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Књига XXVI

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for the study of the culture of eastern Serbia and the adjacent areas

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Књига XXVI

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THE CHRONOLOGICAL FRAME OF THE BUBANJ-HUM I GROUP AND THE CULTURAL AND CHRONOLOGICAL POSITION OF ITS SITES WITHIN THE TIMOK VALLEY

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Abstract: *The goal of this paper is to determine the cultural and chronological relations between the Early Eneolithic sites in the Timok Valley and the sites of the Bubanj – Salcuța – Krivodol complex in other regions of the central Balkans through new absolute dates and the analysis of stylistic and typological elements of pottery that originates from the Timok Valley, with a particular focus on the site of Kmpije in Bor.*

Key words: *central Balkans, Early Eneolithic, Kmpije site, absolute dates, XRF analyses of pottery, interactions of BSK bearers.*

Апстракт: *Циљ чланка је да се дефинишу културни и хронолошки односи између раноенеолитских локалитета у Тимочкој Крајини и локалитета Бубањ – Салцуца – Кривидол комплекса у другим регијама централног Балкана помоћу нових апсолутних датума и анализе стилско-типолошких елемената керамике из Тимочке Крајине, са посебним освртом на локалитет Кмпије у Бору.*

Кључне речи: *централни Балкан, рани енеолит, локалитет Кмпије, апсолутни датуми, XRF анализа керамике, међусобне везе носилаца БСК комплекса.*

THE RELATIVE CHRONOLOGY OF THE EARLY ENEOLITHIC IN THE CENTRAL BALKANS

The cultural milieu of the Eneolithic is not unique in the entire territory of Serbia due to different geographical features and socio-cultural characteristics. According to N. Tasić, the Eneolithic period in Serbia can be divided into Early, Middle, and Late, while some of these phases have several sub-phases (Tasić 1995, 18, 28-35). The Early Eneolithic in the central Balkans, according to this author, is represented by the Bubanj I-Salčuța II culture, the Middle Eneolithic is represented by the Černavoda III and Kostolac – Kocofeni cultures, and the Late Eneolithic by the Vučedol culture. The given relative chronology is mostly confirmed by the results of recent excavations at the sites of Bubanj and Velika Humska Čuka, save for the Late Eneolithic, where instead of the Vučedol culture, the approximately simultaneous Bubanj-Hum II culture is represented, whose stylistic and typological characteristics of pottery have elements reminiscent of the Vučedol culture pottery (Bulatović, Milanović 2020; Bulatović, Gori, Vander Linden 2020).

Such relative chronology is not uniform in all regions of the Balkan Peninsula. Therefore, the period that corresponds to the Early Eneolithic in Serbia is marked as the Late Eneolithic in Bulgaria (Todorova 2003, 288-289), yet similarly culturally defined in both regions. Namely, the terms used to mark this cultural complex are almost identical, with the main difference being the order of the eponymous sites in the name. Thus, Garašanin and Simoska mark the complex as Bubanj-Hum I – Krivodol – Salčuța (Garašanin, Simoska 1976, 9), Garašanin and Đurić define it as Salčuța – Krivodol – Bubanj (Garašanin, Đurić 1983, 12), and within the Serbian archaeological literature the term Bubanj – Salčuța – Krivodol is commonly used (Tasić 1995, 29). On the other hand, in Bulgaria, this complex is defined as the Krivodol- Salčuța -Bubanj (Todorova 2003, 288-289), or Krivodol – Salčuța – Bubanj Hum Ia (Georgieva 2005, 144).

According to numerous authors, the Bubanj-Hum Ia culture, which is the representative of the BSK complex in most of Serbia, is parallel to the Salčuța II phase (Garašanin, Simoska 1976, 20; Tasić 1995, 27). Judging by the stratigraphy and finds from new excavations at the sites of Bubanj and Velika Humska Čuka, the Bubanj-Hum I cultural group lasted longer than previously thought and was apparently contemporaneous with several phases of the Salčuța culture.

Although experts have been dealing with problems of the Early Eneolithic in Serbia for more than half a century, there were no answers to the questions regarding the absolute dates related to the beginning and end of this culture up until recently, as well as its chronological relation to the neighboring cultures in terms absolute chronology.

According to N. Tasić, as well as other contemporary authors, the Early Eneolithic in the central Balkans is marked by the Bubanj – Salčuța – Krivodol complex (Tasić 1979, 87-114; Tasić 1995, 29; Bulatović, Milanović 2020), which encompassed

the territory of almost the entire present-day Serbia south of Sava and Danube, present-day North Macedonia, northwestern Albania, the northern Aegean coast, Oltenia and present-day western Bulgaria. In Serbia, this complex is represented by the Bubanj-Hum I group, which was defined several decades ago (Garašanin 1958).

ABSOLUTE CHRONOLOGY OF THE BSK COMPLEX

Until recently, the absolute chronology of the Early Eneolithic culture in the central Balkans, i.e. the BSK complex, was based exclusively on absolute dates from sites in western Bulgaria, mostly with a very high unreliability up to 280 years, which made it difficult to define a more precise chronological scope of this period in absolute dates (Boyadziev 1995, 184-185, tab. 5; Bojadziev 1998). Shortly thereafter, however, the first dates for this complex appeared with minor deviations (Lazarovici 2006, 282), which, on the other hand, were quite contradictory since the relative chronology of the Salcuța group, which was defined earlier by stratigraphy, did not match with the absolute chronology.¹

The Salcuța group, which is the regional “representative” of the BSK complex in the territory of Oltenia, can be positioned between the 46th and the 43rd-century calBC according to the aforementioned dates (Lazarovici 2006, 282, Figs. 10 and 11).

A similar situation is observed in northwestern Bulgaria, where the lower chronological frame of the BSK complex, i.e. the beginning of the Galatin and Salcuța IV groups, which marked the end of the unity of the BSK complex, was defined on the basis of more recent absolute dates. Dates from northwestern Bulgaria (Valentinova 2016; Ganetsovski 2016) indicate that these new cultural groups certainly existed in the 40th-century calBC, in which, apart from some sherds attributed to the BSK complex, ceramics with different stylistic and typological characteristics dominate, which led some authors to define the particular groups Salkuca IV (Berciu 1961; Roman 1971) and Galatin (Georgieva 1987). The upper chronological frame for the BSK complex in northwestern Bulgaria could be defined by the absolute date from Djakovo (5620±100 BP) although it has an extremely high uncertainty of 100 years (Boyadzhiev 1995, tab. 5). This date in calibrated dates is 4704-4326 BC (93.8% probability),² which would statistically mostly correspond to the period of 46th-45th century BC, which approximately fits to the time of the beginnings of the Salcuța group in Oltenia (Lazarovici 2006). Therefore, according to the available absolute dates, the BSK complex in western Bulgaria lasted from the 46th-45th century calBC to the 40th century calBC.

¹ Namely, according to absolute dates, the phase Salcuta III is older than the Salcuta IIb (Lazarovici 2009, Figs. 10 and 11).

² The date is calibrated by OxCal v4.4 method (<https://c14.arch.ox.ac.uk/oxcal/OxCal.html#> accessed on November 4th 2023.).

No	Site	Lab. cod	BP	BC	Published	Culture
1	Spasovine	AA I13502	5706±25	4577-4509 (68%CalPal)	Bulatović et al. 2020	Late Vinča/BH I
2	VHČ	DeA-42045	5666±41	4607-4440 (89.4%)	This article	BH I
3	Vinča	NOSAMS -67686	5650±30	4519-4463 (CalPal 68%)	Tasić et al. 2015	Late Vinča
4	Grivac	Z-1507	5600±100	4557-4367 (68%, CalPal)	Borić 2009	Late Vinča
5	Velika humska čuka	DeA 21482	5571±39	4447-4373 (68% CalPal)	Bulatović et al. 2020	BH I
6	Bodnjik	OxA-?	?	4468-4347 (95%)	Živanović 2013	BH I
7	Velika humska čuka	DeA 26775	5539±32	4448-4369 (68.2%) 4450-4340 (95.4%)	Bulatović, Milanović 2021	BH I
8	Kmpije, Bor	Dea-42906	5513±34	4445-4270 sigma 2 4368-4332 (75.4%)	This article	BH I
9	Begov most, Staničenje	Dea-43028	5511±26	4450-4270 sigma 2 4403-4329 (80.2%)	This article	BH I
10	Velika humska čuka	DeA-32630	5499±30	4362-4329 (92%) 4450-4260 sigma 2	This article	BH I
11	Bubanj	SUERC 50666	5452±28	4351-4257 sigma 2	Bulatović, Vander Linden 2017	BH I
12	Vinča	OxA-24922	5451±35	4354-4244 sigma 2	Borić 2015	Tisapolgar/ Bodrogkereštur BH I
13	Bubanj	MAMS 31460	5445±24	4344-4260 sigma 2	Bulatović et al. 2018	BH I
14	Bubanj	Lyon 13690	5440±30	4346-4246 sigma 2	Bulatović et al. 2018	BH I
15	Bubanj	Lyon 13689	5435±30	4343-4245 sigma 2	Bulatović et al. 2018	BH I
16	Bubanj	SUERC 50670	5433±30	4342-4245 sigma 2	Bulatović, Vander Linden 2017	BH I
17	Velika humska čuka	DeA 26774	5416±38	4350-4070 sigma 2 4304-4250 72.6%	Bulatović, Milanović 2021	BH I
18	Vinča	OxA-24923	5335±34	4314-4048 sigma 2	Borić 2015	Tisapolgar/ Bodrogkereštur BH I
19	Bubanj	DeA-43018	5300 ± 26	4240-4040 sigma 2 4179-4046 (71.8%)	This article	BH I
20	Viminacium, Rit	Ua-63955	5271±31	4230-3990 68.2% 4230-3980 sigma 2	Bulatović et al. 2019	BSK/Tisapolgar (?)
21	Viminacium, Rit	DeA-14237	5111±34	3866-3812 (62%) 3980-3800 sigma 2	Bulatović et al. 2019	Salkuca IV
22	Bubanj	MAMS 31463	5087±25	3960-3800 sigma 2 3881-3800 (61.8%)	Bulatović et al. 2018	B-H I (?)
23	Viminacium, Rit	DeA-14234	5080±33	3877-3804 (76.1%) 3960-3797 sigma 2	Bulatović et al. 2019	Salkuca IV
24	Velika humska čuka	DeA-19350	5064±36	3960-3780 sigma 2	Bulatović, Milanović 2021	BH I
25	Mokranjske stene	MAMS 31467	4875±23	3698-3638 sigma 2	Bulatović et al. 2018	BH I/Salcuta IV/ Galatin groups

Table 1. Absolute dates of the Late Neolithic and the Early Eneolithic sites in the central Balkans.

THE ABSOLUTE CHRONOLOGY OF THE BUBANJ-HUM I GROUP

As aforementioned, during the Early Eneolithic, the territory of present-day Serbia south of the Danube and the Sava rivers was inhabited by a population that was the bearer of the BH I group,³ which is one of the three main cultural groups of the so-called BSK complex. Although there was no absolute date for this complex in the territory of Serbia up until recently, through several different projects,⁴ we currently possess dozens of absolute dates, some of which are presented in this paper in order to provide an appropriate picture of the absolute chronology of the BSK complex and its chronological relations to the Early Eneolithic cultures outside this territory.

According to these dates, the chronological beginnings of the BH I group, meaning the BSK complex in the central Balkans, could be positioned into the period of the second half of 46th century calBC, or the first half of the 45th century calBC (tab. 1/2). The date from the site of Spasovine (tab. 1/1) could also be treated as a date for the beginning of the BH I group since some of the ceramic vessels from a dated structure already possess stylistic and typological elements of the BH I group. In that case, the genesis of the BH I group began as early as the middle of the 46th century calBC. According to the currently available dates, the lower chronological frame of the BH I group is somewhat lower than that of the BSK complex in Oltenia or western Bulgaria. A date from the site of Velika Humska Čuka in the South Morava Valley (tab. 1/24), acquired from the most recent floor of house 3, from which the finds of pottery corresponding to the BH I group originate, indicates that the population that used pottery of these stylistic and typological features occupied the site even during the 39th century calBC. However, there is an even lower date for the cultural layer with ceramic finds that still possess characteristics of the BH I group within the Timok Valley, which will be discussed in the following chapter.

CULTURAL AND CHRONOLOGICAL FRAME OF THE BUBANJ-HUM I GROUP IN THE TIMOK VALLEY

Similar to many regions of the central Balkans, the region of Timok Valley was also inhabited by the bearers of the Bubanj-Hum I group during the Early Eneolithic. Although this complex, with all the cultural groups that comprise it, Bubanj-Hum I, Salcuța, and Krivodol, covered a vast territory, it had almost identical stylistic and typological characteristics of ceramics, as well as other finds (Tasić 1979; Garašanin, Đurić 1983, 12-13), with possible minor regional characteristics. Thus, there are short beakers

³ The abbreviation BH I will be used further in the text.

⁴ We would mention *THE FLOW* project financed by the Science Fund of the RS, and the *Archaeological research of the Velika humska čuka site* project, which is financed by the Ministry of Culture of the RS, the City of Niš and the Municipality of Crveni krst in Niš.

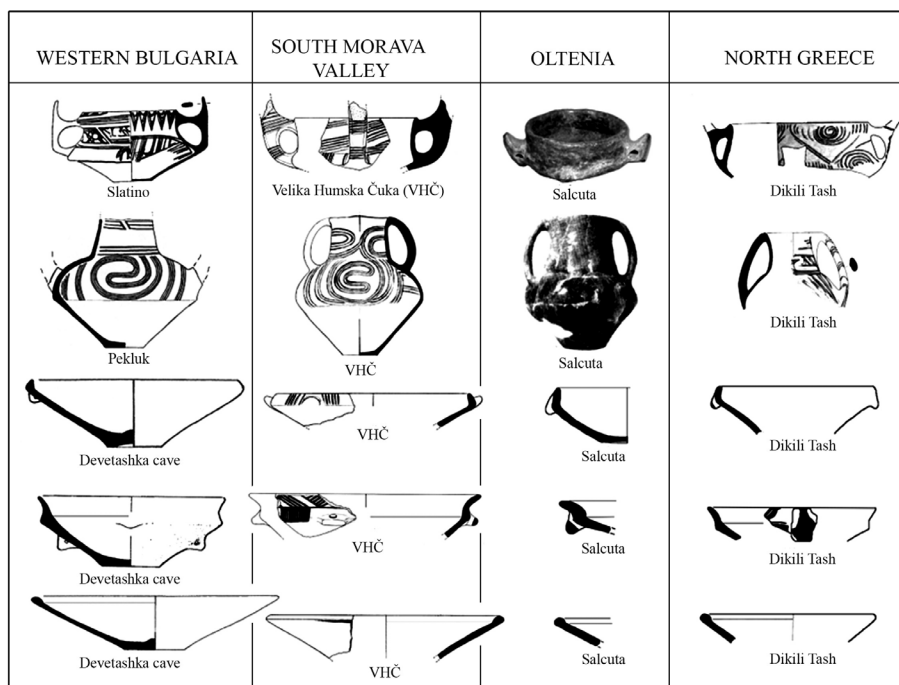
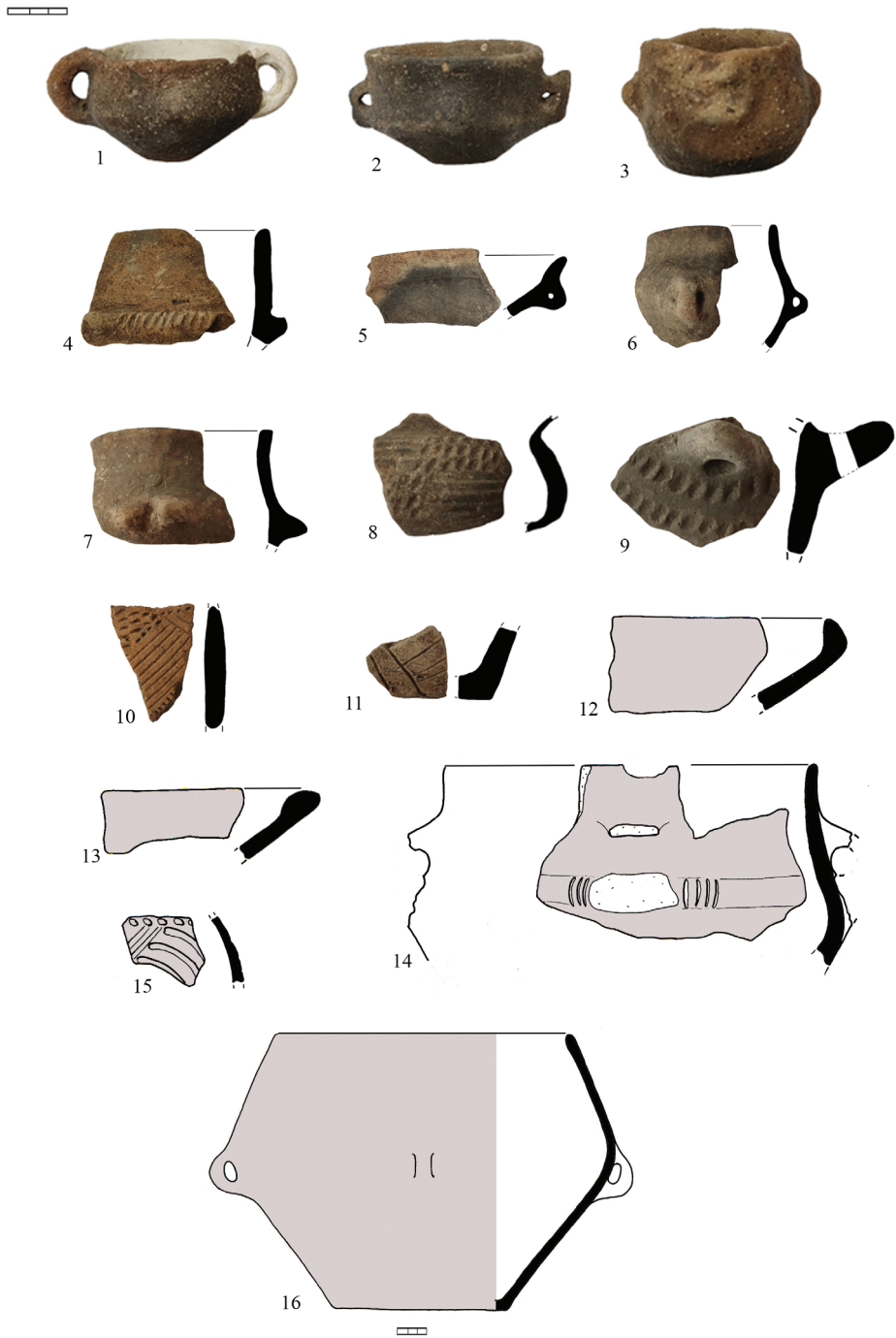


Fig. 1 – Characteristic stylistic and typological elements of BSK complex.

with two handles (*kantaros*), conical bowls with a semicircular thickened inner side of the rim, conical bowls with an inverted rim, conical bowls with an expanded thickened rim, globular amphorae with a longer cylindrical neck with two arched handles, etc. (fig. 1) registered on a vast territory covering the area from Oltenia and southern Transylvania in the north to the Aegean coast in the south, and from western Bulgaria in the east to the Drina and northwestern Albania in the west.

The Timok Valley is located approximately in the central part of the territory encompassed by the BSK complex. Its northern border is the Danube River, in the south, it is bordered by the Svrljig Mountains, in the east by the northern slopes of the Stara Planina, and in the west by the slopes of the Carpathian Mountains. A decade ago, during the processing of finds from museums in Negotin, Bor, Knjaževac and Zaječar, numerous Early Eneolithic finds were also recorded, which the authors agreed to belong to the BSK complex, i.e. the Bubanj-Hum I group (Bulatović, Kapuran, Janjić 2013; Kapuran, Bulatović, Jovanović 2014; Stojić, Ilijić 2010; Kapuran, Bulatović 2012; Kapuran 2014). Many of the processed sites were known for decades, when likewise based on the stylistic and typological characteristics of numerous pottery finds were attributed to the Bubanj-Hum I group (Tasić 2004; Lazić, Sladić 1997; Tasić 1997).



Pl. 1 – 1-11. Bor, Kmpije, the Hearth finds; 12-17. Staničenje, Begov most, pit 7.

However, the particular site on the outskirts of Bor, was discovered at the beginning of the 90s, and the research began about ten years after (Jovanović 2013; Kapuran, Bulatović, Jovanović 2014). It is the site of Kmpije, which is situated on the Kmpu Boruluj hill on the southeastern outskirts of Bor. Excavations yielded remains of two settlements on the site, one from the Early and the other from the Late Eneolithic. The settlement from the Early Eneolithic covered an area of approximately 0.5 ha, and belonged to the bearers of the BSK complex, while the younger settlement was inhabited by the bearers of the Kocofeni-Kostolac group (Kapuran, Bulatović, Jovanović 2014, 78). Archaeological research at the site of Kmpije in Bor was carried out between 2004 and 2007. During this period, an area of 164 square meters was excavated by 12 archaeological trenches. During the excavation, the remains of three houses, built in wattle and daub technique were excavated, although the site was largely devastated by the construction of the railway line (Jovanović 2013). During the research at the site of Kmpije in 2006, an outdoor hearth with pottery scattered around was discovered (fig. 2). The sampled charcoal from the hearth was AMS dated to 4445-4270 (probability 95.4%), i.e., 4368-4332 (probability 75.4%) calBC, and therefore this horizon of the settlement, with the mentioned hearth and ceramics, can be fairly reliably dated to the 44th century calBC.⁵



Fig. 2 – Site of Kmpije in Bor, Trench 7, the Hearth with scattered portable finds.

The pottery around the hearth consists of short beakers with two arched handles in line with the rim, situated on the neck or belly (Pl. 1/1, 2, 4), a shallow conical plate with a thickened rim (Pl. 1/5), globular vessels with a short cylindrical neck (Pl. 1/6,

⁵ AMS analyses was performed in Izotoptech ZRT. Laboratory in Debrecin, Hungary (lab.No. DeA- 42906).

7), and the characteristic pottery ornaments comprised of bundles of incised parallel lines, sometimes in combination with rows of pricks (Pl. 1/8, 10, 11), rows of *impresso* imprints (Pl. 1/9), and narrow vertical grooves on the thickened belly of the vessels (Pl. 1/4).

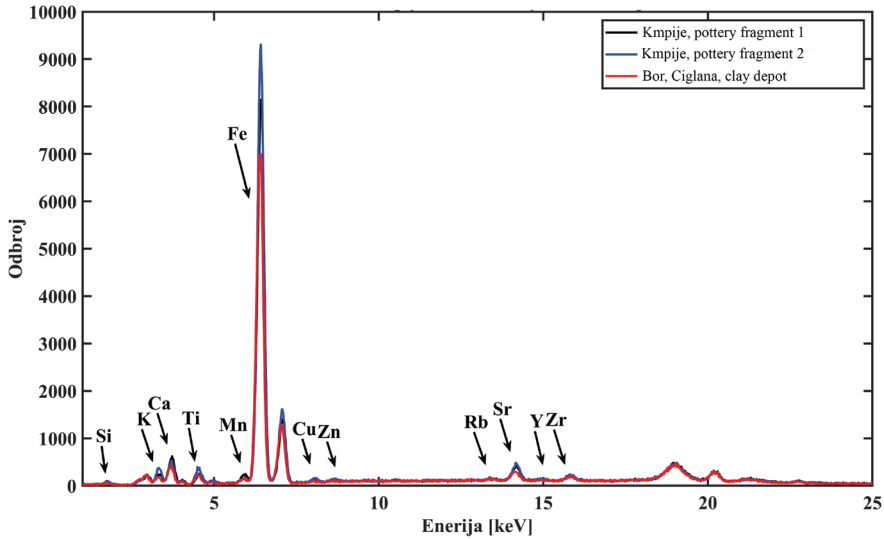


Fig. 3 – Compared EDXRF spectra.

In order to determine the possible origin of pottery from the site, two ceramic samples and raw material from the local clay depo at Bor Brickyard located a kilometer from the site, were analysed using portable energy dispersive X-ray fluorescence (pEDXRF) spectrometry. The well-established analytical procedure was applied using an in-house developed pEDXRF spectrometer (more details about the instrument can be found in (Andrić *et al.* 2021, 167; Gajić-Kvašček, 2023, 13). The analysis aims to detect the elemental composition of the materials to compare the results and draw conclusions about the possible similarities.⁶ The compared spectra are presented in figure 3. The chemical composition of all analysed samples is similar, meaning all detected chemical elements are present in all three spectra. For a better representation (fig. 4), the reduced counts figure was plotted to enlarge the visibility of the peaks with smaller intensities.

⁶ The experimental setup was as follows: the X-ray tube voltage of 40 kV, the filament current of 800 μ A, and the measurement time of 120 s. The measurement geometry was as follows: collimated non-filtered incident X-ray beam spot size on the object's surface of 2 mm, the angle between the incident X-ray beam and the detector of 45°, the distance from the endpoint of the collimator and detector window and the analysed surface was 21 mm and 16 mm, respectively. The mentioned parameters were kept constant during all measurements. The ADMCA software (AMPTek Inc.) was used for spectra acquisition.

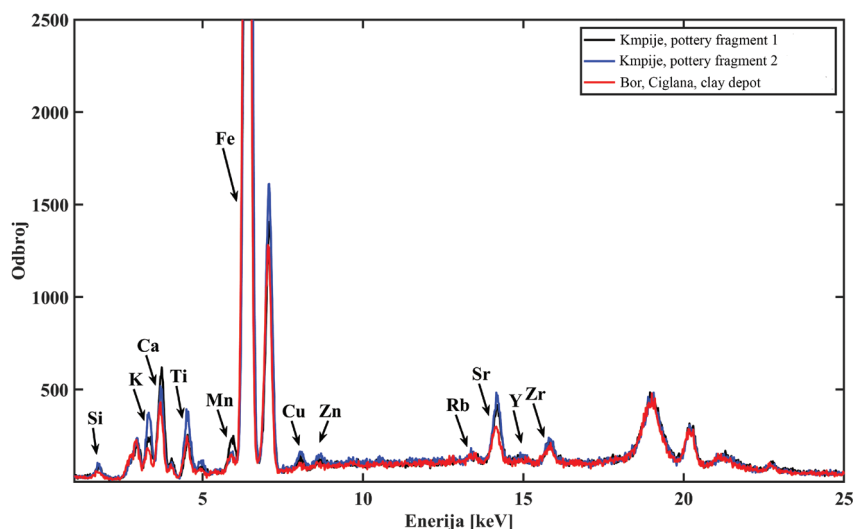


Fig. 4 – Reduced EDXRF spectra for two Kmpije ceramic samples and raw material.

The elemental composition indicates that ceramics were most probably made of local raw material since identical chemical elements were detected in all spectra. Moreover, the detected trace elements such as Rb, Sr, Y, Zr, and Mn and their peaks' intensity can support the conclusion of local raw material usage for the production of Kmpije ceramics. For more precise determinations, the analysis of more samples and provenance analysis would be useful, or some other studies (SEM-EDX analysis) could be performed to support conclusions made based on the EDXRF measurements.

In terms of stylistic and typological characteristics of finds from the hearth, as well as other finds from the earlier settlement, especially ceramic vessels (Jovanović 2013), it seems that they are characteristic of the BSK complex and very reminiscent of ceramics from the surrounding sites from this period (Kučajna, Zlotska pećina, Krivelj, Kovilovo, Korbovo, Mokranjske stene, Smedovac and others - Bulatović, Kapuran, Janjić 2013; Kapuran, Bulatović, Jovanović 2014 and cited lit.). Further, the stylistic and typological characteristics of finds from the hearth are likewise similar to ceramics of this complex from the South Morava Valley, especially from the sites of Bubanj and Velika Humska Čuka (Garašanin, Đurić 1983), which have been intensively researched in recent years (Bulatović, Milanović 2015; Bulatović, Milanović 2020; Bulatović, Milanović 2021; Bulatović et al. 2023). Apart from the pottery finds, the site of Velika Humska Čuka and Kmpije coincide chronologically, since the date from Kmpije corresponds to one settlement horizon on Velika Humska Čuka (Bulatović, Milanović 2021) (tab. 1/7, 10). The oldest settlement from this period from Bubanj, at least according to the currently available dates, is somewhat younger, and exists only at the turn of the 44th to 43rd century calBC (Bulatović, Vander Linden 2017), although the ceramic finds from Bubanj

are almost identical to those from Kmpije. A settlement chronologically very close to Kmpije was recorded south of the Timok Valley, in the Nišava Valley, close to present-day Pirot. It is the site of Begov Most in Staničenje, from which an absolute date almost identical to the date from Kmpije originates, from a pit with several animal bones and scattered pottery (tab. 1/9). Pottery from Begov Most is also very similar to finds from Kmpije. Bowls with a thickened rim (Pl. 1/13), a globular vessel with a cylindrical neck (Pl. 1/14), and a fragment decorated with bundles of incised lines in combination with pricks (Pl. 1/15), are also recorded at the site.

Another absolute date comes from the Timok Valley, from the site of Mokranjska stena in Mokranje near present-day Negotin (Bulatović 2015; Bulatović *et al.* 2018). The date originates from the cultural layer with ceramics of stylistic and typological characteristics of the BH I group, but also the Salcuta IV and Galatin groups (Bulatović 2015, 29-30), and dates this layer to the 37th century calBC (tab. 1/25). The site, however, is located in the hilly part of the Timok Valley, therefore it is possible that the elements of the BH I group prevailed longer here than in other regions of the central Balkans, and that the date cannot be considered with certainty as the lower chronological frame for the BH I group in the central Balkans, especially since the group ceased to exist much earlier in neighbouring regions (tab. 1/21, 23) (Valentinova 2016; Ganetsovski 2016). Chronologically uniform dates from Bubanj and Velika Humska Čuka (tab. 1/23, 24) should rather be taken into account as the lower chronological frame of the group, which position the final stages of this group into the 39th century calBC. Certain elements characteristic of the Galatin, Salcuța IV and Chernavoda I groups also appear at these sites, but elements characteristic of the Bubanj-Hum I group are still dominant (Bulatović, Milanović 2015; Bulatović, Milanović 2020; Bulatović, Milanović 2021).

CONCLUSION

A brief overview of the cultural and chronological characteristics of the Bubanj-Hum I group, which is in fact a “representative” of the Early Eneolith BSK complex in the central Balkans, pointed out that the entire area of the central Balkans is dominated by the same stylistic and typological elements, as well as that the chronological frame of particular regions of this group in the central Balkans is quite uniform. The site of Kmpije coincides with the middle period of the existence of the BH I group, with the chronological range from which the greatest number of absolute dates originate (fig. 5), probably the period of the cultural peak of the Bubanj-Hum I group. Therefore, it can be concluded that the BH I group was formed during the final phase of the Vinča culture, which is for the most part parallel to the Early Eneolithic cultures in southern Pannonia and the Peri Pannonian area, such as the Tisapolgar and Bodrogkeresztur, and that it disappeared during the penetration of new cultural elements from the northeast, which the bearers of the Salcuța IV, Galatin and Chernavoda I groups probably brought (fig. 5).

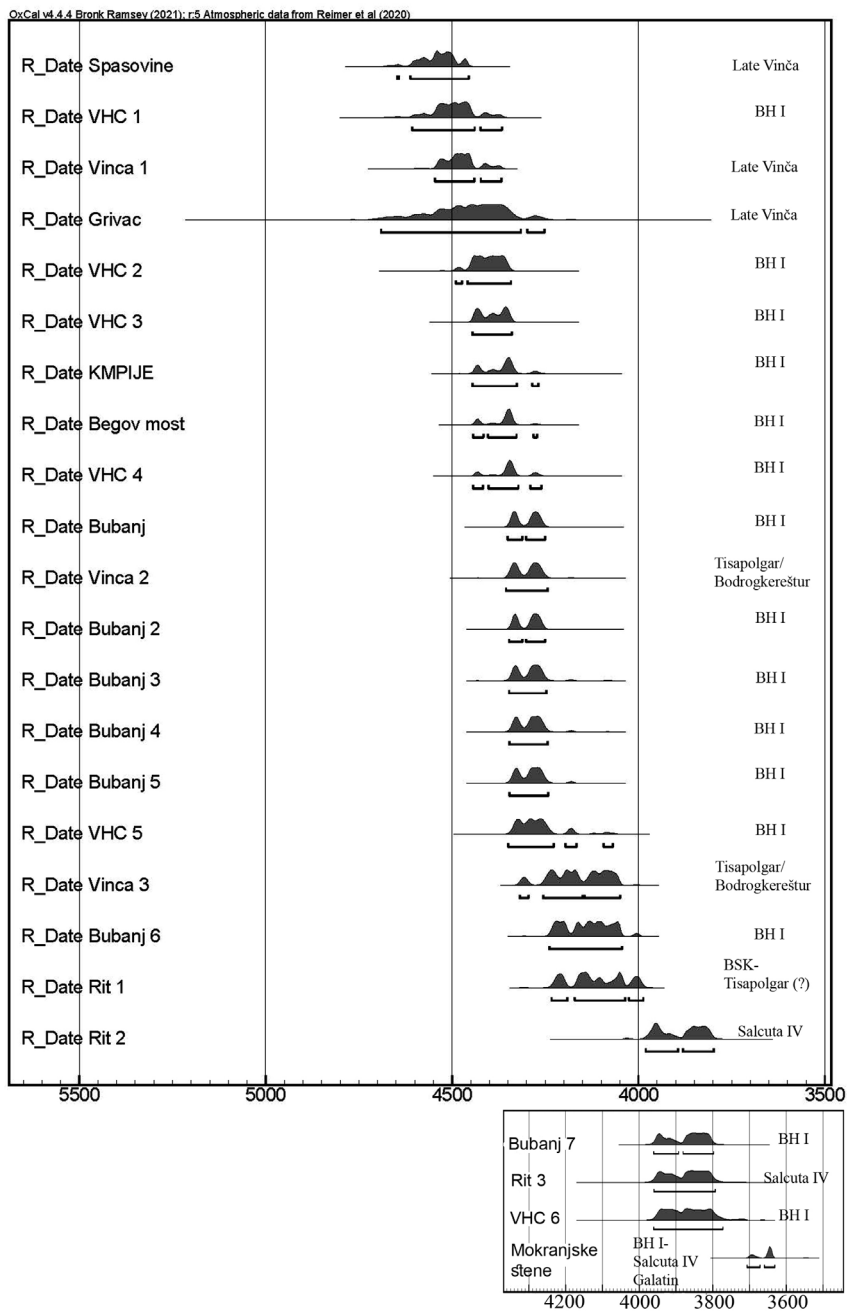


Fig. 5 – Modelled Absolute dates of the Late Neolithic and the Early Eneolithic sites in the central Balkans.

Both the stylistic and typological features of ceramics and the absolute dates indicate that the Timok Valley completely fits into the cultural and chronological frame of the BSK complex, that is, the BH I group in the central Balkans. That confirms that during the second half of the 5th millennium BC, this wide area was subject to intense interaction, that is, the cultural transmission of its bearers, rather than significant social movements (migrations), which could be confirmed by determined local origin of BH I pottery from the site of Kmpije. Still, the migration scenario cannot be completely excluded either, especially regarding the events that will follow.

Namely, at the end of the 5th and the beginning of the 4th millennium BC, significant changes took place in the cultural domain of the central Balkans, especially in the north of the Danube region, which could indicate more intensive movements from the NE to the south and SW. Besides the Danube region (site of Rit), the Timok Valley (Mokranjske stene) was the first to be influenced by those movements, as the cultural picture changed significantly as soon as during the first quarter of the 4th millennium BC, while in the south the elements of the BH I group remained dominant (tab. 1/22, 24; fig. 5) (Bulatović, Kapuran 2017).

Later, during the second half of the 4th, and the beginning of the 3rd millennium BC, and again during the 2nd millennium BC, the Timok Valley represented the main natural communication route for the interactions and cultural transmission between population of the central Balkans and populations from Oltenia and Transylvania, which subsequently makes it one of the most important geographic regions when it comes to the study of cultural contacts and links in the prehistory of the central Balkans.

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ХРОНОЛОШКИ ОКВИР БУБАЊ-ХУМ I ГРУПЕ И КУЛТУРНО-ХРОНОЛОШКИ ПОЛОЖАЈ ЊЕНИХ НАСЕЉА У ТИМОЧКОЈ КРАЈИНИ

У раду смо се кратко осврнули на терминологију којом се дефинишу рано енеолитске културе на централном Балкану и околним регијама. Експерти се махом слажу да је реч о јединственом културном комплексу названом Бубањ – Салкуца – Криводол, по епонимним локалитетима у данашњој Србији, Румунији и Бугарској.

Епонимни локалитети овог комплекса у Србији су Бубањ и Велика хумска чука код Ниша (Бубањ – Хум I група), који су послужили за хронолошку детерминацију ове групе, односно овог комплекса на централном Балкану.

Према датумима махом са ова два локалитета ова група је настала у другој половини 46. или првој половини 45. века пре н.е. а нестала после 39. века пре н.е.

Иако је керамика са локалитета у Понишавља и Тимочкој Крајини била готово идентична керамици са других локалитета ове групе, у недостатку апсолутних датума није било могуће дефинисати њихов хронолошки оквир. Недавно добијеним датумима са локалитета Бегов мост код Пирота и Кмпије у Бору (44. век пре н.е.) установљено је да се и ови локалитети, односно регије Понишавља и Тимочке Крајине и хронолошки уклапају у БХ I групу. Анализа хемисјко-физичког састава керамике са локалитета Кмпије (pEDXRF) указује да је керамика израђена од локалне глине, те јединство БСК комплекса на овако пространој територији од Олтеније до северне Грчке и западне Бугарске до Дрине, са приближно истом хронологијом, пре се може објаснити интензивним везама и контактима популација које су настањивале овај простор, него миграцијама.