utemeljen na metapodacima strukturiranim na tri razine. Prva obuhvaća podatke o načinu izrade digitalnih preslika, a druga podatke o klasifikacijskom planu dokumentacije, odnosno o načinu konstrukcije digitalnog arhiva i sustavu njegove unutrašnje hijerarhije. Na toj su razini definirani i načini bilježenja, imenovanja i skraćivanja tekstualnih podataka. Treća razina obuhvaća evidenciju digitalizirane dokumentacije i način, mjesto te sustav pohrane izvornih dokumenata i njihovih digitalnih preslika. Stoga predstavlja temeljni sustav međusobnog povezivanja digitalnih podataka i fizičkih originala.

<sup>20</sup> Backhouse 2005, 47; Ivanović 2010, 69; Šojat-Bikić 2013, 118.

<sup>21</sup> Kenney, Rieger, Entlich 2003.

<sup>22</sup> Ivanović 2010, 70; Lučić 2010, 110.

<sup>23</sup> Baričević 2010, 201.

stored data represents a prerequisite for the long-term preservation of the usefulness of the documentation, thus it is necessary to develop and consistently apply a metadata system on the method and structure of storage.<sup>20</sup> Metadata presupposes the various attributes of digital records that provide them with meaning, context and organisation and which are used to make navigating, searching and managing digital information easier. Therefore, detailed metadata represent a prerequisite for ensuring permanent access to digital information.<sup>21</sup>

Ascribing metadata allows for the identification of the location of a documentation unit<sup>22</sup> and, depending on the manner of filing and the extent to which the recorded materials have been processed, may allow easy and precise access to original materials and digital records.<sup>23</sup> As metadata allow for establishing and maintaining a connection between the original material and its digital copy, metadata should encompass the different attributes of both document categories. Due to this reason, the process of digitalising archaeological field documentation is based on metadata structured on three levels. The first level encompasses data on the method of creating digital copies, while the second level includes data on the classification plan of the documentation, i.e. the manner of constructing the digital archive and the system of its internal hierarchy. This level also defines methods for recording, naming and shortening textual information. The third level encompasses the recording of digitalised documentation and the manner, location and system of storing original documents and their digital copies. Therefore, it represents the fundamental system for interlinking digital information and physical originals.

<sup>20</sup> Backhouse 2005, 47; Ivanović 2010, 69; Šojat-Bikić 2013, 118.

<sup>21</sup> Kenney, Rieger, Entlich 2003.

<sup>22</sup> Ivanović 2010, 70; Lučić 2010, 110.

<sup>23</sup> Baričević 2010, 201.

## SUSTAV IZRADE PRESLIKA

Stvaranje preslika obuhvaća postupke pretvaranja originalnog dokumenta u digitalni oblik, najčešće uz pomoć skenera ili digitalnog fotoaparata,<sup>24</sup> dok se tehnika snimanja odabire sukladno fizičkim osobitostima građe, ovisno o vrsti, veličini, obliku i sadržaju.<sup>25</sup> Kako digitalizacija najvjerojatnije neće biti ponavljani postupak, utemeljene odluke o načinu izrade preslika predstavljaju prioritet. Stoga je potrebno istaknuti da je kvaliteta u digitalnom svijetu u značajnoj mjeri uvjetovana ograničenjima tehnologije pa se digitalizacija provodi s ciljem dobivanja najbolje reprezentacije originala pomoću dostupne tehnologije.<sup>26</sup> Kako je cilj proizvesti podacima i vizualnim sadržajem bogate preslike iz kojih je moguće izvesti radne kopije različitih značajki i za različite svrhe,<sup>27</sup> digitalizacija je arheološke terenske dokumentacije izvedena u skladu s preporučenim formatima nacionalnoga projekta „Hrvatska kulturna baština“.<sup>28</sup> Svi slikovni podaci pohranjeni su u TIFF-u (*Tagged Image File Format*) bez kompresije, kao standardnom formatu za pohranu slikovnih podataka za koji još uvijek, unatoč brojnim pokušajima, nije pronađena odgovarajuća zamjena.<sup>29</sup> Za svaku presliku slikovne građe načinjena je manja kopija u JPEG (*Joint Photographic Experts Group*) formatu kako bi se olakšalo korištenje digitalnih preslika u elektroničkom okruženju. S druge strane, PDF (*Portable Document Format*) predstavlja format koji se najčešće koristi za pregledavanje i ispisivanje dokumenata sastavljenih od više stranica pa se tekstualni podaci, prema smjernicama projekta „Hrvatska kulturna baština“<sup>30</sup>, pohranjuju u PDF-u varijante 1a. Standardi su skeniranja usklađeni s vrstom i dimenzijama originala te se, u skladu s preporu-

<sup>24</sup> Youngs 2001, 6; Kenney, Rieger, Entlich 2003.

<sup>25</sup> Youngs 2001, 4; Baričević 2010, 196.

<sup>26</sup> Conway 2000, 24.

<sup>27</sup> Conway 2000, 24; Kelly 2005, 15.

<sup>28</sup> Ministarstvo kulture RH 2007.

<sup>29</sup> Kenney, Rieger, Entlich 2003.

<sup>30</sup> Ministarstvo kulture RH 2007.

## SYSTEM FOR CREATING COPIES

The creation of copies encompasses procedures for the transformation of original documents into digital form, usually with the help of a scanner or digital camera,<sup>24</sup> while the recording technique is selected in accordance with the physical characteristics of the material, i.e. its type, size, form and content.<sup>25</sup> As the procedure of digitalisation is not likely to be repeated, well-founded decisions on the manner of creating copies are a priority. Therefore it is necessary to stress that, in the digital world, quality is largely dependent on the limitations of technology, thus digitalisation is conducted with the aim of achieving the best representation of the original possible with the help of available technology.<sup>26</sup> As the aim is to produce copies that are rich in data and visual content and from which working copies with various features and for various purposes can be derived,<sup>27</sup> the digitalisation of archaeological field documentation is conducted in accordance with the formats recommended by the national project "Croatian Cultural Heritage".<sup>28</sup> All image data is stored in the TIFF format (*Tagged Image File Format*) without compression, as the standard format for the storage of image data for which an adequate replacement has, in spite of multiple attempts, not yet been found.<sup>29</sup> For every copy of image data, a smaller copy in the JPEG (*Joint Photographic Experts Group*) format was made in order to facilitate the use of digital copies in an electronic environment. On the other hand, the format of PDF (*Portable Document Format*) is most often used to view and print documents that comprise more than one page, thus textual information, in accordance with the guidelines of the project "Croatian Cultural Heritage",<sup>30</sup> is stored in PDF variants 1a. Scanning standards are harmonised with the type and dimensions of the original and, in accordance with recommenda-

<sup>24</sup> Youngs 2001, 6; Kenney, Rieger, Entlich 2003.

<sup>25</sup> Youngs 2001, 4; Baričević 2010, 196.

<sup>26</sup> Conway 2000, 24.

<sup>27</sup> Conway 2000, 24; Kelly 2005, 15.

<sup>28</sup> Ministarstvo kulture RH 2007.

<sup>29</sup> Kenney, Rieger, Entlich 2003.

<sup>30</sup> Ministarstvo kulture RH 2007.

VRSTA DOKUMENTACIJE	VRSTA IZVORNE GRAĐE	FORMAT PRESLIKE	REZOLUCIJA	BOJA
FOTOGRAFSKA	fotografije	TIFF	600	8-bitna siva skala, 24-bitna kolor skala
		JPEG	100	
	35 mm negativ / pozitiv	TIFF	3200	8-bitna siva skala, 24-bitna kolor skala
		JPEG	100	
	60 mm negativ	TIFF	2400	8-bitna siva skala, 24-bitna kolor skala
		JPEG	100	
MJERNA	nacrti / planovi	TIFF	600	8-bitna siva skala, 24-bitna kolor skala
		JPEG	100	
TEKSTUALNA	dnevnik / izvještaj	PDF	300	8-bitna siva skala, 24-bitna kolor skala

Tablica / Table 1: Standardi za izradu digitalnih preslika arheološke terenske dokumentacije / Standards for creating digital copies of archaeological field documentation (izradila / created by F. Sirovica 2015 prema / after Ministarstvo kulture RH 2007).

kama<sup>31</sup> i ovisno o značajkama izvorne građe, preslike izrađuju u 8-bitnoj sivoj skali ili 24-bitnoj kolor-skali. Rezolucija preslike ovisi o vrsti originala, a korištene su rezolucije prikazane u tablici 1.

Sustav izrade preslika prati i set metapodataka koji obuhvaćaju upute za izradu preslika i podatke o načinu njihove izrade. Ti podaci obuhvaćaju podatke o načinu odabira materijala za skeniranje, selekciji između izvornih dokumenata, načinu njihova razvrstavanja, upotrebi skenera i formatima skeniranja, načinu popisivanja dokumenata i načinu pohrane digitalnih preslika u digitalni arhiv. Predstavljaju svojevrsan priručnik za postupak izrade digitalnih preslika koji omogućuje njegovu trajnu izvedbu uz održavanje kvalitete u sklopu zadanih standarda, neovisno o tome tko, gdje i u kojem trenutku provodi postupak.

<sup>31</sup> Ministarstvo kulture RH 2007.

tions<sup>31</sup> and depending on the characteristics of the original material, copies are made in 8-bit grayscale or 24-bit colour scale. The resolution of the copy depends on the type of the original, and the resolutions used are shown in Table 1.

The system for creating copies is also accompanied by a set of metadata that encompasses instructions for the creation of copies and the method of their creation. These data also encompass information on selecting the best materials for scanning, selecting between original documents, how to sort them, scanner operation and formats, methods for listing documents and the manner of storing digital copies in the digital archives. They represent a manual of sorts for the creation of digital images in a more permanent form while adhering to the set standards quality control, regardless of when, where and by whom the procedure is being conducted at a given moment.

<sup>31</sup> Ministarstvo kulture RH 2007.



## SUSTAV EVIDENTIRANJA PRESLIKA

Temeljni preduvjet uspješne izvedbe postupka predstavlja uspostava smislenog načina arhiviranja prikupljenih digitalnih podataka s jasno iskazanom vezom između fizičkog predloška i digitalne preslike. Uspješna realizacija toga zahtjeva obuhvaća uspostavu i implementaciju smislenog sustava evidentiranja koji je istodobno usklađen s arheološkim razumijevanjem značenja arheoloških podataka. Prema definiciji, upis u evidenciju strukturirani je zapis kojim se dokumentira ili utvrđuje određeno stanje ili postupak vezan uz dokument na koji se odnosi pojedini zapis.<sup>32</sup> Kako se arheološka dokumentacija dijeli na tri osnovna dijela: fotografsku, mjernu i tekstualnu dokumentaciju, sustav evidentiranja pojedinih dokumenata utemeljen je na toj podjeli. Fotografska dokumentacija u tome kontekstu obuhvaća sve oblike izvorne građe koja predstavlja fotografski zapis o tijeku arheoloških istraživanja. Toj kategoriji pripadaju fotografije, staklene ploče, negativni, pozitivni i dijapozitivi. Mjerna dokumentacija obuhvaća skice, nacрте, planove, geodetske podloge, katastarske planove i slične dokumente koji sadrže podatke o mjerenjima izvedenima na terenu; a tekstualna različite vidove zapisa koji predstavljaju opis vrste, tijeka i rezultata provedenih istraživanja: npr. popise, bilješke, terenske dnevničke, izvještaje, objave itd. Smisleno evidentiranje tih različitih dokumenata zahtijeva zaseban popis za svaku vrstu arheološke dokumentacije (sl. 1).

U popis se uvodi pojedinačni dokument izvorne građe i njegova digitalna preslika, ovisno o nalazištu na kojem je istraživanje provedeno i tijekom kojeg je nastao izvorni dokument. Pri upisivanju svakom se dokumentu dodjeljuje jedinstvena oznaka, što omogućuje jednoznačnu identifikaciju svih dokumenata.<sup>33</sup> Kako bi se pojedini dokument uvijek mogao povezati s nalazištem, svaka dodijeljena oznaka sadrži jedinstve-

<sup>32</sup> Ivanović 2010a, 82.

<sup>33</sup> Ivanović 2010, 69; Lučić 2010, 110.

## COPY FILING SYSTEM

The basic prerequisite for the successful execution of the procedure is the establishment of a sensible manner of archiving the collected digital information with a clearly visible connection between the physical template and the digital copy. The successful realisation of this condition demands the establishment and implementation of a sensible filing system that is also harmonised with archaeological understandings of the meaning of archaeological information. According to the definition, entry into the records represents a structured entry that documents or determines a certain condition or procedure related to the document that a particular entry pertains to.<sup>32</sup> As archaeological documentation is divided into three basic categories: photographic, measurement and textual documentation, the filing system for individual documents is based on this categorisation. In this context, photographic documentation encompasses all forms of original material that represent photographic records on the course of archaeological research. This category includes photographs, glass plates, negatives, positives and slides. Measurement documentation encompasses sketches, drawings, plans, surveying maps, cadastral plans and similar documents that contain information on measurements performed on the field. Textual documentation encompasses various forms of records that describe the type, course and results of the conducted research: e.g. lists, notes, field journals, reports, publications etc. In order to file these various documents in a sensible fashion, it is necessary to make a separate list for each type of archaeological documentation (fig. 1).

Original material and its digital copy are introduced into the list, depending on the site the research was conducted at and during which the original document was created. Each document is given a unique designation during entry, which allows for the unambiguous identification of all documents.<sup>33</sup> In order to ensure that a certain document can always

<sup>32</sup> Ivanović 2010a, 82.

<sup>33</sup> Ivanović 2010, 69; Lučić 2010, 110.

POPIS FOTOGRAFSKE DOKUMENTACIJE																		
Rbr. ID	IMENJER PIRAZ	OPREMA	POVEZANICA	KOD AN	POLOŽAJ	GDNA ISTRANJAVANJA	INDYI IZADUŽAJ	POLEBNA	NAPOBNA	FORMAT	PPI	BOJA	VISTA DOKUMENTA	KOLUČNA (br. kopija)	SMJETA ORIGINALA	VEZA (ovisno)	UVJOLA	DATUM
1		059_TRS-GRC_1983.0001	<a href="#">059_TRS-GRC_1983.0001.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1983			Kvarta Trdnjaja, Gredov (1983.g.)	TIF_4PG	3000, 100	848 GRAYSCALE	30mm NEGATIV (48)	1	LAO 21	059_TRS-GRC_1983.0002	Filomena Sirovica	2015-10-14
2		059_TRS-GRC_1983.0002	<a href="#">059_TRS-GRC_1983.0002.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1983			Kvarta Trdnjaja, Gredov (1983.g.)	TIF_4PG	3000, 100	848 GRAYSCALE	30mm NEGATIV (48)	1	LAO 21	059_TRS-GRC_1983.0001	Filomena Sirovica	2015-10-14
3		059_TRS-GRC_1983.0003	<a href="#">059_TRS-GRC_1983.0003.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1983			Kvarta Trdnjaja, Gredov (1983.g.)	TIF_4PG	3000, 100	848 GRAYSCALE	30mm NEGATIV (50)	1	LAO 21	059_TRS-GRC_1983.0004 059_TRS-GRC_1983.0005	Filomena Sirovica	2015-10-14
4		059_TRS-GRC_1983.0004	<a href="#">059_TRS-GRC_1983.0004.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1983			Kvarta Trdnjaja, Gredov (1983.g.)	TIF_4PG	3000, 100	848 GRAYSCALE	30mm NEGATIV (52)	1	LAO 21	059_TRS-GRC_1983.0003 059_TRS-GRC_1983.0005	Filomena Sirovica	2015-10-14

POPIS MIJERNE DOKUMENTACIJE																		
Rbr. ID	IMENJER PIRAZ	OPREMA	POVEZANICA	KOD AN	POLOŽAJ	GDNA ISTRANJAVANJA	INDYI IZADUŽAJ	POLEBNA	NAPOBNA	FORMAT	PPI	BOJA	VISTA DOKUMENTA	KOLUČNA (br. kopija)	SMJETA ORIGINALA	VEZA (ovisno)	UVJOLA	DATUM
1		059_TRS-GRC_1989.A001	<a href="#">059_TRS-GRC_1989.A001.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989			Telet. Slika koji je prikazao ing. Ineb	TIF_4PG	600, 100	24-bit COLOR	SKICA	1	ARHIV AMZ/ig-42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23
2		059_TRS-GRC_1989.A002	<a href="#">059_TRS-GRC_1989.A002.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989			Telet. Slika. Prehvatni promatranje kod Trdnjaja	TIF_4PG	600, 100	24-bit COLOR	SKICA	1	ARHIV AMZ/ig-42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23
3		059_TRS-GRC_1989.A003	<a href="#">059_TRS-GRC_1989.A003.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989			Telet. Pribitka slika. Slika koji je prikazao Ineb	TIF_4PG	600, 100	24-bit COLOR	SKICA	1	ARHIV AMZ/ig-42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23
4		059_TRS-GRC_1983.A004	<a href="#">059_TRS-GRC_1983.A004.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1983			Telet. Trdnjaja 1983. god. greb. 1. nabor. Rukava i tre. stolica, ciglica od crne, iskopani R. Dvorstare	TIF_4PG	600, 100	24-bit COLOR	SKICA	1	ORH. 88	059_TRS-GRC_1983.T012	Filomena Sirovica	2015-10-23

POPIS TEKSTUALNE DOKUMENTACIJE																	
Rbr. ID	OPREMA	POVEZANICA	KOD AN	POLOŽAJ	GDNA ISTRANJAVANJA	INDYI IZADUŽAJ	POLEBNA	NAPOBNA	FORMAT	PPI	BOJA	VISTA DOKUMENTA	KOLUČNA (br. kopija)	SMJETA ORIGINALA	VEZA (ovisno)	UVJOLA	DATUM
1	059_TRS-GRC_1989.T001	<a href="#">059_TRS-GRC_1989.T001.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989	ARHIV AMZ, slip. 42, TRDNJAJA (izvodi nacrtova dokumenta sa 1989. godine greb. 1. nabor. R. Dvorstare)		opisak: Slika. Arhiv	PDF	300	24-bit COLOR	SPIS	1 / 26	ARHIV AMZ/42	059_TRS-GRC_1989.T002 059_TRS-GRC_1989.T003 059_TRS-GRC_1989.T004 059_TRS-GRC_1989.T005 059_TRS-GRC_1989.T006 059_TRS-GRC_1989.T007 059_TRS-GRC_1989.T008 059_TRS-GRC_1989.T009 059_TRS-GRC_1989.T010 059_TRS-GRC_1989.T011 059_TRS-GRC_1989.T012	Filomena Sirovica	2015-10-23
2	059_TRS-GRC_1989.T002	<a href="#">059_TRS-GRC_1989.T002.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989	R. Dvorstare, V. Vrgodni. Putni nalozaj		11. 10. 1958.	PDF	300	24-bit COLOR	IZVJEŠTAJ	1 / 2	ARHIV AMZ/42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23
3	059_TRS-GRC_1989.T003	<a href="#">059_TRS-GRC_1989.T003.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989	F. Kralj. DOPISNICA, kralj. Arheološkog muzeja		18. 9. 1959.	PDF	300	24-bit COLOR	DOPISNICA	1 / 2	ARHIV AMZ/42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23
4	059_TRS-GRC_1989.T004	<a href="#">059_TRS-GRC_1989.T004.TIF</a>	059_TRS-GRC	Trdnjaja - Gorick	1989	Arheološki muzej. Putni nalozaj		19. 9. 1959.	PDF	300	24-bit COLOR	PUTNI NALOG	1 / 2	ARHIV AMZ/42	059_TRS-GRC_1989.T001	Filomena Sirovica	2015-10-23

Slika / Figure 1. Popisi arheološke terenske dokumentacije / Lists of archaeological field documentation (izradila / created by F. Sirovica).

ni kod nalazišta. Taj se kod izvodi iz *Popisa arheoloških nalazišta* (skr. PAN) koji je pohranjen u temeljnoj mapi arhiva terenske dokumentacije (ATD-AMZ), a sastoji se od jedinstvenog troznamenkastog broja i kombinacije slova izvedene iz naziva položaja na kojem se nalazište nalazi. Osim koda nalazišta, jedinstvena oznaka svakog dokumenta sadrži i godinu kada je izvorni dokument nastao, obično godinu istraživanja te jedinstvenu oznaku sastavljenu od slovne oznake vrste dokumentacije ("M" za mjernu i "T" za tekstualnu dokumentaciju) i jedinstvenog troznamenkastog broja, koji se dodjeljuje redom od broja 1 (npr. 059\_TRS-GRC\_1959-M001), ili samo jedinstvenoga četveroimenkastog broja za fotografsku dokumentaciju (npr. 059\_TRS-GRC\_1959-0001). Naime, zbog ponekad izrazito velike količine fotografija snimljenih tijekom istraživanja, fotografska se dokumentacija označava četveroimenkastim brojevima (redom od 0001). Ista se oznaka upisuje i na izvorni dokument. Ako postoji više kopija izvornog dokumenta, jedinstvena se oznaka upisuje na svaku kopiju, dok se u zagradu dodaju redni broj kopije i ukupni broj kopija (npr. 059\_TRS-GRC\_1959-0001 (2/3)). Prva kopija u tome sustavu ujedno je ona iz koje je načinjena digitalna preslika.

U popise se, nakon dodjeljivanja jedinstvenog broja, prema zadanom redosljedu, unose osnovni podaci o dokumentu. Pojedini dokument treba biti dovoljno precizno opisan, kako bi korisnik iz njegova opisa mogao pouzdano zaključiti što on jest i što može pronaći u njegovu sadržaju.<sup>34</sup> Prva skupina podataka obuhvaća podatke o identifikaciji dokumenta: redni broj pod kojim je dokument uveden i njegovu jedinstvenu oznaku. Tim se podacima može priključiti i umanjeni prikaz dokumenta i direktna poveznica na digitalnu presliku (sl. 2). Zatim slijede podaci o nalazištu, njegovoj jedinstvenoj oznaci sastavljenoj od rednog broja i koda nalazišta, njegovu položaju i vremenu istraživanja, odnosno

<sup>34</sup> Lučić 2010, 110.

be connected to its site of origin, every designation contains a unique site code. This code is derived from the List of Archaeological Sites (*Popis arheoloških nalazišta* - PAN) that is stored in the basic folder of the archives of field documentation (ATD-AMZ), and it consists of a unique three-digit number and a combination of letters derived from the name of the location of the site. Apart from the site code, the designation of each document contains the year that the original document was created, which is usually the year the research was conducted, and a unique designation that consists of a letter that denotes the type of documentation ("M" for measurement and "T" for textual documentation) and a unique three-digit number that is assigned in numerical order, starting from 1 (e.g. 059\_TRS-GRC\_1959-M001) or, in the case of photographic documentation, only a unique four-digit number (e.g. 059\_TRS-GRC\_1959-0001), as photographic documentation is marked with four-digit numbers (starting from 0001) due to the fact that the number of photographs recorded during research is sometimes exceptionally high. If there are several copies of an original document, the unique designation is entered on every copy, while the ordinal number of the copy and total number of copies are added in parentheses (e.g. 059\_TRS-GRC\_1959-0001 (2/3)). The first copy in this system is also the one from which the digital copy was made.

After the ascription of unique numbers according to the set order, basic information on the document is added to the lists. A document should be described in a fashion that is precise enough to allow the user to be able to confidently conclude the nature and contents of the document on the basis of its description.<sup>34</sup> The first set of data encompasses information on the identification of the document: the ordinal number under which the document is listed and its unique designation. A small-scale image of the document and a direct link to its digital copy (fig. 2) can also be attached to this information. This information is followed by information on the site and its unique designation consisting of an ordinal number and site code,

<sup>34</sup> Lučić 2010, 110.

vremenu nastanka dokumenta. Slijede podaci pridruženi izvornom dokumentu koji se mogu nalaziti na njegovoj poledini ili su mu priloženi na mjestu pohrane. Tim se podacima mogu dodati i opaske ili primjedbe na koje treba obratiti posebnu pažnju (npr. nesigurni, neprovereni ili nečitki podaci). Zatim se upisuju podaci o tehničkim značajkama preslike pa podaci o izvornom dokumentu: vrsti dokumenta, broju kopija i njegovu smještaju. Slijedi popis jedinstvenih oznaka drugih dokumenata s kojima je izvorni dokument u direktnoj fizičkoj vezi (npr. fotografije na istom negativu, crtež pridružen izvještaju, različite vrste tekstualnih dokumenata u istom spisu itd.). Na kraju dolazi ime i prezime osobe koja je dodijelila oznaku i opisala dokument te datum dodjeljivanja oznake.

#### SUSTAV POHRANE PRESLIKA

Pohranjivanje preslika treba biti utemeljeno na sustavu koji obuhvaća jasno definirane hijerarhijske veze iskazane kroz strukturu arhiva, što omogućuje postupke identifikacije pojedinih dokumenata unutar strukture.<sup>35</sup> Ostale su veze iskazane opisom pojedinih dokumenata unutar odgovarajućih popisa. Unutar prikazanog postupka digitalne preslike pohranjuju se u unaprijed organizirani sustav smješten na serveru Arheološkog muzeja u Zagrebu (sl. 3).

Temeljna je mapa za pohranu digitalnih preslika imenovana ATD\_AMZ, odnosno nosi skraćeni naziv Arhiva terenske dokumentacije Arheološkog muzeja u Zagrebu. Unutar temeljne mape smješteni su *Popis arheoloških nalazišta s njihovim jedinstvenim oznakama*, metapodaci o postupku izrade digitalnih preslika te dokument koji sadrži metapodatke o strukturi digitalnog arhiva, njegovoj konstrukciji, sustavu razvrstavanja i korištenim kraticama te njihovim značenjima (sl. 4). U tome je dokumentu opisana hijerarhija digitalnog arhiva s

<sup>35</sup> Prema Lučić 2010, 105.

location and period of research, i.e. time of creation of the document. Next is information attached to the original document, which may be located on its reverse or are attached at the site of storage. Notes or remarks that demand special attention (e.g. data is unreliable, unverified or illegible) may be added to this information. Information on the technical characteristics of the copy and information on the original document follows: type of document, number of copies and location. Next is a list of the unique designations of other documents that the original document is in direct physical connection with (e.g. photographs on the same negative, a drawing attached to the report, different types of digital documents in the same file etc.). Finally, the name and surname of the person who ascribed the designation to the document and described it is added, together with the date the designation was added.

#### SYSTEM OF COPY STORAGE

The storage of copies is based on a system that encompasses clearly defined hierarchical connections expressed through the archive structure, which allows for procedures for the identification of certain documents within the structure.<sup>35</sup> Other connections are described by the description of certain documents within the corresponding list. Within the described procedure, digital copies are stored in a pre-organised system that is located on the server of the Archaeological Museum in Zagreb (fig. 3).

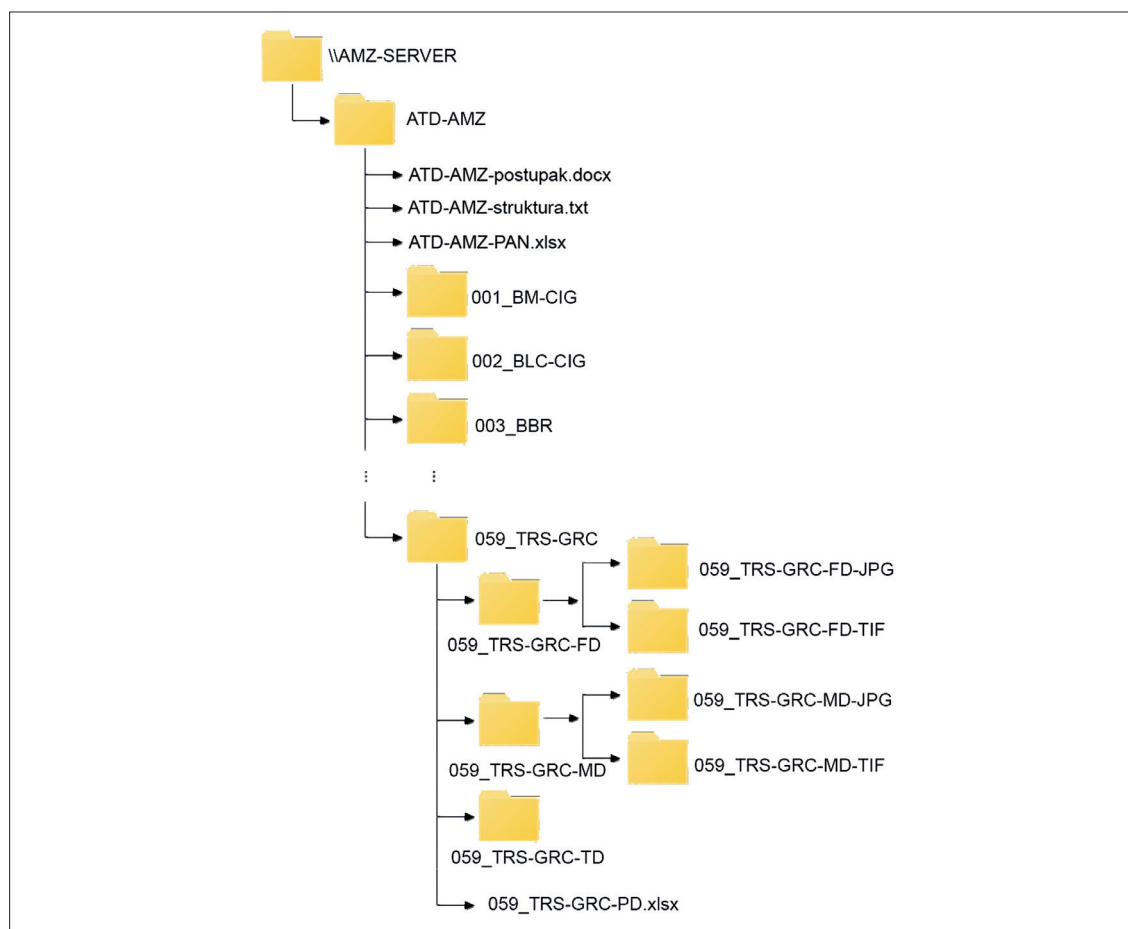
The root folder for the storage of digital copies was named ATD\_AMZ, i.e. an acronym of the Archive of Field Documentation of the Archaeological Museum in Zagreb (*Arhiv terenske dokumentacije Arheološkog muzeja u Zagrebu*). The *List of Archaeological Sites* and their unique designations, metadata on the procedure for creating digital copies and a document that contains metadata on the structure of the digital archive, its organisation, sorting system and used abbreviations are located within the root folder (fig. 4). This document describes the hierarchy of the digital archive and provides a clear definition of all the abbreviations

<sup>35</sup> After Lučić 2010, 105.



Ref ID	IMENIK/PRIJAVA	OZNAKA	POZICIJA	KODIRAJ	POLAZAJ	ODOVNA HRTI/STANJE	POLEZNA	NAPOМЕНА
1		059_TRS-GRC_198-0001	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1983	-	Kuverta Trodaruga Gradak/1983.g
2		059_TRS-GRC_198-0002	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1983	-	Kuverta Trodaruga Gradak/1983.g
3		059_TRS-GRC_198-0003	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1983	-	Kuverta Trodaruga Gradak/1983.g
4		059_TRS-GRC_198-0004	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1983	-	Kuverta Trodaruga Gradak/1983.g
5		059_TRS-GRC_198-0005	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1983	-	Kuverta Trodaruga Gradak/1983.g
6		059_TRS-GRC_198-0006	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1984	-	Kuverta Trodaruga 1984.g. Boli. grib 314
7		059_TRS-GRC_198-0007	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1984	-	Kuverta Trodaruga 1984.g. Boli. grib 314
8		059_TRS-GRC_198-0008	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1984	-	Kuverta Trodaruga 1984.g. Boli. grib 314
9		059_TRS-GRC_198-0009	<a href="#">ARHEOLOŠKA DOKUMENTACIJA</a>	059_TRS-GRC	Trodaruga - Gradak	1984	-	Kuverta Trodaruga 1984.g. Boli. grib 6

Slika / Figure 2: Povezivanje Popisa fotografske dokumentacije s digitalnom preslikom fotografije / Connecting the List of Photographic Documentation with the digital copy of the photograph (izradila / created by F. Sirovica).



Slika / Figure 3: Hijerarhija sustava pohrane digitalnih preslika arheološke terenske dokumentacije / Hierarchy of the system for storing digital copies of archaeological field documentation (izradila / created by F. Sirovica).

jasno definiranim značenjem svih korištenih kratica i oznaka. Hijerarhijski su definirani i sustavi popisivanja dokumenata s detaljnim podacima o njihovom sadržaju.

U temeljnu su mapu smještene i mape označene kodom nalazišta na kojima je Arheološki muzej u Zagrebu vršio istraživanja. Te se mape mogu smatrati predmetnim spisom pojedinoga arheološkog nalazišta u kojem se nalaze svi dokumenti vezani uz isti postupak ili predmet.<sup>36</sup> Kako je dokumentacija pojedinog nalazišta podijeljena na fotografsku, mjernu i tekstualnu, za svaki je vid dokumentacije predviđena zasebna mapa s oznakom vrste dokumentacije koja je u njoj pohranjena. Uz te mape smještena je i datoteka s *Popisom doku-*

<sup>36</sup> Ivanović 2010a, 82.

and designations used. The systems for listing of documents are also hierarchically defined, together with more detailed information on their content.

The root folder also contains folders marked with the code of the site where the Archaeological Museum in Zagreb conducted research. These folders can be considered the case file of a certain archaeological site and contain all the documents related to the same procedure or subject.<sup>36</sup> As the documentation of a certain site is divided into photographic, measurement and textual documentation, a separate map with the designation of the documentation stored inside is provided for every form of documentation. In addition to these maps, there is also the file with the *List of Documen-*

<sup>36</sup> Ivanović 2010a, 82.

```

ATD-AMZ-struktura.txt - Notepad
File Edit Format View Help
POPIS KRATICA I OZNAKA
ATD-AMZ = Arhiv terenske dokumentacije Arheološkog muzeja u Zagrebu
metadata = metapodaci o strukturi digitalnog arhiva (txt format)
PAN.xlsx = Popis arheoloških nalazišta s jedinstvenim oznakama AN (Excel tablica)
001_BM-CIG = jedinstvena oznaka nalazišta = jedinstveni broj i kratica sastavljena iz imena položaja
001_BM-CIG-FD = fotografska dokumentacija
001_BM-CIG-MD = mjerna dokumentacija
001_BM-CIG-TD = tekstualna doklumentacija (PDF dokumenti)
001_BM-CIG-FD-JPG = fotografska dokumentacija (JPG dokumenti)
001_BM-CIG-FD-TIF = fotografska dokumentacija (TIF dokumenti)
001_BM-CIG-MD-JPG = mjerna dokumentacija (JPG dokumenti)
001_BM-CIG-MD-TIF = mjerna dokumentacija (TIF dokumenti)
001_BM-CIG_1954-0001.jpg = godina nastanka + oznaka fotografskog dokumenta
001_BM-CIG_1954-0001.tif = godina nastanka + oznaka fotografskog dokumenta
001_BM-CIG_1954-M001.jpg = godina nastanka + oznaka mjernog dokumenta
001_BM-CIG_1954-M001.tif = godina nastanka + oznaka mjernog dokumenta
001_BM-CIG_1954-T001.pdf = godina nastanka + oznaka tekstualnog dokument
001_BM-CIG-PD.xlsx = popis dokumenata (Excel tablica)

PAN = Popis arheoloških nalazišta (Excel tablica)
podaci o identifikaciji dokumenta
Rbr. AN = jedinstveni redni broj arheološkog nalazišta
KOD = troznamenasti jedinstveni broj i kratica sastavljena iz imena položaja
POLOŽAJ = ime položaja
GODINA ISTRAŽIVANJA = popis godina istraživanja
podaci o vrsti, količini i smještaju izvorne građe
TEKSTUALNA DOKUMENTACIJA = popis tekstualne dokumentacije (vrsta i količina)
FOTOGRAFSKA DOKUMENTACIJA = popis fotografske dokumentacije (vrsta i količina)
MJERNA DOKUMENTACIJA = popis mjerne dokumentacije (vrsta i količina)
SMJEŠTAJ = podaci o smještaju izvorne građe
LAD br./sign. = oznaka ladičara u Arhivu AMZ-a/signatura Arhiva
ORM br./sign. = oznaka ormara u Arhivu AMZ-a/signatura Arhiva
POL br. /sign. = oznaka police u Arhivu AMZ-a/signatura Arhiva

dodatni podaci
NAPOMENE = napomene ili primjedbe na koje treba obratiti posebnu pozornost
UEVO/-LA = ime i prezime osobe koja je dodijelila oznaku
DATUM = datum dodjeljivanja oznake

PD = popis dokumentacije (izvornih dokumenata i njihovih digitalnih preslika; Excel tablica)
sheet:
PF = popis fotografske dokumentacije
PM = popis mjerene dokumentacije
PT = popis tekstualne dokumentacije

sadržaj:
podaci o identifikaciji dokumenta
Rbr. FD = redni broj fotografskog dokumenta
UMANJENI PRIKAZ = THUMBNAIL = prikaz dokumenta
OZNAKA = jedinstvena oznaka dokumenta (KOD AN_godina
istraživanja_četveroimenkasti Rbr.FD)

```

Slika / Figure 4: Metapodaci o strukturi arhiva / Metadata on archive structure (izradila / created by F. Sirovica).

mentacije koja je pohranjena u stvarnom i u digitalnom arhivu. Za svaku presliku slikovne građe u TIFF-u načinjena je i njezina manja kopija u JPEG formatu pa se unutar mapa, koje sadrže preslike fotografske i mjerne dokumentacije, dokumenti, ovisno o formatu, pohranjuju u zasebne mape koje, uz postojeće podatke, sadrže i oznaku formata. Sustav je, dakle, osmišljen na temelju jednostavne podjele dokumenata u tri segmenta, koja uvjetuje i način njihova evidentiranja i način njihove pohrane. Stoga bi razumljivost prikazanog pristupa i njegova usklađenost sa suvremenim razumijevanjem arheološkog podatka trebala osigurati dugoročnu razumljivost i upotrebljivost digitalnih dokumenata.

tation that is stored in the physical and digital archives. For every copy of image materials in TIFF, a smaller copy in JPEG format is also made. Thus, within folders that contain copies of photographic and measurement documentation documents are, depending on the format, stored in separate folders that, in addition to the existing data, also contain a designation of the format. The system has, therefore, been created on the basis of a simple division of documents into three segments, which also determines the manner in which they are filed and stored. Thus the coherence of the described approach and its harmonisation with contemporary understandings of archaeological data ought to ensure the long-term intelligibility and usability of digital documents.



## ZAKLJUČNA RAZMATRANJA

Arheološka terenska dokumentacija važan je segment kulturne baštine pa njezinu vrijednost možemo prepoznati u tome što predstavlja temeljnu informaciju o terenskim postupcima koji su doveli do određenih stručnih i znanstvenih rezultata te predstavlja vjerodostojno svjedočanstvo o aktivnostima i događajima koji su ih pratili. Digitalizacija takvih dokumenata stvara dodatne vrijednosti jer doprinosi lakoći i brzini dohвата informacija te njihovoj cjelovitosti i primjerenosti različitim potrebama.<sup>37</sup> Istovremeno većem broju korisnika otvara pristup podacima bez mogućnosti oštećivanja unikatne i propadanju podložne izvorne građe pa uspješnost postupka leži i u njegovoj sposobnosti da dugoročno očuva i zaštiti originalnu terensku dokumentaciju. Kako je uvid u građu preduvjet izvođenja temeljnih analiza i znanstvenih interpretacija, olakšani pristup podacima te pojednostavljeno korištenje građe u elektroničkom okruženju predstavlja neprocjenjivi doprinos obradi, objavi i znanstvenoj spoznaji. Kada se te prednosti sagledaju iz perspektive stalnog napretka digitalnih tehnologija, ne samo trenutne, već i buduće mogućnosti upotrebe digitalnih podataka za izvođenje novih informacija, mogu predstavljati značajan doprinos budućim analizama i reinterpretacijama osnovnog seta podataka. Dodatnu vrijednost postupka predstavljaju i mogućnosti sustavnog ažuriranja podataka te nadopunjavanja njihova sadržaja u skladu s novim obradama, objavama i spoznajama, kao i mogućnosti unapređivanja strukture arhiva u skladu s razvojem arheološkoga poimanja vrijednosti i značenja dokumentacijske građe.

Stoga se može naglasiti da rezultat prikazanog pristupa predstavlja digitalna zbirka terenske dokumentacije pohranjena u sustavu koji omogućuje olakšan pristup digitaliziranom sadržaju, njegovo pretraživanje i razvrstavanje te povezivanje s drugim digitalnim podacima. Sustav je

<sup>37</sup> Ivanović 2010, 66.

## CONCLUDING THOUGHTS

Archaeological field documentation represents an important segment of cultural heritage, and its value is also reflected in its role as the key information on the field procedures that led to certain professional and scientific results, acting as a credible witness to the activities and events that accompanied them. The digitalisation of such documents creates added value as it contributes to the ease and speed of accessing information, together with ensuring its integrity and appropriateness for various needs.<sup>37</sup> Likewise, it makes information accessible to a greater number of users without the risk of damaging the unique, devastation-prone original material, thus the success of the procedure also lies in its ability to provide a long-term solution for the protection and preservation of original field documentation. As examination of materials is the prerequisite for conducting basic analyses and scientific interpretations, easier access to data and the simplified use of materials in an electronic environment represents a priceless contribution to scientific processing, knowledge and publication. When these advantages are viewed from the perspective of the constant progress of digital technology, current and future possibilities for using digital data to extrapolate new information could represent an important contribution to future analyses and reinterpretations of basic data sets. The possibility of systematically updating information and supplementing it with new content in accordance with new knowledge, processing and publications represents an added value, as does the possibility of improving the structure of the archives in accordance with the development of archaeological conceptions of the value and meaning of documentation materials.

Therefore, it can be summarised that the results of the described approach come in the form of a collection of field documentation that is stored in the system, which allows for easier access to digitalised content, together with its searching and sorting and connection to other digital data. The system is based on the basic forms of archaeological information and is

<sup>37</sup> Ivanović 2010, 66.



utemeljen na osnovnim formama arheoloških podataka i usklađen s načinima izrade terenske dokumentacije na suvremenim arheološkim istraživanjima. Predstavlja usklađivanje starih podatkovnih formi sa suvremenim zahtjevima struke koji su utemeljeni na digitalnim podacima i njihovoj upotrebi u elektroničkom okruženju. Oblikovanje takvog sustava omogućuje, ne samo novu kategorizaciju podataka prikupljenih davno provedenim istraživanjima već i uspostavu sustava arhiviranja primjenjivog na različitim setovima podataka, koji se prikupljaju novim istraživanjima, i stvaranje smislene te učinkovite platforme za njihovu pohranu i čuvanje. Istovremeno, prikazani je sustav primjenjiv i u drugim ustanovama zaduženim za pohranu arheološke terenske dokumentacije pa može značajno doprinijeti radu i muzejske i znanstvene zajednice.

harmonised with the methods of creating field documentation during modern archaeological research. It represents a harmonisation of old data forms with the contemporary demands of the profession based on digital information and its use in an electronic environment. The creation of such a system allows for not only a new categorisation of the data collected at studies conducted long ago, but also the establishment of a categorisation system based on different sets of information gathered through new research, together with the creation of a coherent and efficient platform for their storage and protection. Likewise, the described system is also applicable to other institutions that are in charge of the storage of archaeological field documentation, which significantly contributes to the work of both the museum and scientific communities.

## KRATICE / ABBREVIATIONS

ATD-AMZ, 059\_TRS-GRC – Arhiv terenske dokumentacije Arheološkog muzeja u Zagrebu, Arheološko nalazište 059 Trošmarija-Goričak.

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## Jasna Jeličić Radonić – Miroslav Katić

# Faros – osnivanje grčkog grada – I

Split 2015.; izdavači: Književni krug Split i Odsjek za povijest umjetnosti Filozofskog fakulteta Sveučilišta u Splitu, Biblioteka Knjiga Mediterana br. 86; 233 stranica s oko 160 ilustracija. Sažetak na engleskom jeziku; Literatura; Kazalo geografskih pojmova i Kazalo osobnih imena. Recenzenti: akademik Nenad Cambi i prof. dr. sc. Marin Zaninović. Cijena: 200,00 kuna.

Knjiga o kojoj će ovdje biti riječ želi nas upoznati s rezultatima desetogodišnjih (1994. – 2004.) arheoloških iskopavanja u Starome Gradu na otoku Hvaru, gdje se nalaze ostaci antičkoga grčkog grada Farosa, koji je utemeljen početkom 4. st. pr. n. e. Knjiga uz *Uvod*, *Zaključna razmatranja*, *Literaturu* i *Indeks* sadrži četrnaest poglavlja koja nisu numerirana. Ovdje ću se osvrnuti samo na neke aspekte ove knjige koja se dugo očekivala i najavljivala.

Vidljivo je da su neka poglavlja već ranije objavljena, što nije ništa neuobičajeno. Problematično je što autori ovom prigodom ne koriste noviju literaturu koja se u međuvremenu pojavila o raznim problemima grčkog naseljavanja izvan matične domovine i odnosa s domorocima te o prisustvu domorodačke lončarije u grčkim apoikijama,<sup>1</sup> ili pak o novijim numizmatičkim analizama parskog novca,<sup>2</sup> ili uz tvrdnju autora o postojanju purpure radionice u grčkom Farosu koja je dovedena u pitanje.<sup>3</sup> Zanimljivo je

<sup>1</sup> Npr. Carter 2006; Yntema 2011; Handberg, Jakobsen 2011; Vlassopoulos 2013.

<sup>2</sup> Tully 2013.

<sup>3</sup> Popović 2010.

i to što se autori ne koriste knjigom Marie-Christine Hellmann *L'architecture greque, I-III*, objavljenom u Parizu 2002., 2006. i 2010. godine na 1008 stranica (!), koja je postala nezaobilaznom svima koji se bave ovom problematikom budući da znatno nadopunjuje ranije, kraće studije.<sup>4</sup> Autori su sakupili svoje ranije objavljene članke i objavili ih u ovoj knjizi a da se nisu potrudili ažurirati bibliografiju i koristiti se rezultatima tih radova te ih urediti tako da predstavljaju povezanu cjelinu.

Teško je, stoga, odrediti karakter ove knjige, iako jedan od recenzenata navodi da je riječ o znanstvenom djelu. Naime, ne može se reći da je strogo znanstvena, a ni to da je znanstveno-popularna, odnosno da je pisana za akademsku zajednicu, odnosno za one koji nisu profesionalni arheolozi, povjesničari antike, klasičari ili povijesničari antičke umjetnosti. Stječe se dojam da je prema načinu izlaganja nametnuto bezpogovorno primanje ponuđenog i s jakim na-

<sup>4</sup> Moglo bi se pomisliti da su autori predali ovu knjigu izdavaču prije objave literature koju sam naveo, no to nije slučaj jer u popisu literature (str. 207–217) navode i literaturu iz 2015. godine.

glaskom na superiornost antičkih Grka, a bez spomena drugačijih tumačenja okolnosti oko utemeljenja parske naseobine prisutnih u literaturi.<sup>5</sup>

Na kraju Uvoda (str. 9) autori navode cilj ove publikacije: »... ovdje će biti izneseni rezultati istraživanja koja se odnose na osnivanje grčkog grada Farosa u 4. st. pr. Kr. « i navode da će, zbog opsežnosti građe, u drugoj publikaciji – *Faros – osnivanje antičkog grada II* – biti objavljeni keramički nalazi.<sup>6</sup> Riječ je o uobičajenom postupku. Međutim, neka poglavlja, poput »Htonska božanstva na novcu Farana«, »Tragovi rane keramičke proizvodnje« ili »Radionica purpura« ne odnose se na samo osnivanje grčkoga grada. Osim toga, očekivalo bi se da u *Farosu I*, uz uobičajen historijat istraživanja i obrazlaganja metodološkog postupka korištenog pri iskopavanju (autori navode na str. 8 da se radi o »sistematskim arheološkim istraživanjima«), budu detaljno opisani ostaci arhitekture, i to u stratigrafskom kontekstu i s odgovarajućim korelacijama s foto i tehničkom dokumentacijom. No to se, na žalost, nije dogodilo.

Već pri samome prelistavanju knjige odmah pada u oči kako ilustracije koje prate tekst (njih oko 160) nisu označene brojevima zbog čega ih je teško povezati s hrvatskim tekstom koji obuhvaća 156 stranica. U samom bi se pak tekstu očekivalo da se čitaoca upućuje na ilustracije: na primjer, »vidi sliku lijevo« ili »vidi sliku gore«, ali toga nema. S druge strane, opširan je sažetak na engleskome jeziku (str. 157–206) bez ilustracija, što čitaocu koji ne poznaje naš jezik znatno otežava, ako ne i posve onemogućava, snaći se i dovesti u vezu engleski tekst i neku sliku koja je u prednjem dijelu knjige. Ilustracije, doduše, imaju šturu legendu (na oba jezika), ali to nije dovoljno da bismo bili posve sigurni o čemu je riječ.

<sup>5</sup> Kirigin 2004, 82–88; 2006, 64–67.

<sup>6</sup> Takva je publikacija već bila u tisku: "... see KATIĆ (The Pre-Grecian Settlement and the Beginning of Greek Colonization in Stari Grad on Hvar, in print" (Jeličić-Radonić 2005, 316 i bilj. 3). Autori ne navode gdje će se objaviti i ostali pokretni nalazi: na primjer, novac, razni metalni i koštani predmeti, životinjske kosti itd.

Autorima je to jasno, no čitaocu, koji se prvi put susreće s Farosom i koji nikad nije bio na terenu, to svakako nije razumljivo. Tako, na primjer, na str. 35 (dolje) nalazi se slika neke sonde, međutim, nije označeno koja je to sonda pa je na tlocrtu na str. 34 ili na str. 40 ne možemo pronaći. Također, na str. 39 nalaze se tri fotografije s prikazima zidova, ali u legendi nije objašnjeno gdje se oni točno nalaze. Na str. 42 spominje se sonda IA, a njezin položaj ni u jednom tlocrtu nije označen. Diljem teksta često se spominje Remete vrt i Remete kuća<sup>7</sup> iako ni na jednome od objavljenih tlocrta nije označeno gdje se nalaze ti prostori.

Poseban je problem što zidovi nemaju oznake (brojeve ili slova premda je riječ o uobičajenoj praksi) pa tako na fotografijama, tlocrtima i presjecima ne možemo znati o kojem se točno zidu radi (a njih ima mnogo, što zorno prikazuje tlocrt na str. 34, kao i oni na str. 40, 58, 70 i 93). Također, na presjecima ili pogledima na razne zidove (str. 38, 48, 49, 52, 54 i 55) nije jasno predstavlja li najniža linija živac ili ne. Uz to, samo na jednome mjestu (str. 92) možemo vidjeti jedini profil sa stratigrafskim slojevima! Na toj su ilustraciji dani opisi slojeva brojevima od 1 do 4. No o tome profilu u tekstu uopće nema riječi, niti je popraćen stratigrafskom matricom, a niti je na tlocrtima označeno gdje se nalazi. Takvih bi profila, koreliranih, s čvrstim strukturama na nalazištu u ovakvim publikacijama trebalo biti znatno više, a sve kako bi nas autori argumentirano uvjerali u prezentirano i omogućili provjeru onoga što izlažu. Jednako tako, od ključnog je znanstvenog interesa objava precizne arheološke dokumentacije spominjanih ilirskih koliba ili ilirske nastambe (str. 33), a i onih koliba prvih grčkih doseljenika (str. 35–36), otkrivenih u slojevima 13 – 11 u sondama »VII, IX i dijela sonde X (cca 17,5 m2)«, a i često spominjani profil u Sondi VII. Riječ je o krucijalnim dokazima, o kojima čitamo, ali ih ne vidimo. Da se htjelo, tlocrti su se mogli prezentira-

<sup>7</sup> Trebalo je spomenuti da se u toj kući danas nalazi Agencija za upravljanje starogradskim poljem.



ti u ovoj knjizi, i to umjesto desetak panoramskih snimaka Staroga Grada i okolice (bez legende) koji su dekorativnog, a ne suštinskog karaktera, i nisu nužni. Uz to 17,5 m<sup>2</sup> je velik prostor, gdje bi se u tlocrtu i presjeku lijepo mogle vidjeti najranije kolibe, pogotovo kada nas autori informiraju da je taj najraniji kulturni sloj debljine 80 cm (od kote 340 do 420 cm: vidjeti str. 33)! Prema autorima, taj sloj leži na zdravici, kota 416 – 420 cm, ali ne navode koliko je udaljena od živca koji na ovome prostoru uopće ne spominju.

Glavni tlocrt iskopavanja nalazi se na str. 34, i to u prilično malome mjerilu. Na njemu su označeni položaji sonde I – XIII iako je pokraj njih iskopano gotovo isto toliko prostora koji pokrivaju spomenute sonde. Na tim su neoznačenim djelovima istraženi znatni ostaci arhitekture: dobri dijelovi ulice, zidova, kanala, bunara i bedema, ali nam nije jasno, a niti je objašnjeno zašto je to tako, to jest zašto prostori nemaju oznaku, a drugi imaju.<sup>8</sup> Na tlocrtima na str. 40 i 58 s lijeve su strane ucrtane tri apside i neki drugi zidovi kojih nema na najvećem tlocrtu na str. 34, a o kojima nema više podataka. Kako će čitalac znati što ti zidovi predstavljaju?

U uvodu autori, osim raznih edukativnih aktivnosti, daju kratak prikaz njihovih istraživanja u razdoblju od 1994. do 2004. godine. No iz toga pregleda ne doznajemo što su radili od 1997. do 2003. godine, niti nas upućuju na arhivske podatke ili pak na podatak da su negde drugdje objavili izvještaje s tih iskapanja.<sup>9</sup>

<sup>8</sup> Autori ne navode koliki je cjelokupni prostor koji su iskopali.

<sup>9</sup> Npr., u Obavijestima hrvatskoga arheološkog društva. Ipak, doznajemo iz njihova objavljenog izvještaja (Jeličić Radonić, Katić 2009) da su se 2003. i 2004. vršila zaštitna arheološka iskopavanja unutar Remete kuće i da je inventirano 253 nalaza s tih iskopavanja (ne navodi se gdje su nalazi pohranjeni niti čiji nose inventarni broj). Osim toga, u tome se izvještaju navodi kako su obavljani konzervatorski radovi na grčkoj i rimskoj arhitekturi u Remetinom vrtu. Zanimljivo je što autori u knjizi Faros I ne citiraju svoj rad, kao ni rad Sare Popović u istome svesku Hrvatskog arheološkoga godišnjaka (Popović 2009), a koji se izravno nadovezuje na spomenuti rad Jeličić Radonić i Katić i odnosi se na isti prostor!? No što su autori radili od 1997. do 2003., ostaje nepoznato.

U prvome poglavlju, koji nosi naslov *Povijesni izvori o osnivanju kolonije Parana*, raspravlja se ne samo o povijesnim izvorima već i o onim epigrafskim. Autori nas ovdje žele uvjeriti kako je posve jasno da više ne treba razbijati glavu o višestoljetnoj dvojbi je li Dionizijev eparh došao u pomoć novoutemeljenoj parskoj naseobini u dnu Starogradske uvale iz Lissosa (Lješ u Albaniji) ili iz Isse (otoka Visa). To potkrepljuju mišljenjima Brune Kuntić-Makvić<sup>10</sup> i P. J. Stylianoua.<sup>11</sup> Oba autora, međutim, nisu baš eksplicitna po tom pitanju, pogotovo ne Stylianou.<sup>12</sup> Ono što zabrinjava je da autori ne donose i stavove drugih povjesničara koji se osvrću na Diodorovo djelo vezano uz osnutak Isse te radi usporedbe navodim samo noviju (inozemnu) literaturu i autore koji su također rezervirani po tom pitanju.<sup>13</sup>

No bez obzira na to, a pozadina svega je to što je Vis (Issa) doista bliži nego Lješ (Lissos), zasad nema arheoloških dokaza koji bi potvrdili da je na početku 4. stoljeća na Visu postojala grčka civilna ili vojna naseobina.

Vezano uz to autori navode (str. 13): »*Diodor opisuje kako je parska naseobina utemeljena uz obalu, odakle je protjerano autohtono stanovništvo domaćeg naselja*«. Njihov prijevod Diodora (str. 12) glasi: »*Za to su vrijeme Parani koji su napućili Far sami utemeljili i bedemima opasali grad uz obalu, a*

<sup>10</sup> Kuntić-Makvić 1995, 33–36.

<sup>11</sup> Stylianou 1998, 191–197.

<sup>12</sup> Stylianou 1998, 195–196; Vidjeti osvrt na Stylianouovu knjigu koji je napisao J. Cargill, a objavio American Journal of Philology 121/3, 2000, 483–487, gdje navodi Stylianouovo mišljenje kako je Diodor "second-rate epitomator" (str. 1), a njegovo djelo "a work of compilation, and hastily and incompetently carried out" (str. 132), što je šteta jer, kako navodi Stylianou, koristi prvorazrene izvore koji su izgubljeni, osobito Efor koji je prema Stylianouovu mišljenju pisao između 330. i 320. godine (str. 110) te navodi "most of the errors to be found in Diodorus' account were produced by inept abbreviation of his mostly reliable main source" (str. 124).

<sup>13</sup> Vanotti 1991; Fraser 1993; Lombardo 2002, 431–432, 440; Anello 1999, 122; Alfieri Tonini 2002, 211–216; Wilkes 1992, 114–115.

*barbare što su prije **ovdje**<sup>14</sup> (podebljao BK) obitavali pustili su netaknute stanovati u nekoj utvrdi koja je bila silno nepristupačna.* Međutim, izvorni Diodorov tekst u doslovnom prijevodu glasi: »U to vrijeme nastivši Hvar Parani prije naseljene barbare puste da budu na miru naseljeni na nekom preko mjere tvrdom mjestu, a sami uz more utemeljivši grad obzidaše ga.<sup>15</sup>« Bez obzira na razne varijante prijevoda ove rečenice na hrvatski i engleski, možemo zaključiti jedino kako Diodor piše da su Parani pustili domoroce da i dalje žive ondje gdje su živjeli, na nekoj nepristupačnoj uzvisini, i da su sagrdili grad uz more i ogradili ga zidom. Za sukob Diodor izričito kaže da je izbio nakon što su Grci sagradili svoj grad. Međutim, autori ispravljaju Diodorov tekst jer tvrde (str. 33–43) kako su na prostoru Remete vrta otkrili ostatke porušenog i spaljenoga ilirskog naselja od strane grčkih osvajača. I to u više navrata. Sumirat ću ono što autori navode:

1. str. 33: Ilirsko naselje na dubini 340 – 420 cm (crni sloj br. 13) ispod čega je sloj zdravice na koti 416 – 420 cm. Ilirske nastambe (množina) su od šiblja objepljenoga glinom. Pronađeni su djelovi ilirske keramike. Otisci drvenih stupova promjera 20 i 12 cm, zabijeni u rahlu crvenicu na koti 326 – 336 cm, na kojoj je ilirska keramika.<sup>16</sup>

2. str. 33: Porušeno ilirsko naselje (slojevi 13 – 11) na prostoru sonde VII, IX i djela sonde X (ca. 17,5 m<sup>2</sup>).

3. str. 33: Nakon povlačenja, domorodačko naselje obnavlja se na istome mjestu, što

<sup>14</sup> Na drugome mjestu (Kuntić-Makvić 1995, 33 i bilj. 2) umjesto ovdje, stoji ondje: „Za to vrijeme Parani koji su napučili Far sami utemeljili i bedemima opasali grad uz obalu, a barbare što su **ovdje** (podebljao BK) prije obitavali pustili su netaknute stanovati u nekoj utvrdi koja je bila silno nepristupačna“, dakle negdje drugdje na otoku, a ne u Starome Gradu.

<sup>15</sup> D. S. XV.14.1; Zahvaljujem se Milenku Lončaru sa Sveučilišta u Zadru koji je, na moju molbu, napravio ovaj prijevod. Zanimljivo je da se u engleskom sažetku donosi (str. 160) engleski prijevod prema Loeb izdanju iz 1954., koji odudara od hrvatskoga prijevoda koji objavljuju autori (str. 11). Dakle, za čitatelje na hrvatskom jeziku imamo jedan prijevod, a za čitatelje na engleskom drugi i drugačiji!

<sup>16</sup> Ta lončarija, prema njihovu mišljenju, predstavlja »konzervativnost autohtonog stanovništva« (str. 33).

potvrđuju tragovi koliba s kućnim lijepom »koji nije izgorio«.

4. str. 33: Vjerojatno povlačenje lokalnog stanovništva na Gradinu (Glavicu) koja je sagrađena »u svrhu obrane nizinskog naselja«.

4. str. 33: Povratak je bio koban. U novom ratnome okršaju posve strada naselje. Pronađene grčke strelice. Slično naselje postoji i u gradu Hvaru.

5. str. 35: Ilirsko naselje u više navrata strada i konačno je spaljeno (»mukotržno osvajanje autohtonog terena«).

6. str. 33: »Osnivanje parske kolonije zahtijevalo je niz ratnih akcija i sukoba žestokih razmjera **tijekom duljeg razdoblja**« (podebljao BK).

7. str. 36, 37: »Prve nastambe Parana«. Preživjeli domoroci povlače se na gradinsko naselje (točka 4 gore). Grčko je naselje od drvene građe (sloj 10 u kojem su pronadene crnopremazani korintski *skyphos*, kantaros, lucerna, tarionik, amfora kuhinjski lonci i dva novca Parosa).

8. str. 36–38: Nakon napada ilirske koalicije Dionizijev eparh i Parani pobjeđuju Ilire.<sup>17</sup>

9. str. 35–36: Domoroci predvođeni Iadasinima žestoko napadaju »tek uspostavljenom grčku koloniju«. Potvrda u Diodora.<sup>18</sup> Sloj 10 predstavlja »potpuno uništenje grčke naseobine«. On leži na sloju 11a koji predstavlja spaljeno ilirsko naselje.

10. str. 37–38: Grci podižu prve kamene kuće u sondama VII, IX i X, (sloj 5) »iznad brojnih slojeva više puta uništenog ilirskog naselja i prvog grčkog naselja«.

11. str. 69: Nakon nekog vremena, to jest »prije sredine 4. st. pr. Kr.« nastaje novi plan grada i istočni bedem na kojem su vrata grada branjena kulama. Zbog toga se prvotne grčke kamene kuće ruše i grade novi helenistički stambeni blokovi.

<sup>17</sup> Prema autorima (str. 36–37): »Tada je potpuno slomljen otpor ilirskog autohtonog stanovništva koje je, po ratnoj tehnici i materijalnoj kulturi, bilo manje razvijeno i lako ranjivo«.

<sup>18</sup> D. S. XV.14.2.

Prema ovome slijedu, od prvih grčkih drvenih kuća pa do prvih grčkih kamenih kuća, te do nove, sada urbanistički planirane gradnje s bedemom, koji negira prve grčke kamene kuće, nije prošlo više od oko 30 godina! Ako su se Grci toliko mučili da bi opstali u neprijateljskom okruženju, daleko od matične domovine, od čega su živjeli? Sirakužani im nisu mogli dugo biti od pomoći jer su od 383. do 375. ratovali s Kartažanima.

U poglavlju, koje nosi naslov *Pregled istraživanja Farosa* (str. 25–31), može se zamijetiti da autori ne navode niti koriste niti se kritički osvrću na istraživanja M. Nikolancija, J. Barbira, M. Zaninovića, N. Petrića, a niti na istraživanja vođena u sklopu međunarodnih projektata »Hvar – arheologija mediteranskog predjela« i »Adriatic Island Project«.<sup>19</sup> To pokazuje da ili ne znaju da oni postoje ili ih ignoriraju, što je sa znanstvenog stajališta neprihvatljivo. Ono što pak posebno zabrinjava jest potpuno ignoriranje radova kolegice Sare Popović<sup>20</sup> koji se izravno tiču teme o kojoj autori raspravljaju. Ti radovi su im svakako bili poznati jer je prvi (2009.) objavljen u istoj publikaciji (*Hrvatski arheološki godišnjak*), gdje i oni objavljuju rezultate svog rada (vidjeti bilj. 10 ovdje), a u drugom (2010.) jedan od autora ima članak u istome zborniku.<sup>21</sup> Jedan od najvažnijih rezultata koje iznosi Popović analiza je istočnog bedma Farosa, za koji autori tvrde da je izvorni bedem grčkoga grada iz 4. stoljeća. Naime, iskopavanja Sare Popović u jugoistočnom uglu Remete vrta pokazala su da je istočni bedem (označen brojem 1 na sl. 9, str. 142 u spomenutom članku iz 2010.) nalegao na zid (br. 3) koji nije fortifikacijskog karaktera, ali je očito iz grčkog razdoblja. Prema autorima, istočni je bedem Farosa građen »prije sredine 4. st. pr. Kr.« (str. 69) te bi stoga zid 3 trebao biti stariji. Iako autori na

tlocrtima na str. 40, 58 i 70 crtaju taj zid (br. 3 kod Popović), u tekstu ga ne spominju. Zid 3 je građen na isti način kao i grčki zid njihove prve stambene jedinice (onaj s naknadno dodanim pragovima koji autori prikazuju na slici na str. 73), a koji povezuju s gradnjom istočnog bedema. No Zid 3 to demantira pa je logično pretpostaviti da je istočni bedem izgrađen kasnije, najvjerojatnije krajem 3. stoljeća. Stoga, cijela priča o gradnji istočnog bedema sredinom 4. st. pr. n. e. nije »konačna« (str. 5), kako bi to autori htjeli.

Također, prema dokumentaciji kaptaža<sup>22</sup> ili cisterne (autori str. 86–89), koja se nalazi zapadno od Remete kuće, nema veze s njihovim drugim stambenim blokom (str. 40, 93). Naime, prema Popović,<sup>23</sup> sjeverno od kaptaže nije pronađen zid koji bi spajao kaptažu s predloženim drugim stambenim blokom na sjevernom dijelu (iako se kopalo do žive stijene). Stoga je vjerojatnije da je kaptaža bila javni objekt, a ne privatni u sklopu nekoga stambenog bloka. Osim toga, na str. 93 autori donose rekonstrukciju toga drugog stambenog bloka bez ikakvih dokaza ili indicija o postojanju južnog i zapadnog zida toga bloka, a ni sjeverozapadnog ugla. Još je upitnije da im taj stambeni blok služi kao modul za ostale (str. 109), o kojima nema baš nikakvih materijalnih dokaza. Uz to navode (str. 107) da dužina stambene jedinice iznosi 100 atičkih stopa, to jest 29,84 m, a širina 75, odnosno 21,78 m. No, atička stopa iznosi 29,57 cm,<sup>24</sup> što znači da je njihov stambeni blok veličine 29,57 x 22,17 metara.

Zbog toga nije moguće utvrditi koriste li graditelji Farosa baš atičku stopu ili neku drugu, na primjer, onu koja se koristila pri parcelaciji farske hore, a iznosi 30,26 cm.<sup>25</sup>

Osvrnut ću se još samo na jednu nedosljednost. Riječ je o novcu čije se fotografije nalaze na str. 37, 83, 118–121, 123, 125–127, 136, 139 i 155 – njih ukupno 51. No

<sup>19</sup> Kirigin 2004, 37–38, 66–73, 82–88; 2006, 23–26, 48–58, 64–67.

<sup>20</sup> Popović 2009; 2010a; 2010b.

<sup>21</sup> Jeličić-Radonić 2010; Da ne bi bilo zabune, autori u poglavlju Literatura (str. 215) navode drugi rad Sare Popović koji je objavljen 2012., a tiče se kamenoloma u Starogradskom zaljevu (Popović 2012).

<sup>22</sup> Popović 2010, sl. 15 i 16.

<sup>23</sup> Popović 2010, 142–143 i sl. 15 i 16.

<sup>24</sup> OCD, 942–943, s.v. Measures.

<sup>25</sup> Stančić, Slapšak 1988.

samo za njih 18 objavljenih na str. 127, a koji nose zajedničku legendu »*Tipovi ranih emisija farske kovnice*«, postoji katalog (str. 128–130). U katalogu se ne navodi u kojim je slojevima novac pronađen. Također, za dva tipa novca navodi se da je pronađen u sondi A, ali o toj sondi nigdje ne možemo nešto pročitati. Osim toga, dvije kovanice ne pripadaju farskoj, već parskoj kovnici (br. 10 i 11). Parskoj kovnici pripada i novac br. 12. koji ne potječe iz Remetinog vrta, već iz zbirke Arheološkog muzeja u Zagrebu (AMZ no. 3078), a koji je objavio Paolo Visonà,<sup>26</sup> što se ne navodi.

Pitam se zbog čega preostale 33 kovani- ce (slike nekih ponavljaju se dva puta bez obrazloženja) nisu kataloški obrađene? Čemu onda njihovo prikazivanje? Inače, identični je katalog već objavljen u radu Zdenke Dukat i Jasne Jeličić Radonić,<sup>27</sup> ali autori to ne spominju u kataloškim jedinicama u ovoj knjizi.

Na str. 155 nalazi se slika srebrnog novca Farosa tipa Zeus / jarac i legendom ΦΑΡΙ u *exergu* ili odsječku (a ne u egzarhu, kako to autori navode na nekoliko mjesta (str. 123, 125, 128)); usput, egzarh je titula bizantskog namjesnika. O tome tipu srebrnog novca Farosa autori u poglavlju »*Rane emisije farske kovnice*« (str. 117–130) uopće ne govore iako raspravljaju o istovremenome brončanom novcu istoga tipa.

Dodajmo i to da novac koji se spominje u tekstu, na primjer na str. 40 (inv. br. N 614), str. 42 (inv. br. N 614 i 647), str. 43 (inv. br. N 684), str. 53 (inv. br. N 440), str. 75 (inv. br. N 645) itd., nije kataloški obrađen, a neke kovanice ipak jesu: na primjer, str. 82 (inv. br. N 223, 224, 380, 381, 486, 492, 493). Kod ovih potonjih, u tekstu gdje ih se spominje, ne navodi se da su kataloški objavljene u knjizi, već to čitalac mora sam otkriti.

Ono što je posebno važno kada je posrijedi brončani novac Parosa, tipa Demetra / koza i sl., jest da, prema analizi Johna Tullyja,<sup>28</sup>

nema dokaza da se brončani novac kovao u ranom 4. stoljeću, već da se počeo kovati početkom helenizma. Ako bi autori doista mogli dokazati da je novac Parosa, iz nama nepoznate sonde A u Remete vrtu, doista iz ranog 4. stoljeća, onda bi to bio značajan dokaz da je parska kovnica izrađivala brončani novac početkom 4., a ne krajem tog stoljeća!

U ostalim poglavljima također ima dosta upitnih stvari koje prelaze okvir kraćeg kritičkog osvrtu. Stječe se dojam da autorima ne trebaju dokazi da bi došli do zaključaka koje ovdje iznose. Trebalo bi stoga napisati nešto što se zove »knjigom na knjigu«, no to ovom prigodom nije moguće.

Nakon svega što sam ovdje iznio, pitam se koja je svrha knjige? Djelo, prema mojem mišljenju, stvara više problema nego što ih rješava. No moguće je da će najavljena druga knjiga *Faros II* sve ove nejasnoće i dvojbe, a i druge iz ove knjige, pojasniti i primjereno dokumentirati.

## KRATICE

OCD – Oxford Classical dictionary, Oxford, 1996.

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<sup>26</sup> Visonà 1993.

<sup>27</sup> Dukat, Jeličić-Radonić 2012.

<sup>28</sup> Tully 2013.



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## **Auguste, son époque et l'Augusteum de Narona**

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Važni događaji, koji su obilježili jednu epohu, a katkad u značajnoj mjeri predodredili i daljnji tijek povijesnih zbivanja, oduvijek fasciniraju, kako historičare i kolege iz srodnih im struka, poput arheologa i povjesničara umjetnosti, tako i široku publiku. Iza takvih događanja redovito stoje državni i vladari zbog čijih je djela – ili nedjela – promijenjen život ne samo suvremenika (a nekima često i okončan) nego i budućnost narednih pokoljenja. O potezima mnogih povijesnih ličnosti, kao i o njihovim utjecajima na buduće generacije (ili pak razmjerima štete), redovito se vodi rasprava u stručnim krugovima, no možemo istaknuti i primjere prevladavajućeg konsenzusa u historičarskoj analizi i interpretaciji nekih događaja i ljudi. Kad je riječ o starome vijeku, uistinu bi bilo nemoguće naći povjesničara ili arheologa koji bi umanjivao važnost Augusta, prvoga rimskog cara, ili ocijenio nebitnim razdoblje njegove vladavine u širem kontekstu povijesti rimske države. Dapače, temelji države i sustava koje je uspostavio August u mnogo čemu su uvjetovali daljnji tijek europske, a time i svjetske povijesti. Među više od sto vladara, koji su duže ili kraće vladali golemim teritorijem

sve do 5. stoljeća, i konačne propasti zapadnog dijela Carstva, ne bi bilo lako izdvojiti, primjerice, 10 najvažnijih careva, ali nema dvojbe da bi se među odabranima uvijek našao August i to, vjerujem, po izboru svakog povjesničara. Tome nije samo razlog činjenica da je riječ o prvome caru. Iako bi mu samo i zbog toga pripadalo zavidno mjesto u svjetskoj povijesti, August je nedvojbeno bio državnik koji je svojom vladavinom i političkim odlukama oblikovao budućnost i postavio trajne temelje, ne samo države kojoj je bio na čelu već i cjelokupne europske civilizacije. Današnja Europa ne bi bila ovakva kakva jest da nije bilo carstva koje je stvorio August. To carstvo nije bilo samo jedan teritorij i državno-pravni okvir već i civilizacija na čijim se temeljima razvijala Europa proteklih 2000 godina. Stoga i ne čudi da je zadnjih godina diljem našeg kontinenta kulturna i znanstvena javnost obilježavala obljetnicu konca Augustove vladavine raznim izložbenim događanjima i simpozijima. Tom je prigodom izašao zavidan broj publikacija, od monografija i izložbenih kataloga do zbornika radova, a među njima i knjiga o kojoj je riječ u ovome prikazu. Obilježavanju smrti

te nadasve važne povijesne figure pridružila se i Hrvatska akademija znanosti i umjetnosti u suradnji s Hrvatskim katoličkim sveučilištem i francuskom Akademijom, odnosno Académie des Inscriptions et des Belles Lettres, koja je ujedno i izdavač. Zbornik sadržava radove predstavljene tijekom skupa, koji su u Parizu organizirale navedene institucije, naslovljenoga „Auguste, son époque et l'Augusteum de Naronā“ (August, njegova epoha i Augusteum u Naroni) i održanoga 12. prosinca 2014. godine. Zbornik, razumljivo, nosi isti naslov kao i skup, a sastoji se od 11 priloga i rasprava koje je pisalo 12 autora. Redom je riječ o relevantnim stručnjacima koji o navedenoj temi itekako imaju što reći.

Uvod su pisali akademici Pierre Gros i Emilio Marin, mogli bismo reći kako i dolikuje, jer je jedan od autora vodeći europski stručnjak za rimsku arhitekturu, posebice sakralnu, a drugi istraživač naronitanskog augusteuma i svakako najzaslužniji za njegovo predstavljanje, kako stručnoj tako i široj javnosti. Ističu, naravno, važnost toga lokaliteta, ne samo u kontekstu očuvanja i predstavljanja lokalne baštine nego i u širem povijesnom kontekstu. Augusteum u Vidu kod Metkovića je, prvenstveno zahvaljujući dobroj istraženosti, te opširnim (i ažurnim) publikacijama, za koje se pobrinula istraživačka ekipa i niz pridruženih stručnjaka, s pravom zauzeo mjesto među ključnim lokalitetima za razumijevanje razvoja carskog kulta i njegova značaja u rimskom društvu. Akademik Michel Zink je u ime Académie des Inscriptions et des Belles Lettres napisao pozdravno slovo u kojem se osvrće, kako na Augustov značaj u europskoj kulturi i povijesti tako i na važnost obilježavanja njegova doba, zapamćenog kao zlatnoga doba, i to ne isključivo u kolektivnoj memoriji samih Rimljana. Istaknuo je stoga i blisku suradnju dviju Akademija u organizaciji ovoga znanstvenog skupa te entuzijazam svih uključenih stručnjaka.

Širi pregled carskog kulta, s naglaskom na obrasce štovanja u samim svetištima, pruža nam John Scheid u svome prilogu naslov-

ljenom „Les Augustea et le culte des empereurs. Réflexions sur les rites célébrés dans ces lieux de culte“. Carski kult, iako sintagma razumljivo implicira religioznu komponentu, ipak je prije svega Augustov politički projekt. Deifikacija živih ljudi, pa ni vladara, nije u Rimljana, pogotovo tada još čvrstih baštinika republikanskih tradicija, mogla naići na sveopće odobravanje unatoč neospornoj Augustovoj popularnosti. Nije stoga čudno što je princeps imao drugačiji pristup od, primjerice, helenističkih vladara. U biti, nije se slavio August kao čovjek, već njegov Genij. Iz naše perspektive to se možda ne čini kao bitna razlika, no u očima njegovih suvremenika to se nije doživljavalo kao službena divinizacija, mada se one pronicljivije i manje mu sklone vjerojatno nije moglo zavarati. Unatoč hramovima i oltarima, koji su podignuti u njegovu čast diljem Italije ali i ostatka Carstva, i sam August izbjegava prisposodobiti sebe s bogovima pa o tome nema ni retka u njegovim Res Gestae, a ni drugi pisani izvori toga vremena ne opisuju štovanje koje mu je upućeno kao vjeru u njegovu božansku narav. U osnovi, upravo su ta svetišta najčvršći trag postojanja Augustova kulta već za njegove vladavine, ali postoje brojne nepoznanice i dubioze, pogotovo kad pokušavamo dokučiti obrasce štovanja i obrede. Neosporno je samo da se August nije smatrao božanstvom – barem za života – ali kult je ipak imao sve odlike štovanja boga, pa i prije Augustove apoteoze, odnosno trenutka kad je pokojnik postao i službeno Divus Augustus. U percepciji Rimljana izbjegnuta je divinizacija živog vladara – što bi se svakako kosilo s tradicijom – no propagandni je učinak morao biti golem jer je princeps, makar kroz svoj Genij ili Numen Augusti, doživljavao kao božanstvo (iako to formalno nije bio), odnosno personifikacija države. Takav princip carskog kulta održavao se sve do trećega stoljeća.

Nakon te teoretske rasprave, Isabel Rodà de Llanza u svom nam radu naslovljenom „La contribución del grupo estatuario de Naronā al conocimiento de la escultura romana en la época de Augusto“ raščlanjuje



važnost i doprinos naronitanskih skulptura u širem kontekstu proučavanja kamene plastike Augustova doba. Naglašava činjenicu da je riječ o nalazima koji pripadaju jasno definiranom kronološkom okviru, što uvelike olakšava praćenje i prepoznavanje mogućih umjetničkih utjecaja. Tako, među ostalim, zaključuje da naronitanski August, odnosno njegov torzo, može biti smatran arhetipom carskih torza u oklopu s prikazima Gorgone, Nereida i dupina.

Toni Glučina opisuje pak u svom radu „Narona Archaeological Museum – Today“ muzeološki okvir u kojem je danas predstavljen naronitanski Augusteum, kao i sažeti opis povijesti istraživanja. Ne smijemo, naime, zaboraviti da taj izniman arheološki lokalitet nije skriven od očiju javnosti, već u njemu posjetitelji mogu uživati u suvremenom i atraktivnom muzejskom postavu.

O Augustovu dobu na jadranskom prostoru kroz prizmu epigrafije, točnije u gradovima na jadranskim obalama, kako na zapadnoj tako i na istočnoj, piše Gianfranco Paci u članku pod naslovom „L'époque d'Auguste dans les documents épigraphiques des villes antiques autour de l'Adriatique“. Poveći broj natpisa na tome području datiranih u to vrijeme, a nerijetko baš i posvećenih Augustu, odnosno neposredno povezanih sa samim carem i njegovim djelovanjem, u osnovi nije začuđujući zbog postojanja brojnih rimskih kolonija čija se dedukcija zbila upravo u doba trijumvirata ili za Augustove vladavine. Na istočnoj obali Jadrana puni razvoj urbanog života de facto uostalom i počinje za Augusta. Zbog programirane urbanizacije i gradnje, posebice određenih javnih građevina i objekata (forum, kapitolij, augusteum, terme, teatar, amfiteatar, bedemi, akvedukt), ali i istoga veteranskog porijekla dobrog dijela populacije tih kolonija, stvara se kulturno srodan i iznimno sličan urbani pejzaž na čitavome prostoru. Uz brojne arhitektonske ostatke, epigrafija pruža najživlju sliku o urbanom procvatu za koji je zaslužan upravo August, što nam kroz svoj pregled zorno predočava G. Paci.

Politička propaganda i veličanje Augusta i njegove obitelji nije bilo ograničeno samo na građevine, kipove, epigrafičke spomenike i kovove novca. François Baratte u svome radu „Auguste et la famille impériale dans les arts précieux: propagande officielle, images privées“ osvrće se na jedan, možda manje uočljiv, ali važan i široko rasprostranjen segment primijenjene umjetnosti u službi uzdizanja vladara. Prikazi Augusta i njegove obitelji, posebice supruga Livije, nisu naime rijetka pojava na kamejama, od onih jeftinijih od staklene paste do vrhunski izrađenih primjeraka od poludragog kamenja. Potonji su, vjerojatno, rađeni pod okriljem carskog doma i dijeljeni kao skupi darovi pripadnicima društvene elite. Kameje od staklene paste su, više ili manje uspješno, imitirale skuplje verzije, a po svemu sudeći bile su vrlo popularne. F. Baratte se osvrće i na poznati nalaz kameje s prikazom Livije iz Narone, pronađen unutar augusteuma, te razrađuje ideju drugih autora da je taj primjerak mogao biti dijelom dekoracije namještaja u svetištu, ili pak posuda, a možda i zidova, odnosno građevinskih elemenata, primjerice stupova. Ne isključuje ni mogućnost da je ta kameja izvorno mogla biti na vijencu kojim se ukrašavala glava nekog od kipova, no dopušta i da je riječ o votivnom daru. Iako nam točan kontekst nije poznat, nema dvojbe da su ovakvi predmeti, direktno vezani uz augustejsku ikonografiju i nesumnjivo propagandnog karaktera, na svoj način doprinosili popularnosti novouspostavljenog režima.

Uz opće i regionalne teme, zbornik sadrži i studije lokalnog karaktera. Dok je John Scheid carskom kultu pristupio na sintetski način, u kronološkom smislu uglavnom u okvirima Augustova doba, iako primjere i analogije traži i u kasnijim vremenima, Marc Waelkens se u svome radu „The Emperor Cult at Sagalassos (Anatolia) from Augustus to Hadrian“ temom carskog kulta bavi na lokalnoj razini, konkretno u pizijskom gradu Sagalassosu (danas Aḡlasun u Anatoliji), ali kroz daleko širi vremenski raspon, odnosno od Augustova vremena do Hadrijanove vladavine. Riječ je o lokali-

tetu koji autor odlično poznaje jer je tamo bio voditelj istraživanja od 1988. do 2013. godine. Augustova vladavina, naravno, obilježava početak razvoja kulta, dok je Hadrijanovo doba izdvojeno kao kronološka odrednica zbog izgradnje velikog hrama koji je u konačnici posvećen Antoninu Piju.

Robert Turcan, jedno od velikih europskih imena kad je riječ o rimskoj povijesti, a posebice religiji, vraća čitatelje u problematiku Augustova održavanja na vlasti sa svojim člankom naslovljenim „Auguste ou le mystère du pouvoir“. Kako sam ističe, novi je vladar uspio uspostaviti novi politički režim ne imenovavši ga izrijeком i bez pravih zakonskih temelja. Naizgled je republika, nakon građanskih ratova i teških previranja, povratila svoj stari ustroj i uobičajene obrasce političkog djelovanja, a ni jednim zakonskim aktom nije spomenut, a kamoli uspostavljen, monarhijski režim. Oktavijan je postupno i potajice stvorio oblik vladavine koji se po svemu, osim po imenu, može usporediti s monarhijom, a u tome je vjerojatno uspio i zato što to nikad nije izričito naglasio. Službeno je, naime, uvijek isticao privrženost tradicionalnim zakonskim okvirima, predstavljajući se kao legalist i zaštitnik rimske republike (uz napomenu da za Rimljane sintagma *res publica* ima značenje države, ne nužno republike kako je mi danas pojmimo). Zapravo, August i nije tvrdio da je „oživio“ ili vratio republiku, ona jednostavno nije nikad niti prestala postojati, on ju je samo kao princeps učvrstio nakon građanskih ratova te vlast vratio narodu. Tijekom cijele svoje vladavine pažljivo je birao riječi, strogo pazeći da se u službenom diskursu ničim ne može naslutiti da je njegova moć apsolutna i da je u svojoj osnovi u svakom pogledu njegov režim koncipiran kao monarhijski. Pa ipak, takav je režim, bez pravnih temelja kojima bi se mogla opravdati nasljedna vlast, opstao pet stoljeća na zapadu i bitno duže na istoku. Važnu je ulogu u tako ambivalentno koncipiranom političkom sustavu igrao i carski kult, koji je u osnovi neodvojiv od vlasti kojoj pridaje božansku ulogu. I u tome je pogledu August odigrao

vještu ulogu: ironično bismo mogli primijetiti da je postao bog, no on je tu činjenicu ignorirao. Podizali su mu hramove, a on je tražio da u njima slave i Rim (*Romae et Augusto*). Naizgled ne priznajući da ima božansku ulogu, povezivanjem Rima i vladara sakralizirana je uloga potonjeg, a on je postao ljudska inkarnacija rimskog suvereniteta. Mada na istoku ni sam August nije odbijao iskazivanje božanskih počasti, u skladu s lokalnim tradicijama, u Rimu bi to u najmanju ruku bilo politički opasno. No zato se Genius Augusti počeo slaviti zajedno s *Lares Compitales* pa je Augustu, odnosno njegovu Geniju, narod u Rimu odavao počast na više od 800 mjesta. Tako je taj kult ubrzo postao sveprisutan i svakako doprinio popularnosti režima i razumljivo samog Augusta. I kao *pater patriae* preuzeo je ulogu koju u rimskoj obitelji ima *paterfamilias*. Kult je njegova Genija pružio mogućnost siromašnijim slojevima (*vicomagistri*), a nešto kasnije i oslobođenicima (*seviri Augustales*) da se neposredno uključe u sustav i dobiju nekakvu ulogu kroz štovanje vlasti. Tako je postignuta široka narodna potpora režimu i dodatno učvršćen društveni poredak. Odanost je masa omogućila propaganda, koja je pojedince prikazivala kao oličenje providnosti i jamca društvenog prosperiteta, onoga koji je osigurao mir, *Pax Augusta*, i čija je apsolutna moć poželjna nužnost. Stvorivši režim koji nikad nije imenovao, pod krinkom tradicionalnog sustava, August svoju vlast nije morao ozakoniti novim pravnim aktima, već se samo prilagodio postojećem okviru i dodao religijsku komponentu, također prilagođenu tradicionalnom svjetonazoru. Svoju je vlast nedvojbeno učvrstio, ali nakon njegove smrti Tiberije nije mogao sa sigurnošću računati da će nastaviti vladati na isti način pa niti da će uopće vladati. Upravo je on taj koji je osigurao kontinuitet Augustova režima i utoliko R. Turcan može ustvrditi da Tiberija možemo smatrati prvim utemeljiteljem Carstva.

Posljednja dva članka pripadaju autorima uvoda koji tako i na simboličan način zaključuju zbornik koji su nam predstavili.

Pierre Gros napisao je duži rad pod naslovom „Du "temple d'Auguste" de la basilique vitruvienne de Fano aux plus anciens Augustea“, tema razumljivo bliska vrsnom stručnjaku za rimsku arhitekturu. U opširnoj analizi bavi se jednim Vitruvijevim navodom (*De architectura*, V, 1, 6-10) u kojem pisac, opisujući baziliku koju je osobno gradio u Fanu na jadranskoj obali (*Colonia Fanensis*), spominje jedan aedes Augusti u apsidi. Taj podatak nije izmakao pažnji filologa, povjesničara umjetnosti i arheologa pa su za njega u stručnoj literaturi ponuđene različite interpretacije. Kako se većina stručnjaka danas slaže da taj podatak nije kasnija interpolacija, zbunjuje činjenica da se tako nešto spominje u pisanom izvoru koji nije mogao nastati nakon 20. godine pr. Kr., odnosno u vremenu kada August zdušno uvjerava Senat da mu ne pada na pamet ugroziti temelje republike i postojeće institucije, ali i kada još odbija i izbjegava svaku inicijativu koja bi se mogla protumačiti kao pokušaj divinizacije, barem u Italiji. Je li Vitruvije tim riječima samo opisao mjesto gdje se nalazio Augustov kip, ne pridajući nužno u tome kontekstu izrazu aedes religijsku konotaciju? Takvo razmišljanje nije neuvjerljivo jer se ista riječ može rabiti i za mjesto gdje zasjedaju dekurioni, ali ne može se zanemariti činjenica da se taj aedes ipak nedvosmisleno pripisuje Augustu. Uostalom, kada riječ aedes prati ime nekog božanstva u genitivu, nema dvojbe da je redovito riječ o svetištu. Čini se da je ipak riječ o nekom aneksu integriranom u prostor bazilike i povezanom s prostorom gdje se sastajao lokalni senat, no pitanje ostaje je li se u njemu veličao samo prvak države ili mu je namjena bila i kultne prirode. Vitruvije je bio blizak s Agripom, a potonji je već između 27. i 25. godine pr. Kr. (dakle, otprilike istovremeno kad Vitruvije opisuje svoj građevinski pothvat u Fanu) planirao postaviti Augustov kip u Panteonu na Marsovu polju. Od te je ideje odustao na intervenciju samog Augusta. P. Gros se zato pita postoje li u istome razdoblju u Italiji arheološke analogije za Vitruvijev aedes Augusti, tim više što Vitruvije u svome tek-

stu ničim ne implicira da je riječ o novotariji, odnosno o njegovoj osobnoj inicijativi. I drugi su autori dopuštali mogućnost da su se u municipijima i kolonijama vrlo rano počeli postavljati Augustovi prikazi kojima se odavala službena počast, iako im se nije pridavao religijski karakter. U svakome slučaju, 12. pr. Kr. dolazi do preustroja svetišta kompitalnog kulta, odnosno svetišta Lara pojedinih četvrti kojima se 7. pr. Kr. pridodaje kult Augustova Genija te se tako lukavo izbjegava deificirati samoga vladara, slaveći samo božanski duh koji ga vodi. P. Gros, citirajući razne autore i istraživače, opisuje bazilike, kako u Rimu tako i u Italiji, koje početkom nove ere zasigurno ili barem dosta vjerojatno raspolažu prostorom u kojem se čuva Augustov kip i koje bi načelno odgovarale opisu Vitruvijeve bazilike u Fanu. Čini se da se princip uspostavljen u Augustovo vrijeme nastavlja primjenjivati u bazilikama diljem Italije i tijekom vladavine sljedećih careva, ali uočljiva je tendencija da se počinju graditi i odvojeni objekti, odnosno hramovi isključivo posvećeni carskom kultu, kao što je to slučaj i u Naroni. Autor posvećuje dio članka i razvoju svećenstva, odnosno augustala, koji su u nekom obliku – vjerojatno kroz kompitalni kult – očito postojali i prije nego što će nakon Augustove smrti službeno zaživjeti *sodalitas Augustalium*. Ujedno, ističe razliku između samih hramova – augustea – i sjedišta augustala – *scholae* – dakle, istog imena kao i sjedišta profesionalnih udruga. Iako je njegova analiza ograničena na Italiju, članak završava kratkim pregledom stanja u provincijama i zaključuje da se iste, ili barem slične graditeljske tendencije, mogu pratiti od istoka do zapada.

Zadnji članak, „L'Augusteum de Narona: de la découverte du site à l'inauguration du musée, une décennie mémorable vue de l'Occident“, jedan je detaljni pregled akademika Emilija Marina o historijatu istraživanja samog lokaliteta, ali i o muzeološkoj valorizaciji augusteuma. Kao voditelj istraživanja i stručnjak koji je prvi predstavio rezultate toga iskopavanja stručnoj javnosti (a potom godinama pisao i uređi-

vao znanstvene publikacije o tim istraživanjima), ujedno i inicijator izgradnje muzeja, nema dvojbe da je bio najpozvaniji napisati ovaj osvrt. Čitatelji koje zanima priča što se krije iza ovoga arheološkog istraživanja (a iza svakog takvog istraživanja stoji jedna priča s brojnim akterima, koja nažalost često ostane neispričana) uz pregršt će informacija imati uvid i u bogatu znanstvenu bibliografiju, nastalu tijekom i nakon istraživanja.

Ovaj je zbornik nedvojbeno publikacija koju su sastavili afirmirani eruditi europskoga glasa.

Stoga je posebno zadovoljstvo primijetiti da su u njezinu nastanku sudjelovale i naše institucije. Sam podatak da je lokalitet koji

u ovome djelu zauzima počasno mjesto u našoj zemlji možda i nije toliko važan koliko činjenica da je riječ o profesionalno istraženom, adekvatno valoriziranom i stručno publiciranom arheološkom lokalitetu. Upravo je to ono što našim kolegama, a time i našoj znanstvenoj zajednici služi na čast, daleko više od puke činjenice da takvo mjesto stjecajem okolnosti postoji u Hrvatskoj. Njihov je profesionalizam i entuzijizam omogućio da Narona postane nezaobilazno mjesto u svakoj raspravi o nastanku i razvoju carskog kulta. Da nije bilo njihova truda i zalaganja, ova knjiga ne bi nikad izašla na svjetlo dana niti bi danas o tome lokalitetu pisala vodeća svjetska imena naše struke, citirajući publikacije objavljene u Hrvatskoj.



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## dr. sc. Janko Belošević u Arheološkome muzeju Zadar

U nedjelju, 6. ožujka 2016., u 87. godini života napustio nas je dr. sc. Janko Belošević, profesor emeritus Sveučilišta u Splitu i Sveučilišta u Zadru.

Od početka 2016. godine, kao i ranijih mjeseci prošle godine, pa sve do 3. ožujka, često smo razgovarali telefonom, a višekratno sam ga posjećivao u njegovu domu u Širokoj ulici u Zadru. Uvijek me je srdačno primao u svoju obitelj. Prije susreta u njegovu domu, redovito bih se najavio telefonom. Tako je trebalo biti i 3. ožujka 2016. Nekoliko sam ga puta nazivao iz Arheološkoga muzeja, ali govorni me je automat obavještavao da je linija traženoga broja u kvaru. Toga je četvrtka kiša nemilosrdno padala. Nešto me je tjeralo da odem u posjet, iako bez najave, i po iznimno ružnom vremenu. Iz Muzeja sam brzo, gotovo trčeći, došao pred njegova vrata i pozvonio. Na vratima se pojavila štovana gospođa Olga i ljubazno me primila. Odmah sam se ispričao na ovakvom dolasku i s vrata vidio profesora kako sjedi za svojim radnim stolom. Znatiželjno me je pogledao i rukom pokazao da sjednem. Uslijedio je dug razgovor. Profesor se prisjećao teških dana u svome

životu i mnogih nepravdi koje su ga pratile. Naravno, najviše smo razgovarali o arheologiji i o onome što ga je tištalo. Potužio se da mu lijeva ruka trne i pokazao mi kako vježba malom lopticom u šaci. Bio je vrlo živahan u razgovoru, ponekad ubacujući po-



Privlaka, 1981., J. Belošević (snimio I. Mirnik).

neku šalu. Onda mi je odjednom naglašeno rekao: „Znate, moj šjor Miro, odlučio sam prekinuti sve veze sa Sveučilištem u Zadru i u cjelosti se posvetiti svojoj obitelji. Moja klepsidra je istekla“.

Poznato je da je nešto više od godinu dana poboljšavao i bio u zadarskoj bolnici, ali se navedenoga nadnevka ničim nije moglo naslutiti da će to biti naš zadnji razgovor. Zapravo, to je bio njegov posljednji razgovor s nekim arheologom. Na odlasku sam mu uručio svoj članak o nakitu iz jednoga groba u stolnici Sv. Jakova u Udbini. Drhtavom ga je rukom uzeo i nakratko pregledao. Do posljednjeg je trenutka bio obuzet arheologijom, posebice onom ranosrednjovjekovnom-nacionalnom. Još jednom je ponovio da mu je žao što nije bio u mogućnosti izvršiti svoje obveze vezane uz publikaciju o skupnom nalazu kasnosrednjovjekovnoga novca i nakita iz Pridrage. Izrekao je i sumnju da neće završiti mnoge započete radove, posebice one koji se tiču podrijetla Višeslavove krstionice i cjelovite obrade arheološke građe s nalazišta Crkvina u Galovcu.

U međuvremenu, dok smo razgovarali, gospođa Olga je otišla na tržnicu i nedugo potom se vratila kući. Ostavio sam prof. Beloševića u dobrom raspoloženju u njegovoj radnoj sobi, punoj knjiga.

Nažalost, rano ujutro narednog dana nastupilo je ono najgore, pa je profesor u teškom stanju završio u bolnici i nakon tri dana preminuo.

Prigoda je prisjetiti se njegova rada i djelovanja u Arheološkome muzeju Zadar. Puna dva desetljeća (1959. – 1979.) bio je djelatnik toga Muzeja. S tom je ustanovom surađivao i nakon prelaska na Filozofski fakultet, a posebice nakon odlaska u mirovinu.

Dr. Janko Belošević, profesor emeritus, rodio se 1929. u Slatini Svedruškoj kod Krapine. Osnovnu je školu pohađao i završio (četiri razreda) u Petrovskom. Klasičnu je gimnaziju završio u Zagrebu, a u istome je gradu na Filozofskom fakultetu 11. srpnja 1958. diplomirao arheologiju i povijest.

Na zadarskom Filozofskom fakultetu doktorirao je 11. svibnja 1977. na temu „Problemi geneze i razvoja starohrvatske materijalne kulture s posebnim obzirom na rezultate istraživanja nekropola u sjevernoj Dalmaciji“ (mentor prof. dr. sc. Zdenko Vinski).

Prema preporuci akademika Grge Novaka, 1. studenoga 1959. zaposlio se kao kustos Srednjovjekovnog odjela Arheološkoga muzeja u Zadru. U toj je ustanovi stekao sva muzejska zvanja, od kustosa do muzejskoga savjetnika. Ujedno je bio i voditelj Srednjovjekovnog odjela i v. d. direktora (1978. – 1979.). Više je godina bio član uredništva *Diadore*, glasila Arheološkoga muzeja Zadar, kao i urednik nekoliko muzejskih publikacija.

Svakako treba spomenuti da je godinama bio filatelist, planinar i lovac.

Do njegova dolaska u Zadar, u Arheološkome muzeju gotovo da i nije bilo istraživanja ranohrvatskih grobova. Na zadarskom su području takva istraživanja provodili djelatnici Muzeja hrvatskih arheoloških spomenika iz Splita (S. Gunjača, D. Jelovina i D. Vrsalović). Ipak, hrabro je tijekom 1964. i 1965. krenuo s istraživanjima takvih groblja u Ravnim kotarima, na položaju Glavčurak u Kašiću, gdje je i otkriveno slojevito ranosrednjovjekovno groblje. Tijekom toga razdoblja na ovome je nalazištu pronađeno nekoliko iznimno vrijednih istočnogotskih nalaza (među ostalima i dvije srebrne lučne spone, danas izložene u Antičkoj zbirci zadarskoga Arheološkoga muzeja). Godine 1967. istraživao je ranohrvatsko groblje na položaju Maklinovo brdo u Kašiću. Bio je to nastavak radova iz 1955. i 1957. koje je vodio prof. Mate Suić. Pedesetak metara jugoistočno od toga položaja, u vrijeme istraživanja kosturnoga groblja, slučajno su otkriveni ostaci paljevinskoga groblja. Bilo je to prvo ranosrednjovjekovno žarno groblje, zabilježeno na prostorima nekadašnje zajedničke države.

Nakon pokusnih istraživanja na položaju Ždrijac u Ninu 1967., uz manje prekide, pa sve do 1977., vodio je sustavna istraživanja toga ranohrvatskoga groblja. Provedeno je šest istraživačkih kampanja i istraženo 337 grobova s više od tisuću raznih predmeta. Riječ je o najvećem i najznačajnijem groblju iz vremena druge polovice 8. do prve polovice 9. stoljeća, koje je dosad istraženo na prostoru ranosrednjovjekovne hrvatske države. Kao izravan svjedok, od studentskih dana, pratio sam mnoge velike napore koje je profesor uložio da bi pronašao sredstava za istraživanja ovoga ranohrvatskoga groblja.

Istraživanja većeg srednjovjekovnoga groblja u okolici Sv. Križa izveo je od 1968. do 1970., a onoga u Staroj Povoljani nešto ranije, dok je 1969. i 1970. cjelovito istražio Crkvu Sv. Ivana Evanđeliste u Biogradu na Moru, koja je pripadala muškome benediktinskom samostanu (11. stoljeće). Pod njegovim vodstvom (1971.) proveden je konzervatorski zahvat i prezentacija toga iznimno značajnoga hrvatskog, srednjovjekovnog, sakralnoga spomenika.

Još kao djelatnik Arheološkoga muzeja, provodio je istraživanja ranohrvatskih i srednjovjekovnih groblja u Biljanima Donjim (Trljuge), Stankovcima (Klarića kuće), Smilčiću (Kulica), Morpolaci (Sv. Petar) te započeo istraživanja na položaju Crkvina u Galovcu.

Zaposlivši se u zadarskom Arheološkome muzeju, sudjelovao je na istraživanjima nekoliko arheoloških nalazišta u Bosni i Hercegovini (Čipuljići kod Bugojna, Rakovčani kod Prijedora, Mistihalj kod Bileće, Police i Ljubomir kod Trebinja) koja su vodili Zemaljski muzej Bosne i Hercegovine iz Sarajeva i Smithsonian Institut iz SAD-a.

Sudjelovao je na arheološkim istraživanjima nekoliko hrvatskih nalazišta, kao što su Muline, Bribir, Knin (Greblje), kao i na nekoliko položaja u gradu Zadru tijekom više godina.

Višekratnim rekognosciranjem širega zadarskog područja otkrio je niz srednjovjekovnih nalazišta (groblja, crkve i dr.).



Knin-Greblje 1967., s lijeva na desno: Janko Belošević, Zdenko Vinski i Nenad Cambi (Fotodokumentacija AMZ).





Vučedol, 1981., s lijeva na desno: Janko Belošević, Zrinka Šimić, Mate Suić, Aleksij Škunca i Željko Rapanić (snimio: I. Mirnik).

Spomenutim je istraživanjima prof. Belošević u mnogome obogatio fundus Srednjovjekovnoga odjela u kojem se do njegova dolaska u Muzej nalazio vrlo mali broj predmeta materijalne kulture. Posebnu je pozornost posvetio inventiranju i sustavnoj obradi novopronađenih arheoloških predmeta.

Posebice je zaslužan što su mnogi primjerci kasnosrednjovjekovnog novca iz ostave u Pridragi dospjeli u Arheološki muzej u Zadru.

Uz mnoge poslove, koji su vezani uz slojevitost muzejsku djelatnost, sudjelovao je na pripremanju raznih tematskih izložbi, zatim u sređivanju i objelodanjivanju novopronađene arheološke građe. Glede izložbene djelatnosti, najveći je njegov rad na realizaciji stalnog postava Srednjovjekovne (starohrvatske) zbirke u sadašnjoj zgradi Muzeja, koja je svečano otvorena 29. studenoga 1974. godine. Duskora je taj stalni postav bio podložen prosudbi nekompetentnih političara pa je prof. Beloše-

vić imao i neugodnih političkih poteškoća. Kao i uvijek, i tada je nepokolebljivo ostao na svojim stručnim i znanstvenim stajalištima. Valjalo je to izdržati.

Uz navedeno, radio je i na stalnom postavu (srednji vijek) Područne arheološke zbirke u Ninu (1969.) i Biogradu (1968. – 1969.).

Isticao se u kulturno-obrazovnim djelatnostima Arheološkoga muzeja (uz Srednjovjekovni odjel, vodio je i Kulturno-prosvjetni odjel). Mnogi se sjećaju njegovih vodstava po Muzeju, Zadru, Ninu, Biogradu na Moru i Ravnim kotarima. Predavao je i na tečajevima za turističke vodiče. Studenti arheologije (ne samo zadarski) mogli su mnogo naučiti o metodologiji istraživanja ranosrednjovjekovnih grobova i o njihovoj dokumentaciji.

Sustavno se stručno-znanstveno usavršavao, posjetivši mnoge značajne arheološke ustanove u Hrvatskoj i bivšoj Jugoslaviji. Ostvario je više studijskih putovanja po Europi: po Grčkoj, Poljskoj, Italiji, Čehoslovačkoj, Njemačkoj, Švicarskoj i dr.

U svome stručno-znanstvenom radu bavio se arheologijom ranoga srednjeg vijeka, problematikom seobe naroda i problemom geneze te razvoja materijalne i duhovne kulture Hrvata. Određenu je pozornost posvetio ranokršćanskoj i predromaničkoj sakralnoj arhitekturi i crkvenom namještaju.

Referatima je sudjelovao na mnogim znanstvenim skupovima, kongresima i simpozijima u Hrvatskoj i izvan nje. Vrlo je često prof. Belošević rezultate svojih terenskih i stručno-znanstvenih istraživanja predstavljao na javnim predavanjima u Zadru (Povijesno društvo Zadar, Ogranak Matice hrvatske), Zagrebu, Ninu i Biogradu na Moru, Karlovu sveučilištu u Pragu, Arheološkom Institutu ČSAV u Brnu, Arheološkomu institutu u Nitri, Filozofskom fakultetu u Ljubljani i dr.

Tijekom ukupnoga muzejskog rada sustavno je surađivao s medijima u Zadru i Hrvatskoj i na taj način popularizirao hrvatsku srednjovjekovnu kulturu.



Prelaskom na Filozofski fakultet u Zadru 1979., nastavio je surađivati s Arheološkim muzejom, a ta se suradnja nastavila i nakon odlaska u mirovinu. I ovom prigodom ističemo njegov veliki angažman u pripremanju i tiskanju velebne monografije „Starohrvatsko groblje na Ždrijacu u Ninu“ koja je kulturnoj i znanstvenoj javnosti predstavljena u Svečanoj dvorani Sveučilišta u Zadru 2007. godine. Prošli smo težak put do nastanka te monografije, a 2008. godine ponosno sam svjedočio uručanju Godišnje nagrade Hrvatskoga arheološkoga društva u Zagrebu za tu knjigu.

Surađivali smo na istraživanju okoliša Sv. Križa u Ninu, uređenju arheološkoga nalazišta u Galovcu i dr. Redovito je obilazio istraživanja koja sam vodio u Zadru, Starigradu Paklenici, Velimu, Radašinovcima, Biogradu na Moru i dr.

Prof. Belošević je u Zadru proveo 57 godina svoga života i rada. Kao jedinome arheologu u to vrijeme, koji se je bavio srednjovjekovnom materijalnom kulturom, nije mu bilo lako djelovati u našem gradu. U mnogo čemu je bio usamljen. Unatoč tomu, već je kao muzealac imao zapažene rezultate. Odavde je uspio ostvariti raznovrsne dodire s mnogim poznatim (prvim) imenima koja su se u inozemstvu i u nekadašnjoj zajedničkoj državi bavila slavenskom arheologijom. S njima se družio, dopisivao i razmjenjivao znanstvene članke te dobio i mnoge druge publikacije za Knjižnicu Arheološkoga muzeja, ali i za svoju knjižnicu. Mnogi strani arheolozi, koji su se bavili srednjovjekovnom arheologijom, posjetili su Zadar, a domaćin im je bio upravo dr. Belošević.

I ovoga puta ističemo višegodišnju suradnju s prof. Z. Vinskijem iz Zagreba koji ga je i usmjerio da se bavi arheologijom „Seobe naroda i hrvatskoga srednjega vijeka“. Taj mu je veliki hrvatski znanstvenik otvorio mnoga vrata u inozemstvu i nekadašnjoj državi. U znak zahvalnosti za višekratna dobra djela, prof. Belošević mu je posvetio svoju monografiju „Materijalna kultura Hrvata od 7. do 9. st.“ (1980.). Ta je knjiga

izazvala veliku pozornost u našoj i europskoj znanosti. Mnoga su je poznata imena s područja ranosrednjovjekovne (slavenske) arheologije visoko ocijenila u više znanstvenih i stručnih časopisa. Sve te ocjene imali smo prilike vidjeti i pročitati.

Grad Zadar bio je njegova velika ljubav. Uza sve poteškoće, u njemu je postigao sjajne rezultate na hrvatskoj i europskoj razini. Svojim je primjerom pokazao da se uz veliki trud mnogo može učiniti i u manjoj sredini.

Njegova je velika ljubav i grad Nin. Učinio je, zaista, mnogo za taj hrvatski povijesni grad.

Obitelj, brojni Zadrani, profesori Sveučilišta u Zadru, kolege i prijatelji iz Splita, Šibenika i Zagreba, zadarski kulturnjaci i nekadašnji profesorovi studenti, oprostili su se od njega 8. ožujka 2016. na Gradskome groblju u Zadru. Bio je to veličanstven i dostojanstven sprovod, a obred je predvodio mons. Josip Lenkić, generalni vikar Zadarske nadbiskupije. Biranim je riječima govorio o našem profesoru, istaknuvši pritom da je redovito nazočio misnim slavljinama u Crkvi Sv. Šime koja je on vodio. Uz klapsku se pjesmu u ime svih prijatelja od prof. Beloševića oprostio prof. dr. sc. Ante Uglešić, donedavni rektor Sveučilišta u Zadru, sada pročelnik Odjela za arheologiju, a prije svega njegov dugogodišnji suradnik i prijatelj.

Zaključno ističemo da je prof. Belošević poznato i poštovano ime u europskoj i uopće slavenskoj srednjovjekovnoj arheologiji, a za života svakako prvo ime u nacionalnoj, hrvatskoj arheologiji. Uz veliku zahvalnost na svemu učinjenom, znat ćemo (znat ću) sačuvati uspomenu na toga iznimnog čovjeka, kulturnoga djelatnika i znanstvenika.

Neka mu je laka hrvatska zemlja u sjeni i tišini čempresa na zadarskom Gradskom groblju, daleko od njegova rodnog Hrvatskoga zagorja, za kojim je nostalgично čežnuo.

