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## BOSUT GOLD

**Abstract:** During the Early Bronze Age the region of Sylvania had a very special position in the South Pannonian territory. Its location at a natural and cultural crossroads of Europe enabled it to play a historical role and to be important in communications and the trade of various goods of that time, as indicated by old and new archaeological research. One of the most important settlements of that time was located on Gradina on Bosut, which is unequivocally documented by the impressive stratigraphic picture from the fringe of Gradina. The hoard of gold objects, which is presented, analysed and interpreted in detail within the social manifestations of the Early Bronze Age elite of the Vinkovci cultural community, is undoubtedly the most significant discovery from that settlement. Together with other prestigious finds in the region, especially hoards from Orolik and Stari Jankovci, they are considered a *symbolic capital* of this exceptional territory, whose owners sovereignly represented themselves as active actors in the pan-European phenomenon of the first elites and “rulers” of Bronze Age cultures.

**Keywords:** Gradina on Bosut, Vinkovci cultural group, elites, gold, status and prestige.

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In the Early Bronze Age, gold was of great value due to its rarity, stability and luminosity. However, it is quite rare as an archaeological find in the southern Pannonian area, but we know it from several sites in Sylvania. The study analyses in detail and comprehensively considers the hoard of gold objects from Gradina on Bosut, which was discovered in controlled circumstances. It is interpreted, based on archaeometallurgical and comparative methods, within the framework of related gold finds on European territory and in the context of the representation of Bronze Age elites.

The elite part of the history of Yugoslav and Serbian prehistoric archaeology of the modern age was definitely marked by the exceptional work of our celebrant Petar Popović. As a long-time member of the expert team in Gradina research, he also participated in the campaign when the hoard was discovered. We respectfully dedicate the *Bosut gold* to his honour.

### Gradina in time and space

The area of Sylvania is located within the confluence of the Sava and Danube rivers – it is a micro-region of the southern part of the Pannonian

Plain. It is characterised by flat plains and alluvial pleistocene-holocene river floodplains, with an abundance of fertile soil and a very favourable climate (Magaš 2013). An exceptional geostrategic position at the junction of eastern and western Europe, throughout history, it has enjoyed the privilege of a dynamic circulation of various influences, both from the southern Balkan, and northern Central European cultural spheres. The most important prehistoric archaeological site in this area is Gradina on Bosut, near the village of Vašica (Fig. 1). It is located on a dominant position along the left bank of the river Bosut, between the villages of Batrovci and Vašica, on the road that leads from the Belgrade – Zagreb route northwards to Šid and Ilok. The site is situated on a flat, ellipsoidal plateau measuring 265 x 60 m, raised about 10 metres above the surrounding terrain. Most of the settlement was naturally protected by rivers – in the south by the Bosut and in the west by the river Struga. Two naturally unprotected sides were secured by a deep, man-made ditch. Various authors assumed that such a defence system was probably built as early as the Bronze or Early Iron Age (Medović, Medović 2010: 9–14; Spasić 2011: 92).

The prehistoric settlement at Gradina was discovered almost 140 years ago, and was explored, in

various campaigns, for a total of 14 years. At the end of the 19<sup>th</sup> century, during the construction of the bridge and the local road, Gradina was partially damaged. It was then that it was mentioned for the first time as an important and very promising archaeological site (Stojanović 1859: 202–205; Ljubić 1880b: 123). Test excavations were started by the Museum of Sirmia from Sremska Mitrovica in 1964/1965 (Tasić 1965) and the first results indicated the importance of this multi-layered site. However, the increasing river erosion encouraged more extensive works that, in 1975, grew into systematic excavations. The cooperation of several institutions lasted until 1988, a period during which about 650 m<sup>2</sup> of the surface were examined (Medović, Medović 2010: 5–8; Sremac 2014, 5). Unfortunately, due to various circumstances, the monographic publication of the complete uncovered material has not yet been realised (Medović, Medović 2010: 13; Spasić 2011: 91–115; 2015: 61–80; cf. Popović, Radojčić 1996; Popović 2003).

Thanks to the well-defined cultural and chronological stratigraphy, cultural horizons of enviable (prehistoric) layers have been determined – not only in the region but also in the wider South Pannonian territory. According to available data, it is considered that the oldest settlement was formed during the final Neolithic (Bosut I) and, with short and long interruptions, occupation continued during the Eneolithic (Bosut II) (Spasić 2011; 2015). This was followed by a more pronounced layer of the Bronze Age (Bosut III) in which the Vinkovci, Vatin and Dubovac-Žutobrdo cultures were singled out. After a hiatus, Gradina was inhabited in a particularly rich horizon of the Early (Bosut IVa–c) and Late Iron Age (Bosut V). This is how the elevation was formed with cultural layers almost 6 metres high, from which a 3.15 m thick block with distinct stratigraphy belonged to the Early Iron Age. Based on the material culture from this complex, the Bosut cultural group was defined, which is one of the starting points for studying that period in the areas of south-eastern Pannonia and the Danubian region (Popović 1981; Поповић, Радојчић 1996; Popović 2003: 311–320; Medović, Medović 2010; Spasić 2011: 91–92).



Fig. 1. Geographical position of Gradina on Bosut on the territory of eastern Sirmia.

### Vinkovci horizon of the early Bronze Age

The Bronze Age layer is most pronounced at Gradina on Bosut (▼80.62–81.52 above sea level). It was identified as the living space of the Early Bronze Age community belonging to the Vinkovci cultural group, dated to the second half of the 3<sup>rd</sup> millennium BCE and considered within the wider Somogyvár–Vinkovci cultural complex (Tasić 1984; cf. Kulcsár 2009: 225–347) (Fig. 2). Most of the known settlements belonging to this culture were identified through systematic field surveys or random finds from Slavonia and Sirmia.<sup>1</sup> Settlements were often erected on important elevated positions alongside river communications and the material culture is mainly represented by the discoveries of numerous pits and hearths as well as numerous ceramic objects. Continuous settlement probably did not last longer than 150

<sup>1</sup> S. Dimitrijević singled out the Early Bronze Age Vinkovci cultural group as a special cultural manifestation and determined it chronologically based on research of the eponymous tell-settlement in Vinkovci-Tržnica. During the second half of the 20<sup>th</sup> century, it was established that the material culture of the Vinkovci culture does not show significant differences from the northern Somogyvár group. Consequently, both cultural groups were merged into a wider cultural complex of early Bronze Age Pannonia. The Vinkovci cultural group spread over a wide area of southern Pannonia, Sirmia and Slavonia. Based on the stratigraphy on the tell of Tržnica, S. Dimitrijević divided the culture into an older and a younger phase with subphases (A1/A2 and B1/B2) (Dimitrijević 1966; 1982: 7–36; Bondár 1995, 220–239; Ložnjak 2001; cf. Kalafatić 2005; Hirscher 2009; Kulcsár 2009, 225–354; cf. Ložnjak Dizdar, Potrebica 2017: 27–32).



Fig. 2. Gradina on Bosutu in the context of the wider distribution Somogyvár–Vinkovci cultural complex and the surrounding Carpathian cultures around 2300/2200 BCE (after Fischl et al. 2015).

to 200 years, as M. Bondár assumed, since most of the sites had a thin settlement layer, which indicates their existence in a shorter period (Tasić 1984: 18; Bondár 1995: 236; Kalafatić 2006: 23; cf. Hirschler 2009: 145). However, the lack of necropolises and the generally insignificant number of individual graves (Vranić 1991; Kalafatić 2006; Kalafatić, Hršak 2007) further complicates the understanding of the cultural event itself and its transmission over a large area, as well as the perception of its social aspects as a whole.

Archaeological excavations of Gradina demonstrated that communities that built and formed the settlement on a clayish and relatively compact geological layer, with the remains of several dozen buildings, could be attributed to the Vinkovci cultural group or the Bosut III horizon (Medović, Medović 2010: 19). First finds were recorded in 1976, and by 1985, numerous waste pits and a single oven for preparing food with supports for the grill were discovered (Tasić 1984: 17–18). In almost every pit, numerous pottery fragments were discovered, sometimes including as many as ten whole or slightly damaged vessels. The impressive Vinkovci culture layer is defined from the base of the 21<sup>st</sup> to the 23<sup>rd</sup> excavation horizon – and one must stress that excavation horizons 24, 25 and 26

represent dug-in pits also dated to Vinkovci culture. The material culture of this Bosut IIIa, i.e., Vinkovci A2/B1, horizon remained almost completely unpublished, except for the papers presented by M. Girić in 1981 and N. Tasić in 1984 in which the material culture from this phase was preliminary presented (Girić 1981: 79; Tasić 1984: 15–32, cf. Kulcsár 2009: 261–262).

#### *Bosut gold*

Among numerous other finds during the excavations of Gradina in 1980, an unusual and, for this cultural layer, completely unexpected find was discovered – a hoard consisting of a large number of gold items, colloquially called the *Bosut gold* (Fig. 3; Pl. 1). Preliminary discussed and, based on its stratigraphic position, determined to the developed A2/B1 Vinkovci culture horizon of the Early Bronze Age on Gradina, it thus became, and remains, the only hoard of gold objects within the entire Somogyvár–Vinkovci cultural complex that has a known context of discovery. It was discovered in a pit at the base of the 21<sup>st</sup> excavation horizon – and 61 gold objects were found in an amphora shaped vessel (Tasić 1984: 22–23). The hoard consisted of a set of 54 conical appliques and their fragments, and 7 spiral (coiled double wire) orna-





Fig. 3. *Bosut gold* – Early Bronze Age hoard from Gradina on Bosut (National Library “Simeon Piščević”, Šid).

ments, with a total weight of 29.23g (Fig. 3; Pl. 1). During the presentation of this exceptional discovery, N. Tasić published a more detailed description of a round pectoral disc (Tasić 1984: 23), which, unfortunately, is not preserved.

It is a larger hoard of a heterogeneous composition of exclusively decorative items. Most of them belong to the uniform type of conical appliques, shaped like buttons, but without a sewing eye.<sup>2</sup> They were made of a thin gold sheet with a smooth surface and two holes for sewing on opposite edges. The holes were made by piercing the sheet metal from the inside (most likely with a thin goldsmith’s awl), which is why they have an unevenly cut and

outwardly bent edge. On some better preserved conical appliques the perforation of several holes is visible – from 3 to 5 in number (Pl. 1: 15, 22, 27, 31-32, 35, 40, 43, 45-46, 50, 54). They are evenly distributed along the very edges, which can be a consequence of subsequent or unsuccessful perforation. Some specimens have a minimally drawn peripheral edge with compressed sheet metal and no additional decorations. A large number of them are deformed (15 examples), and three of them are preserved only in small fragments (Fig. 3; Pl. 1). Conical appliques of this shape, mostly made of bronze, served to enrich the costumes and jewelry repertoire sewn in different positions, mainly the upper part of the garment – from the neck and shoulders, to the arms and chest, and the lavish decorations of various headwear (Kiss 2012: 111–112;

<sup>2</sup> Tasić reports an even larger number of conical appliques – as many as 78 (Tasić 1984: 23; cf. Medović 2001: fig. 77; Sremac 2014, 9).

Găvan 2015: 120; Bertemes, Heyd 2015: 10). However, they could also be part of a decorative set of belts and lower parts of skirts, i.e., aprons. We can follow the wider use from the Early Bronze Age horizon, with good examples from the cultures of the Danubian–Carpathian basin, e.g., the contemporary early Nagyrev and Maros cultures (Fig. 2), especially from the sites of Periam, Beba Veche and Mokrin (Gogâltan 1999: 173; Wagner 2009: 343, fig. 11). They are also present further west in the Bell Beaker cultural complex in the contexts of the 24<sup>th</sup> and 23<sup>rd</sup> century BCE (Heyd 2007: 341–344). Although they were numerous until the Late Bronze Age, they probably experienced the greatest intensity of use during the Middle Bronze Age cultures of the Carpathian-Pannonian region and the Koszider horizon (Vinski 1958: 12; Mozsolics 1967; 1968; O’Shea 1996: 49; Szabó 1997: 66–69; Kiss 2012: 111–112). Many of them were discovered in hoards of large tell-settlements, such as those in the hoard from Jászdózsa with 30 admittedly miniature conical appliques or e.g., from the settlement in Periam and Pecica (Gogâltan 1999: 173–174; Găvan 2015: 120). The closest cultural and chronological direct parallel to our examples is the discovery of 20 gold conical appliques from Orolik near Vinkovci (Majnarić-Pandžić 1974: 22–24; 1998: 171, Fig. 4). All of them are also of the cone-shaped type, with narrowed edges, and several holes were also observed on some of the appliques on the inside of the pierced gold sheet (Fig. 4).

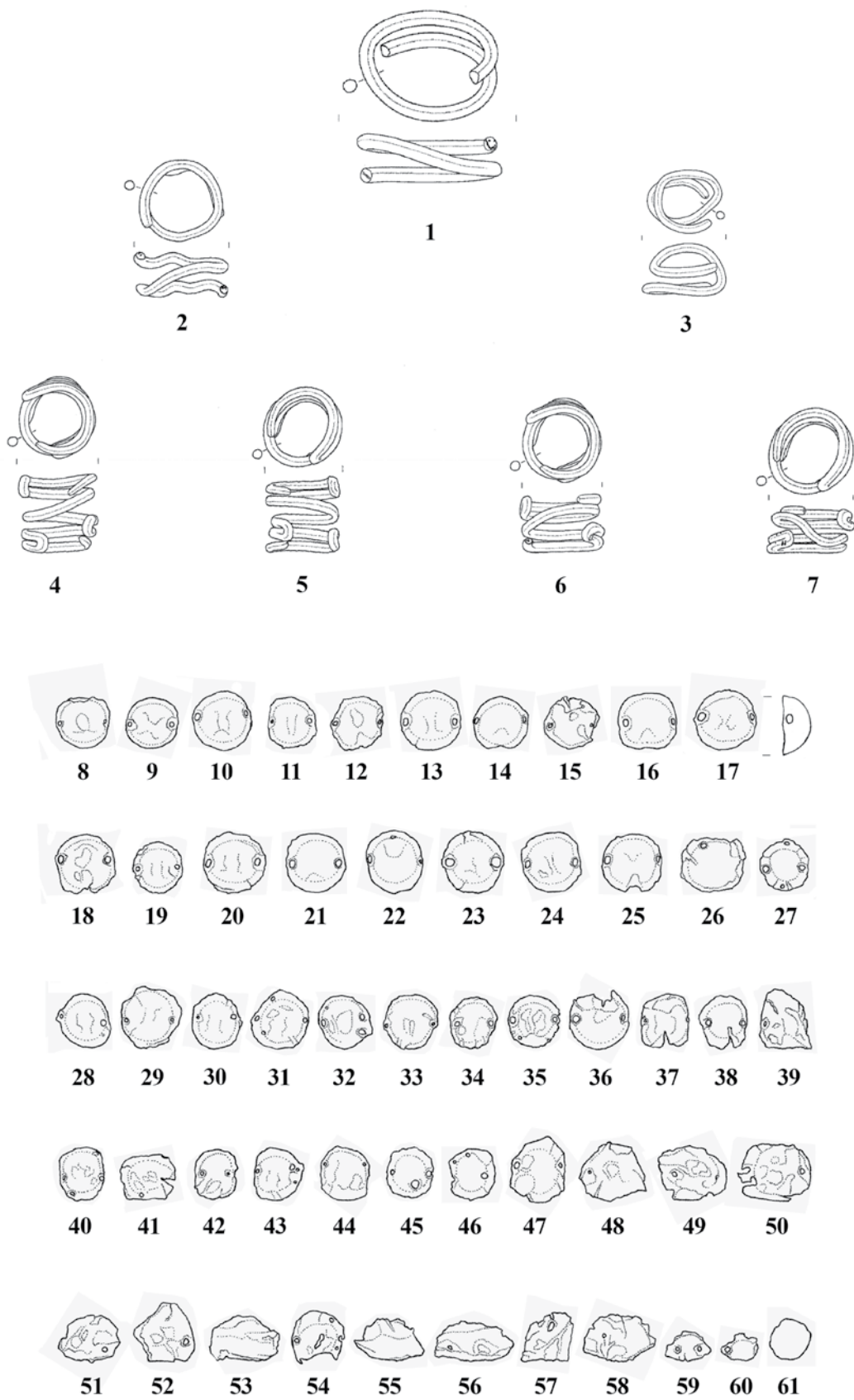
The second, smaller group of objects is represented by spiral ornaments or hair rings. They are basically divided into two groups; a) 6 smaller examples made of thinner coiled wire, and b) a larger and thicker spiral ring (Fig. 3; Pl. 1: 1-7). The latter is a much larger object with overlapping ends, made of thicker gold wire of uneven round cross-section (Pl. 1: 1). In terms of shape and dimensions, it could have been worn as an ornament on clothes, although its role in decorating the head and/or hairstyles cannot be ruled out. Most of the smaller spiral ornaments can be further typologi-



Fig. 4. Early Bronze Age hoard from Gradina on Bosut near Orolik (Vinkovci City Museum).

cally divided into two types according to their production. The first group (2 spirals), were simple, smaller spirals made from coiled, slightly thicker wire with a round and uneven cross-section and overlapping ends (Pl. 1: 2-3). One example has the end slightly thinned and broken off, so it may have been originally flattened (Fig. 3; Pl. 1: 2). The second group (4 spirals) are spirals made of thin single but in the opposite direction bent/double-coiled wire, also with a round cross-section and pointed ends (cf. Moucha 1997: 159, Abb. 6.10: 7; Reiter 2008: 93–100) (Pl. 1: 4-7). It is generally accepted that these were ornaments intended for styling hair (*noppenring*), worn directly on the hair, in strands and braids, as decoration on headwear, or on decorative ribbons or diadems – although they could also be used as rings.

Spiral hair rings absolutely marked the trend of Early Bronze Age costumes in Europe, from the Carpathian to Central European and Scandinavian areas, where they were discovered mostly in graves but also in hoards (O’Shea 1996: 201; Szabó 1997: 68–69; Kovács 1999; Kiss 2012: 112–113; Găvan 2015: 134–135; cf. Meller 2014: 616–620, 623–624; Szathmári et al. 2019; *in print*). The oldest finds of gold hair rings, dated to the initial appearance (Neusiedl) of the Somogyvár–Vinkovci culture in the northwest, originate from grave 1 in



Pl. 1.



Neusiedl am See (Ruttkay 2002: 154–155, fig. 4; Kern 2011: 163–164; cf. Heyd 2007: 341; Kulcsár 2009: 346). Despite the absolute dating of the grave, the inadequate conditions of the discovery and the unusual inventory still support the doubt of a closed set of finds and their belonging to the corresponding skeletal remains (Kern 2011: 164). All this makes it difficult to interpret the inventory, so it cannot be a reference for other identical or related discoveries from the Late Eneolithic/Early Bronze Age of that area. At the same time, it should be noted that the spiral rings are very large and do not represent the best comparison for those from Bosut and Orolik. Better and more adequate comparisons could be established with a significant number of rich graves from the Fanzhausen I and Gemeinlebarn necropolises of the early Unterwölbling cultural group from the 24<sup>th</sup>/23<sup>rd</sup> century BCE, where a variety of hair rings could be divided into several typological groups (Neugebauer 1994: 87; Reiter 2008: 93–100; cf. Lutteropp 2009: 76, 138, 264, fig. 16). With hair rings from a thin single, but in opposite direction bent/double-coiled wire, many equivalent and similar comparisons can be observed in burials of the late Bell Beaker cultural complex, e.g., at the Szigetszentmiklós necropolis, where a total of 12 examples were discovered, and where the burials were dated between the 25<sup>th</sup> and 23<sup>rd</sup> centuries BCE (Patay 2013: 293, fig. 15: 3–4; cf. Szabó 2017). Similar hair rings are known, on the other hand, from the graves of Beba Veche, Pitvaros, and Szöreg, dated to the Early Maros culture (Bóna 1965: T. V: 1–6; O’Shea 1996: 77, 83, 224, T. 5.1; 5.5; Wagner 2009: 343), while in the graves of Mokrin their bronze equivalents were discovered (O’Shea 1996: 49, 204; cf. Wagner 2009: 343).

The closest parallels to spiral ornaments made of a single round wire, with overlapping and broken ends can be observed in the gold spirals from Orolik (Majnarić-Pandžić 1974: 22–24; 1998: Fig. 4) (Fig. 4). However, in the pair of smaller rings from Orolik, one end is leaf-shaped and decorated with simple points along the edge of the leaf and in its middle. In analysing these truly unusual finds from the southern Pannonian area, N. Majnarić-Pandžić used the then most extensive synthesis of ornaments by E. Zaharia (1959) and found related examples in the, as yet unpublished, necropolis of Sărata-Monteoru (Majnarić-Pandžić 1974:

25). However, these Romanian examples are not coiled into a spiral, but into a ring. Considering the method of their manufacture and assembly, and the decoration on the leaf-shaped ends, we can observe much more appropriate analogies in spirals of the Apfelstädt type made from precious metals, from the Bell Beaker cultural complex (Meller 2014: 616–620, fig. 4). According to its style of decoration, the most similar parallel would be an example from the Austrian Oberndorf in der Ebene, although it is made of silver (Meller 2014: fig. 4: 6). The rings from Orolik and Bosut display a major difference – their spirals were not made from an embossed flat band as in the types and variants of the Apfelstädt type, but from a wire of round cross-section like all other spiral ornaments/hair rings. If we add to this the information about the discovery of the same/similar type of gold spirals with overlapping ends, unfortunately now lost, from neighbouring Stari Jankovci (Ljubić 1880a: 92–93), we can probably assume a local variant of these special spiral ornaments, influenced by the north-western trends deriving from the Bell Beaker cultural complex. Furthermore, the production of very similar spirals is present in the simultaneous cultures of Chłopice-Vesele and Mierzanowice in Slovakia and southern Poland – again in a certain regional variant that would still be closer to Romanian examples (Machnik 1984: T. XC: 14, 19–20; XCIV: 23–24; 1991: 164–168; cf. Bertemes, Heyd 2002: 204–208). From known circumstances of discovery, mostly in graves, we learn that they are equally represented in inventories attributed to male and female deceased – as a canon they are discovered next to the skull, thus marking a social rather than a gender-oriented means of representation. Therefore, a unique criterion shaped by a specific hairstyle with gold hair rings became widespread throughout Europe, especially in communities of the Bell Beaker cultural complex, which were proven more closely associated with the elites of Somogyvár–Vinkovci culture (Fig. 2). Consequently, the design of gold hair ornaments demonstrates regional differences, but also strong similarities over extremely long distances (Meller 2014: 616–619).

Gold items are not only prestigious and high-value archaeological finds resistant to the ravages of time. They represent a raw material that, like stone, did not change from the deposit of its

origin to the finished, desired product – they are remarkable finds in terms of analytical potential for the determination of origins of the metal (Borg 2010; Armbruster 2013: 463–464; Pernicka 2014: 159–161; Borg, Pernicka 2017: 117–118). Based on preliminary physical and chemical tests using a non-destructive technique, energy dispersive X-ray fluorescence spectroscopy (EDXRF spectroscopy), something more can be said about the chemical composition of the *Bosut gold*. Namely, as was assumed with a certain degree of certainty, it was established that the sampled gold objects were made of natural gold, consisting of a composition of different components, mostly gold and a smaller amount of silver, copper, aluminium, magnesium, iron and other trace elements (cf. Pernicka 2014). Most of the gold objects from the Early Bronze Age come from alluvial gold collected along rivers that washed away gold from quartz ore veins and native gold (Borg 2010; Armbruster 2013: 464–465; Borg, Pernicka 2017). Along the way, gold came into contact with sand and various minerals, gradually incorporating them, which is reflected in the presence of elements of aluminium, iron, magnesium and other characteristic minerals, thus preventing the accurate identification of one primary deposit (Borg, Pernicka 2017: 181–121). Accordingly, most likely, the sampled items from the Bosut hoard were actually made from gold originating from eroded secondary deposits, rolled and cold-forged from a gold sheet in the case of appliques, while the spiral rings were produced from extruded wire produced from long and narrow gold strips or bars (Kiss 2012: 112; Armbruster 2013: 465–466; Gävan 2015: 120, 135). In 11 samples (6 spiral rings and 5 conical appliques), a higher percentage of silver (from 17.3% to 38%) and copper (from 0.4% to 4.2%), and the absence of tin were detected. The presence of silver at levels of more than 20% is also known for gold spiral rings from the Maros culture (Szathmári et al. 2019; *in print*). It should be noted, however, that most of the analysed items actually have up to 1% of copper and only two hair rings have a higher percentage of 3.3% (Pl. 1: 4) and 4.2% of copper (Pl. 1: 5). Hair rings also have the highest percentage of gold. It is interesting that the appliques are richer in silver (from 27% to 37%), and also have a significantly lower percentage of copper (from 0.6% to 1%), while the situation is

exactly the opposite with spiral ornaments. Given the composition, the gold could generally be attributed to the group of heterogeneous gold of A3C geochemical composition with higher copper content, according to A. Hartmann, characteristic for the early phases of the Early Bronze Age of the wider Danubian and Southeast European cultural circle (Hartmann 1972; 1982; Kovács 1999, 47; cf. Borg 2010: 742–746, Fig. 8; Pernicka 2014: 159–160, Fig. 10; Borg, Pernicka 2017: 118, Fig. 1; cf. Szathmári et al. 2019; *in print*). They are, therefore, connected to other finds from the Pannonian-Carpathian area – from the contemporary early Maros and Nagyrev cultures, so their gold sources should be sought further east, all the way to Banat and Transylvania, as was suggested by N. Majnarić-Pandžić (Majnarić-Pandžić 1974: 23; cf. Hartmann 1982; O’Shea 1996: 49, 51, 330, 355; Borg, Pernicka 2017: 131).

## Discussion

Conical appliques and spiral hair rings are recognisable decorative items whose origins date back to the Eneolithic and Early Bronze Age in continental, especially Central and Eastern Europe, and all the way to the Aegean and the Black Sea (e.g., Primas 1995; Heyd 2007: 341; Armbruster 2013: 462; Leusch et al. 2015). The oldest gold appliques are known from the rich male graves of the Varna necropolis, dated to the middle of the 5<sup>th</sup> millennium BCE (e.g., Hansen 2013; Leusch et al. 2014). Spiral ornaments were also discovered in the richest graves of Central European Bell Beaker and Proto-Únětice cultural complexes (Heyd 2007: 341, 347–348; Meller 2014: 616–620, 623–624; Schwarz 2014; Bertemes, Heyd 2015: 49–50), and in the ambience of Early Bronze Age cultural manifestations of the gold-rich eastern Carpathian Basin, as presented (Bóna 1965: 31–33; Mozsolics 1968; O’Shea 1996, 204, 354–355; cf. Fischl, Kulcsár 2011; Szathmári et al. 2019; *in print*) (Fig. 2). Although such decorative objects were mostly made from bronze, luxury examples were usually made of more durable and, therefore, more valuable gold. Moreover, in that earlier Bronze Age cultural circulation, they had the role of representing the status and prestige of selected individuals within different but socially hierarchical communi-





Fig. 5. The elite graves/hoards with precious metal of the Early Bronze Age in the Carpathian and Balkan territory from the second half of the 3rd millennium BCE (supplemented after Heyd 2013a; 2013b).

ties of Europe. These oldest elites were certainly well connected and networked in the circulation of goods, knowledge, ideas and, above all, raw materials, as well as in all other activities that this revolutionary time brought with it (Heyd 2013a: 14–33; 2013b: 48–55; Vandkilde 2016). Connecting people regarding mineral resources and their control in terms of transportation, trade and exchange was certainly of primary interest. However, a much closer and more intensive connection took place in the processes of various mobilities, matrimonial ties and, above all, political and diplomatic contacts of elites – precisely by the gifts of ideological and symbolic valuables, which, to some extent, reflects the circulation and deposition of precious metals. Gold jewellery was not only an ornament of luxurious costumes but also a symbol of value and identity, emphasising their power and significance like an *insignia* (cf. Primas 1995; Kilian Dirlmeier 2005: 119; Armbruster 2013; Heyd 2013a: 32–33; 2013b: 54–55; Meller 2014; Schwarz 2014).

In the preliminary presentation, the items from the Bosut hoard were compared with gold finds from the nearby Gradina on Orolik, located along the northern bank of the Bosut river, in western Sarmia (Fig. 4). In 1968, these items were dis-

covered in a pit, next to a bronze flat axe. They were exhaustively analysed and interpreted in the time horizon of the developed Vinkovci culture, which in many ways reflected the intertwining of complex processes of nurturing old traditions and accepting and adapting to new circumstances (Majnarić-Pandžić 1974; 1998: 171, Fig. 4; cf. Tasić 1984: 22–23; Machnik 1991: 144–146, fig. 30; Forenbaher 1993; Glogović 2003: 100; Kulcsár 2009: 346). Interpreting the discovery, N. Majnarić-Pandžić presented two possibilities for its deposition: a) enclosed items of costume and jewellery in the grave of a prominent female or b) since the bones of the deceased were not discovered, disposed jewellery in a hoard of prestigious items in the settlement of a Vinkovci culture community (Majnarić-Pandžić 1974: 21–22; 1998: 171, Fig. 4). For a long time, direct analogies were lacking in the closer territory, but also in the wider area of the Somogyvár–Vinkovci cultural complex, although brought into closer connection with the early cultures of the Danubian area and the Carpathians. The discovery of the hoard in Gradina on Bosut was, therefore, extremely important for establishing arguments for the Orolik discovery. Adhering to the second interpretation of the dis-

posal at Orolik Gradina, in the Bosut example, N. Tasić actually saw a reference for the Orolik gold – a position which is also accepted in recent literature (cf. Ložnjak Dizdar, Potrebica 2017: 29). This could also be, despite a very distanced rhetoric, the position of G. Kulcsár. Namely, despite the precisely described situation of discovery and exact position on the edge of the pit in the settlement, she treated the Orolik gold as an unreliable find, and the *Bosut gold* was not even adequately published at that time (Kulcsár 2009: 346). She was, of course, sceptical about the dating of both hoards as well as their attribution to communities of the Vinkovci cultural group. In this sense, she paid special attention to the pectoral disc from Orolik, attributing it stylistically to discs of the Stollhof-Csáford type, referring to interpretations of N. Tasić, J. Machnik and D. Glogović (Kulcsár 2009: 346; cf. Machnik 1991: 144–146, Fig. 30; Glogović 2003: 97–99; 2004). Consequently, in the example of the grave in Neusiedl am See, where the hair rings are obviously much older than the ones from the Gradinas Orolik and Bosut, neither could this comparison, let alone attribution, be considered valid, especially after taking in to account substantial differences in the methods in which they were produced and the differences in the style of decoration in the repoussé technique. N. Majnarić-Pandžić demonstrated, a position confirmed later by N. Tasić and J. Machnik, that we can observe certain analogies and a long tradition of these artistic and symbolic pectoral ornaments, ranging from the Eneolithic to the Early Bronze Age in that narrow part of the interfluvium of the Drava, Sava and Danube (Majnarić-Pandžić 1974: 25; Tasić 1984: 23, Machnik 1991: 146; cf. Glogović 2004) (Fig. 6). However, a comparison was also presented with gold discs from the early Maros cultural group, known only from Mokrin, Beba Veche and Battonya, unfortunately without more certain circumstances of discoveries (Girić 1971; Bóna 1965: T. VI: A1, B1; O’Shea 1996: 78, 204, 330; Wagner 2009: 338, cf. Fischl, Kulcsár 2011, 77, T. 1) (Fig. 7). N. Tasić insisted on this even more vigorously, describing and interpreting the alleged disk from the *Bosut gold* as quite simple, cut from a thin gold sheet and without additional ornaments. He interpreted the phenomenon of the use of these two pectoral discs in a wider space, comparing them with those from Mokrin (Tasić 1984: 23; cf. Girić 1984: T. XI: 6),

i.e., in the context of cultures whose elites were embellished and ideologically represented by gold pectoral discs.

If we consider the fact that there was a round pectoral disk in the Bosut hoard, then the composition of these two mixed hoards would be basically typologically, stylistically and, of course, chronologically identical – with a larger difference only in quantity, i.e., in the number of preserved specimens, where the discovery from Orolik represent a much larger and heavier collection of objects (75.56 g) than that from Bosut (29.23 g). The difference is that the Orolik gold contains many thin rings, while the find from Bosut has coiled hair rings. We could add to them the discovery from Stari Jankovci, which, if we accept the information from Š. Ljubić, also represents a larger hoard of mixed composition, deviating from the Orolik and Bosut finds only due to the enclosed status weapons, i.e., a pair of silver parade axes (Balén, Mihelić 2007). In that find, in addition to a pair of larger spirals with overlapping ends, there were also 16 smaller rings that, together with a larger one, formed a chain 40 cm long – a composition that irresistibly reminds us of the find from nearby Orolik. There were also two rectangular gold sheets, with two holes at each end, one even decorated with embossed dots on the edges, which Š. Ljubić interpreted as parts of belt sets (Ljubić 1880a: 93). For this discovery, we can observe comparable elements in the tombs from Szigetszentmiklós (Patay 2013: 293, fig. 15: 4) and, thus, perhaps follow once again the intertwining and importance of strong influences from the northern circle of the Bell Beaker cultural complex (Fig. 2) (cf. Kalafatić, Hršak 2007; Koledin 2012; Dani, Tóth, 2014).<sup>3</sup>

## Conclusion

The Bosut gold should be interpreted as an exceptional find of a Vinkovci culture community of the Early Bronze Age for numerous reasons. The primary value of the hoard is, due to the collected items and the value of the precious metal itself, more significant given the directly known topo-

<sup>3</sup> The gold finds from Čepin are not included in the discussion, because it has been confirmed that they belong to the set of older finds from Tenja – Orlovnjak (Glogović 2004 – with earlier literature).

graphic position of the find on the outskirts of the settlement of Gradina, near the Bosut river communication. The river was obviously the dominant connection with Gradina on Orolik, where a very similar and simultaneous hoard of gold objects originates. If we add to them the slightly northern hoard of Stari Jankovci on the Bosut *highway*, we get three impressive and undeniably important hoards of the second half of the 3<sup>rd</sup> millennium BCE on the southern edge

of the Pannonian plain, in the narrowest crossing of the most important crossroads of prehistoric Europe (Fig. 6).

The conical appliques from the Bosut hoard will undoubtedly represent the most numerous collections of decorative objects of this type in the entire Carpathian and Pannonian area and, together with the appliques from Orolik, form their greatest concentration within that vast territory. The representation of as many as four types of spiral ornaments/hair rings is still without comparison – it is the largest collection in the wider area of Somogyvár–Vinkovci cultural and topographical distribution. By the typological and stylistic analysis and interpretation of known contexts of the same or similar objects, as well as by the stratigraphic situation from Gradina on Bosut, we can date them more widely within the time range from the 24<sup>th</sup> to the 22<sup>nd</sup> century BCE. This would mean a developed phase of the Vinkovci culture, which could roughly correspond to the stage Br A0, according to Central European relative chronology (Szabó 2017: 108, fig. 5). They are, therefore, located in the era of the so-called *international spirit* present in the networks of superregional circulation of luxury items, serving as an emblem of European “golden” elites in their recognition, social characteristics and identifications of the already complex composition of values (Flannery, Marcus 2012; Heyd 2013b; Schwarz 2014; Dani et al. 2016: 219–241).

The importance of the presented gold hoards, however, is not only crucial for understanding the status and cultural relationships of individuals and/



Fig. 6. Gold pectoral discs from a) Mokrín (National Museum Kikinda) and b) Beba Veče (elaborated after Vörös 1997).

or the ruling hereditary elite or clan, as is generally assumed, but also for understanding the topography of landscape as an attractor in general. Besides this, they also provide us with valuable data on social structures that were focused on procurement, i.e., a specific way of approaching gold, to possible toreutic gold-working centres and to manipulations with their values in the pre-monetary chain (e.g., Hänsel, Weihermann 2000; Leusch et al. 2014). After a certain time of use, such prestigious items were collected and disposed of with a particular intention, thus implying a possible understanding of certain customs of Vinkovci elites. Hoards along the outskirts of the settlement are not uncommon and are mostly associated with ritual and ceremonial activities, especially if they are near rivers. The place of dedication has always played a special role in collective memory and depended on numerous factors (Hansen 2012; Bradley 2013: 123-125). Perhaps, therefore, the Bosut hoard can be associated with the renunciation of valuables during the sacrifice, i.e., donations during the opening or closing of settlements as a symbolic and status practice, but also a reflection of the power of the most prominent individuals within the Vinkovci culture hierarchical society. Given the content and circumstances of the finds, it is most likely that both finds, from Bosut and Orolik, were votive hoards lacking suitable or at least approximate counterparts in the graves. They will, therefore, reflect the *symbolic capital* of this exceptional space in a time of the superregional fashion of two-dimensional gold jewellery made of “sheet and wire”, whose owners sovereignly participated in the ideological and

pragmatic pan-European phenomenon of the first elites and “rulers” of Bronze Age cultures.

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### Catalogue

The Bosut hoard is kept in the Archaeological Collection at the “Simeon Piščević” National Library in Šid under unified inventory number 34. The numbers in the catalogue correspond to the numbers on the plate.

1. A large spiral ring with overlapping ends made of thicker smooth gold wire, round in cross section. It is damaged at the ends – cut with a tool. Size: diameter 2.1 cm, weight 5.67 g.  
 2. Spiral hair ring made of thin, smooth gold wire with a round cross-section. One end is pointed and the other is flattened and broken. In places, the wire is damaged and improperly bent. Size: diameter 1.3 cm, weight 1.56 g.  
 3. Spiral hair ring made of thin, smooth gold wire with a round cross section. One end is pointed, the

other is broken off. Width 0.6 cm, length 1 cm, weight 1.59 g.

4. Larger fully preserved spiral hair ring made of thin gold wire of a round cross-section and with pointed ends. Size: diameter 1.1 cm, weight 3.58 g.  
 5. Larger fully preserved spiral hair ring made of thin gold wire of a round cross-section and with pointed ends. Size: diameter 1.1 cm, weight 3.78 g.  
 6. Smaller completely preserved spiral hair ring made of thin gold wire of a round cross-section and with pointed ends. Size: diameter 1.1 cm, weight 1.65 g.  
 7. Smaller completely preserved spiral hair ring made of thin gold wire of a round cross-section, partially bent central wire and with pointed ends. Size: diameter 1.1 cm, weight 2.2 g.

A total of 54 conical appliques made of thin and smooth gold sheet metal, slightly drawn and in places narrowed ends, with two to five holes for fastening.

8. Size: diameter. 0.9 cm, weight 0.16 g.  
 9. Size: diameter 0.9 cm, weight 0.15 g.  
 10. Size: diameter 1 cm, weight 0.22 g.  
 11. Size: diameter 0.9 cm, weight 0.11 g.  
 12. Size: diameter 0.9 cm, weight 0.14 g.  
 13. Size: diameter 1.1 cm, weight 0.24 g.  
 14. Size: diameter 1 cm, weight 0.22 g.  
 15. Size: diameter 0.9 cm, weight 0.15 g.  
 16. Size: diameter 1.1 cm, weight 0.22 g.  
 17. Size: diameter 1.1 cm, weight 0.26 g.  
 18. Size: diameter 1.1 cm, weight 0.17 g.  
 19. Size: diameter 0.9 cm, weight 0.14 g.  
 20. Size: diameter 1.1 cm, weight 0.23 g.  
 21. Size: diameter 1.1 cm, weight 0.23 g.  
 22. Size: diameter 1 cm, weight 0.24 g.  
 23. Size: diameter 1.1 cm, weight 0.25 g.  
 24. Size: diameter 1.1 cm, weight 0.22 g.  
 25. Size: diameter 1.1 cm, weight 0.22 g.  
 26. Size: diameter 1 cm, weight 0.27 g.  
 27. Size: diameter 0.8 cm, weight 0.12 g.  
 28. Size: diameter 0.9 cm, weight 0.22 g.  
 29. Size: diameter 1.1 cm, weight 0.23 g.  
 30. Size: diameter 0.9 cm, weight 0.13 g.  
 31. Size: diameter 1 cm, weight 0.18 g.  
 32. Size: diameter 0.9 cm, weight 0.16 g.  
 33. Size: diameter 1 cm, weight 0.16 g.  
 34. Size: diameter 0.9 cm, weight 0.10 g.  
 35. Size: diameter 0.9 cm, weight 0.15 g.  
 36. Size: diameter 1.1 cm, weight 0.20 g.  
 37. Size: diameter 1 cm, weight 0.12 g.



38. Size: diameter 0.9 cm, weight 0.11 g.
  39. Size: diameter 1.1 cm, weight 0.22 g.
  40. Size: diameter 1 cm, weight 0.15 g.
  41. Size: diameter 1 cm, weight 0.15 g.
  42. Size: diameter 0.9 cm, weight 0.08 g.
  43. Size: diameter 0.9 cm, weight 0.13 g.
  44. Size: diameter 1 cm, weight 0.17 g.
  45. Size: diameter 0.9 cm, weight 0.10 g.
  46. Size: diameter 0.9 cm, weight 0.11 g.
  47. Size: diameter 1.1 cm, weight 0.20 g.
  48. Size: diameter 1.1 cm, weight 0.23 g.
  49. Size: dim. 0.9x1.2 cm, weight 0.17 g.
  50. Size: diameter 0.9 cm, weight 0.22 g.
  51. Size: dimensions. 0.7x1 cm, weight 0.15 g.
  52. Size: diameter 1 cm, weight 0.22 g.
  53. Size: dimensions 0.8x1.2 cm, weight 0.22 g.
  54. Size: diameter 0.9 cm, weight 0.13 g.
  55. Size: dimensions 0.8x1.2 cm, weight 0.22 g.
  56. Size: dimensions 0.7x1.4 cm, weight 0.24 g.
  57. Size: dimensions 0.7x1.2 cm, weight 0.15 g.
  58. Size: dimensions 0.7x1.3 cm, weight 0.21 g.
- Three smaller fragments of dome-shaped patches of thin and smooth gold sheet metal.
59. Size: dimensions 0.6x0.9 cm, weight 0.06 g.
  60. Size: dimensions 0.7x0.5 cm, weight 0.03 g.
  61. Size: diameter 0.7 cm, weight 0.17g.

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