

FINAL BRONZE AGE HOARD WITH A CUP OF JENIŠOVICE TYPE FROM BZINCE POD JAVORINOU¹

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The aim of the study is to present a find of Final Bronze Age deposition with metal objects from Bzince pod Javorinou (dist. Nové Mesto nad Váhom) in western part of Slovakia. The hoard consisted of a bronze cup of Jenišovice type and five studs which can be dated to HB1. The analysis has shown that the deposition can be interpreted as a votive hoard situated in the very visible part of the Salašky Mountain. The Jenišovice cup as a commodity directly connected to the higher social rank indicates super-regional contacts of the local elites.

INTRODUCTION

In the first decade of 21st century, a hoard with products – a bronze cup of the Jenišovice type and five pieces of bronze studs with opposite holes – was randomly discovered in the rural zone of the municipality of Bzince pod Javorinou (dist. of Nové Mesto nad Váhom; Fig. 1). The find was documented by the finder photographically and provided to the Museum of National History in Hlohovec. All six objects are kept under inventory numbers 461 and 462/1–5. The provided information and photographic documentation enabled partial reconstruction of the find context of the depot. The information was used in the analysis and interpretation of the hoard.

The methodology of analysis and interpretation of the depot consisted of two main steps. The first step involved a traditional typological-chronological analysis of individual artefacts from the depot and examination of the material composition of the objects using XRF analysis. The second step of the analysis focused on the broader spatial relationships of the depot. Primarily, we carried out a visibility analysis in the GIS environment to identify the importance of the depot's location in the cultural landscape of the Late Bronze Age in the wider microregion.

The depot from Bzince pod Javorinou with a cup of the Jenišovice type not only expands the exceptional collection of cups of this type from Slovakia, but also extends our information about the settlement between the Little and White Carpathians and the perception of the landscape when choosing the depot's location.

FIND CONTEXT AND HOARD LOCATION

The depot was located approx. 25–30 cm deep in the ground. The cup was turned upside down with the handle facing west. Adjacent to the outer wall of the cup on the eastern side were studs, which were inserted into each other (Fig. 2).

The hoard was located on the northern slope of the Salašky massif in the Little Carpathians, at the Plešivec site in the cadastre of Bzince pod Javorinou (Fig. 1: 1), near one of the branches of the holloway network leading across the Salašky massif, visible on LiDAR (Fig. 1: 2).

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Fig. 1. Bzince pod Javorinou. 1 – localisation of the hoard (the data source: © ÚGKK SR, authors: K. Hladíková, E. Makarová); 2 – position of the hoard on the Lidar. Data source: © ÚGKK SR; Lidar visualization T. Lieskovský (SvF STU); author K. Hladíková.

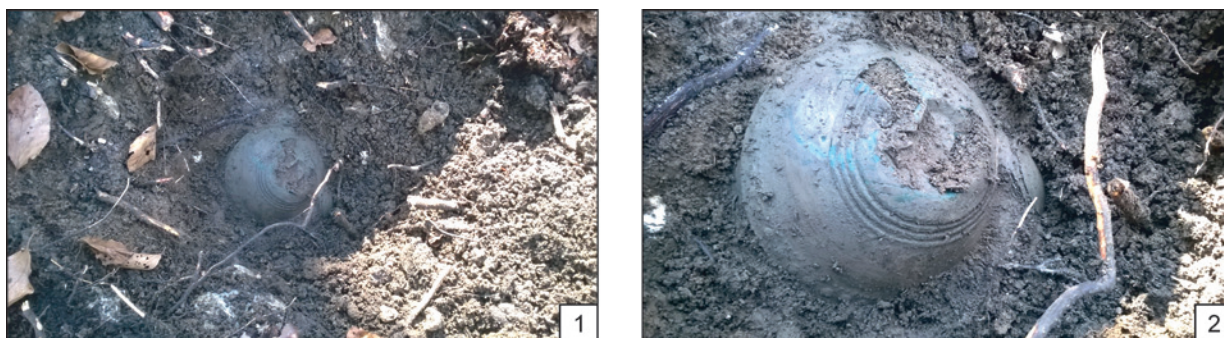


Fig. 2. Bzince pod Javorinou. 1 – documentation of finding circumstances of the hoard from Bzince pod Javorinou; 2 – detail of finding circumstances. Photo Archive of the Museum of National History in Hlohovec.

The cadastre of Bzince pod Javorinou is situated in the dist. of Nové Mesto nad Váhom. The Plešivec site is located in part Horné Bzince. Geomorphologically, the depot is located on the border of the Slovak-Moravian Carpathians and the Fatra-Tatra region, more precisely (in the south near the border) in the contact zone of geomorphological units Myjavská pahorkatina and the northernmost ridges of the Little Carpathians referred to as the Čachtice Carpathians.² The depot site on the northern slope of the Salašky massif belongs to this unit. Bzince pod Javorinou is located at the confluence of the Vrzavka and Kamečnica streams. The Kamečnica stream flows around the Salašky massif (558 m a.s.l.) on the northern and north-eastern sides. The bedrock of the Little Carpathians is crystalline-Mesozoic (*Michaeli* 2015). The geological composition of the Čachtice Carpathians is variable, characterised by sandstones, conglomerates, and limestones.³ The soil cover of the Čachtice Carpathians is dominated by rendzina. The Quaternary is represented by fluvial and aeolian sediments (*Vlastivedný slovník* 1977, 262, 263). The microregion of the site is a moderately humid highland with an average annual temperature of -3 to -4 °C in the winter months and 19 to 20 °C in the summer months. The average annual precipitation ranges from 650 to 850 mm.⁴

² Available on: <https://app.sazp.sk/atlassr/> [13. 12. 2021]

³ Available on: <https://app.sazp.sk/atlassr/> [13. 12. 2021]

⁴ Available on: <http://klimat.shmu.sk/kas/> [23. 1. 2022]

Description of Artefacts

1. A cup made of bronze sheet with hammered decoration and a ribbon handle. The foot is inverted, the bottom of the cup is decorated with four hammered concentric ribs 5 mm above the undecorated base. The body is slightly convex, shoulders are subvertical, the neck is funnel-shaped with outwardly curved rim. Body decoration starts at the angle of the belly and consists of two horizontal rows of small dots. Between them, there is a row of larger bosses (39 preserved from the original ca. 41). The ribbon handle is decorated with two engraved lines at the edges. It is widened at both ends and attached to the cup with 2 × 2 rivets, the upper part of the handle on the inside and the lower part on the outside of the cup. Damaged. Dimensions: mouth diameter 160.5 × 160 mm, max. belly diameter 141 mm, height 66 mm, sheet metal thickness at the rim 0.8 mm, body sheet metal thickness 0.4 mm, sheet metal thickness at the bottom 0.3 mm, diameter of bosses approx. 5 mm, diameter of dots approx. 1 mm; cup weight 136.83 g; inv. No. A 461, 27/18 (Fig. 3; Pl. I: 1a–1d).
2. A round, slightly convex bronze stud, probably with one damaged and two drilled holes on opposite sides, decorated around the perimeter with embossed dots. Damaged edges. Dimensions: 49 × 47 mm, sheet thickness 0.18 mm (measured at the rim), hole diameter 3.7 mm, 3.9 mm, weight 7.89 g; inv. No. A 462-1, 28/18 (Pl. I: 2).
3. A round, slightly convex bronze stud with two drilled holes on opposite sides, decorated around the perimeter with embossed dots. Damaged holes. Dimensions: 49 × 47.5 mm, sheet thickness 0.3 mm, hole diameter 3.9 mm, 3.7 mm, weight 8.17 g; inv. No. A 462-2, 28/18 (Pl. I: 3).
4. A round, slightly convex bronze stud with one damaged and two drilled holes on opposite sides, decorated around the perimeter with embossed dots. Slightly damaged. Dimensions: 51 × 48.5 mm, sheet thickness 0.35 mm, hole diameter 4.15 mm, 3.9 mm, 3.8 mm, weight 7.61 g; inv. No. A 462-3, 28/18 (Pl. I: 4).
5. A round, slightly convex bronze stud with two drilled holes on opposite sides, decorated around the perimeter with embossed dots. Slightly damaged edges, one hole broken. Dimensions: 48 × 49 mm, sheet thickness 0.2 mm, hole diameter 3.1 × 4 mm, 3.9 mm, weight 6.22 g; inv. No. A 462-4, 28/18 (Pl. I: 5).
6. A round, slightly convex bronze stud with two drilled holes on opposite sides, decorated around the perimeter with embossed dots. Slightly damaged edges. Dimensions: 60.5 × 48 mm, sheet thickness 0.3 mm, hole diameter 3.7 mm, 3.3 mm, weight 8.64 g; inv. No. A 462-5, 28/18 (Pl. I: 6).

The total weight of the depot is 175.23 g.

ANALYSIS OF ELEMENTAL COMPOSITION

The basic elemental composition was analysed for the cup and all five studs. Two measurements were made. The first measurement was made in 2018 by J. Tirpák from the Gemological Institute of the Faculty of Natural Sciences at Constantine the Philosopher University in Nitra (see *Tirpák 2018*). Due to a low number of measured points, a second measurement was made in 2020 by R. Čambal from the Archaeological Museum of the Slovak National Museum in Bratislava. The paper uses the results of the second measurement. This measurement was made by a handheld Niton XL3t XRF Analyser from Thermo Fisher Scientific, NITON, USA, which is intended for non-destructive analyses of the chemical composition of objects with measurement from the surface of the analysed object. Each stud was measured at one point on the outside and at two points on the inside. The cup was measured at five points (Tab. 1). At the analysed points, the patina was removed using sandpaper down to the original metal and the measurement time was approximately 30 seconds. The results of the spectral X-ray analysis (Tab. 1) showed that the cup was made of bronze sheet. According to *J. Tirpák (2018)*, the high proportion of tin in the patina shows significant oxidation of the surface. The patina on the cup was problematic to remove sufficiently, which explains the measured results. The ribbon handle attached to the cup was made of bronze, but the rivets attaching the handle to the cup are made of copper. The studs were also made of bronze, they have high copper content, except for the measurement of the outside of stud No. 4 where the results are also distorted by a thick patina layer.⁵ Given that the measurements of the elemental composition were made on the surface, they should be taken as approximate. Cups from other European sites were also subject to elemental composition analyses. Analyses of French finds from the Évans and Blanot depots show that parts of vessels were made of bronze. The tin content ranged from 6% to 12.5%. Elemental composition measurements are also published for the Riesa-Gröba cup with a copper content of 94% and a lower tin content of 0.11% (*Martin 2009*, 175). Spectral analysis was also performed for cups from the Štramberk-Kotouč site, Obišovce (?) and cups from Liptovský Mikuláš-Liptovská Ondrašová, which indicate bronze production with a tin

⁵ The patina layers on the inside of the stud No. 4 and on other studs (inside and outside) were sufficiently removed.

Tab. 1. Results of compositional XRF surface analysis. Measurement by R. Čambal.

Meas. No	Inv. Number	Measurment	Measuring time (s)	Ag	Cu	Sn	Fe	rightb	Zn	Co	Ni	Sb	Ti	Bi
1.	28/18 A462-1	stud – outside	31.4	0.355	90.28	6.75	–	0.625	–	–	0.605	1.200	0.140	0.030
2.	28/18 A462-1	stud – inside – lower part	32.2	0.411	89.90	7.08	–	0.653	–	–	0.614	1.160	0.146	–
3.	28/18 A462-1	stud – inside – left edge (in the middle)	32.2	0.426	89.15	7.51	–	0.912	–	–	0.581	1.220	0.139	0.037
4.	28/18 A462-2	stud – outside	32.1	–	90.92	6.39	0.142	0.349	–	–	0.977	0.849	–	–
5.	28/18 A462-2	stud – inside – right edge (in the middle)	32.1	0.219	92.41	5.34	0.076	0.184	–	–	1.030	0.726	–	–
6.	28/18 A462-2	stud – inside – left edge (in the middle)	32.1	0.224	91.50	6.06	0.106	0.249	–	–	0.974	0.755	–	–
7.	28/18 A462-3	stud – outside	32.1	0.317	92.37	5.08	–	0.389	–	–	0.593	1.080	0.129	0.022
8.	28/18 A462-3	stud – inside – uppper part	33.2	0.263	93.48	4.32	–	0.282	–	–	–	0.932	–	–
9.	28/18 A462-3	stud – inside – lower part	32.1	0.280	93.41	4.37	–	–	–	–	0.631	0.983	–	–
10.	28/18 A462-4	stud – outside	31.0	1.100	66.35	26.67	0.959	1.510	–	–	1.080	1.900	–	0.068
11.	28/18 A462-4	stud – inside – upper part – left	32.1	–	91.86	5.62	0.160	0.208	–	–	1.040	0.751	0.101	–
12.	28/18 A462-4	stud – inside – lower part – right	35.3	0.226	91.60	5.95	0.135	0.268	–	0.017	1.000	0.757	–	–
13.	28/18 A462-5	stud – outside	32.8	–	92.37	5.41	0.089	0.241	–	0.016	1.060	0.716	–	–
14.	28/18 A462-5	stud – inside – lower part	31.7	–	92.24	5.66	0.058	0.208	–	–	1.020	0.722	–	–
15.	28/18 A462-5	stud – inside – upper part	31.7	0.221	92.46	5.34	0.090	0.112	–	–	0.685	0.026	–	–
16.	27/18 A461	cup – inside – left from the handle	31.8	–	77.03	20.94	0.117	0.018	–	0.043	1.430	0.142	0.250	–
17.	27/18 A461	cup – belly – outside – opposite the handle	32.3	–	56.89	39.84	0.418	0.045	0.138	–	2.020	0.254	–	–
18.	27/18 A461	cup – outside – edge of the bottom	32.2	–	68.58	27.78	1.790	0.032	–	–	1.240	0.172	0.384	–
19.	27/18 A461	cup – outside – handle	32.2	–	80.26	17.99	0.355	0.017	–	0.026	1.020	0.131	0.179	–
20.	27/18 A461	cup – inside – handle – rivet	31.9	–	99.55	0.388	0.048	–	–	–	–	–	–	–

content of over 1% (Furmánek 1970, 454; Podborský 1967, 28; 2012, 337). Given the low number of analyses of Jenišovice-type cups to determine the elemental composition, it is problematic to comment on the provenance of these vessels. French researchers assume the existence of two production variants (western and eastern) based on the different elemental composition of vessels from the Évans depot: western variants of Jenišovice-type cups have lower tin content compared to eastern variants with an average tin content of 11.5% (Piningre/Pernot/Ganard 2015, 95–100, 201–206).

TYPOLOGICAL AND CHRONOLOGICAL CLASSIFICATION

Bronze cup

The bronze cup from Bzince pod Javorinou is a Jenišovice-type cup⁶ (Fig. 3; Pl. I: 1a–1d). There are 19 documented specimens of these cups from Slovakia, including the cup discussed.⁷ Moreover, a fragment of sheet metal from the bottom of a hammered vessel with a bottom accentuated by three concentric grooves, found in the hoard of scrap items from the municipality of Ladice, could also be a fragment of a Jenišovice-type cup (Veliačik/Ožďáni 2020, 223, pl. I: 1).

Cups of this type are characterised by a distinct profile with a high angled belly, a stepped, funnel-shaped, mostly undecorated neck with an outwardly curved rim and undecorated shoulders. The ribbon handle, which can be undecorated or engraved, is almost always widened at the ends, usually attached to the rim of the cup on the inside and under the neck on the belly on the outside using two pairs of rivets. In addition to cups with a ribbon handle, there are also specimens without a handle, which are usually referred to as handleless cups (e.g. Novotná 1991, 33; Patay 1990, 61) but are sometimes also called bowls.⁸ Jenišovice-type cups are decorated by alternating rows of smaller dots and larger bosses whose number and arrangement may vary. In addition, some specimens have several horizontal circular ribs at or just above the base. However, there are also undecorated specimens.⁹

Jenišovice-type cups are named after an eponymous site in Bohemia with a depot of 14 such cups (Kytlicová 1991, 45, 46). The term was coined by V. G. Childe (1948, 181, 182, 188–190, 194, 195). Originally, they were classified by E. Sprockhoff (1930, 57–67) as the Kirkendrup type (after the site in Denmark¹⁰). Later, the Jenišovice-Kirkendrup type was used after both sites (Kytlicová 1959, 146, 147; von Brunn 1968, 75–77, 87, 120).¹¹ Their typology was developed by H. Thrane (1965) by distinguishing two main variants/types (A and B), which were subsequently used and described in more detail by other researchers (see Martin 2009, 65; Piningre/Pernot/Ganard 2015, 23–64).

Type A is characterised by a low shape, a flat annular base, straight or slightly convex walls, an obliquely curved neck and rim, and almost vertical or slightly obliquely curved shoulders. The vessel body is decorated with one or two lines of bosses, which are lined with fine dots. Most of them do not have a handle.

⁶ In the literature, this type is also referred to as the Kirkendrup type (e.g. Sprockhoff 1930, 57–67) after the eponymous site in Denmark, or as the Jenišovice-Kirkendrup type (e.g. von Brunn 1968, 75–77, 87, 120; Kytlicová 1959, 146, 147; Nekvasil/Podborský 1991, 3–7; Neustupný E. 1965), or Kirkendrup-Jenišovice type (e.g. Soroceanu 2008, 53).

⁷ These specimens may be classified as typical Jenišovice-type cups, not cups that are related to them (see below).

⁸ Two types of vessels (cups and bowls/jars) are distinguished e.g. by J. Martin (2009, 63–72) – Tassen = vessels with a handle, Schalen = vessels without a handle or V. Ganard and J.-F. Piningre – coupes = vessels with a handle, tasse = vessels with a handle (Piningre/Pernot/Ganard 2015, 147–177). In the past, it was thought that all specimens were originally intended as cups with a handle, i.e. the handle was supposed to be attached to the handleless cups later (Thrane 1965, 170), but this hypothesis was disputed (Kytlicová 1991, 47, 48). However, the later attachment of the handle by a person who did not make the cup could be considered if the handle was attached “carelessly”, mostly with wires instead of rivets, so there is a visible difference between the quality of the cup and handle attachment (Soroceanu 2008, 56, 57). Such attachment of the handle may be seen, for example, on cups from the Liptovský Mikuláš-Liptovská Ondrašová hoard (Furmánek 1970, fig. 11: 1; 14: 3a, 3b; 15: 3a–5b). According to V. Furmánek (1970, 462), such bronze clamps used in some hammered vessels instead of a rivet document an independent production centre in the territory of present-day Slovakia.

⁹ As the typical feature of Jenišovice-type cups is the sharp angle in the upper part, they include both undecorated and handleless specimens (Patay 1996, 409).

¹⁰ On the Danish island of Fyn, a depot consisting of four bronze hammered cups (Jenišovice type), two hanging bronze vessels, three bronze bracelets, a bronze spiral shoulder strap, three bronze bell-shaped belt studs and 37 pieces of bronze sheet rolled in a cylindrical tube was found in the peat bog near Kirkendrup in Odense (Sprockhoff 1930, 57).

¹¹ Currently, the use of “Jenišovice type” is preferred (Gedl 2001; Kytlicová 1991; Martin 2009; Novotná 1991; Patay 1990; Prüssing 1991).



Fig. 3. Bzince pod Javorinou. Photography of the cup of Jenišovice type from Bzince pod Javorinou. Photo by R. Čambal, graphic by E. Makarová.

Type B is often a vessel with a high body, the bottom accentuated by circular collar and pressed inwards in the middle, often underlined by concentric ribs. The rim, neck and shoulders are oblique, the walls of the body often convex. The decoration, which usually consists of two to four lines of bosses lined with dots on the body, is sometimes complemented with a line of bosses on the neck. These vessels often have a riveted handle.

Moreover, the Jenišovice-type cups are considerably diverse in details within the two variants as well. These differences may be understood as a manifestation of the craftsman's individuality, while common features may indicate transfer of tradition and craftsmanship, and combination and continuity of some types (Furmánek 1970, 464; Novotná 1964, 31). The question is how to understand the specimens that only

have some properties typical for Jenišovice-type cups, but differ from typical specimens of this type, i.e. whether they can be classified as Jenišovice-type or whether they are a related type – a derivative.

M. Novotná (1991) studied the typology of bronze vessels from the territory of Slovakia. In addition to specimens decorated with bosses and dots, she also classified undecorated specimens and a handleless variant (“schüsselartige Tasse ohne Henkel”, a cup from the Liptovský Mikuláš-Liptovská Ondrašová depot) as Jenišovice-type cups. She classified other cups from the Liptovský Mikuláš-Liptovská Ondrašová hoard as related to the Jenišovice type (Novotná 1991, 33–38). However, those cups were classified as the Jenišovice type by later researchers (Martin 2009, 171; Piningre/Pernot/Ganard 2015, 147–177). According to V. Furmánek (1970, 464), none of them has the typical shape of the Jenišovice cup and he considers them to be its younger variants.¹² The handleless variant of the cup (bowl) from Liptovský Mikuláš-Liptovská Ondrašová, despite its decoration typical of the Jenišovice-type cups, cannot be considered a typical representative of this type. Except for 3 specimens (cup No. 3, 7 and 10: Furmánek 1970, fig. 14: 3; 15: 5, 6), which may be assigned to the Jenišovice-type cups on the basis of vessel shape, we consider the other five specimens to be cups related to this type. Two cups related to the Jenišovice type were also found in hoard III at the fortified settlement of Nemecká-Hradisko. It consisted of 17 bronze items deposited in a bronze cup of the Stillfried-Hostomice type, which safely dates the depot to the end of the Late Bronze Age (Oždání 2009, 5–27, 29, fig. 2, 9, 10; pl. XVII: 1; XVIII). Thus, these two specimens are also younger than the typical Jenišovice cups.

The shape and decoration of the cup from Bzince pod Javorinou makes it a typical Jenišovice-type cup. The closest analogies are the cup from the urn grave discovered in 1996 in Klentnice in Moravia (Kos 1997, 283, fig. 3: 3) and the cup from the Sîg depot in Romania (Soroceanu 2008, 59, pl. 5: 19). In terms of detailed typological classification, it is type B, although certain features, especially decoration, resemble type A.

The size corresponds to cups of lower type-B shapes. Its height of 6.6 cm is the median height of Slovak specimens, and it is close to the mean height of 6.7 cm (max. = 8.5 cm; min. = 5 cm). The diameter of the mouth (16 cm) is the largest of specimens from Slovakia (mean = 14.1 cm; median = 13.9 cm; max. = 16 cm; min. = 12.5 cm). The flattening index (FI = height/width) is relatively high (0.47), which is one of the features of type B cups, in contrast to type A cups with lower values (see Piningre/Pernot/Ganard 2015, 23–64).

The cup from Bzince pod Javorinou, similar to the specimen from Somotor (Novotná 1991, pl. 5: 32), has less oblique shoulders, in contrast to other Slovak specimens with convergent shoulders. The less converging shoulders are more characteristic of type-A cups. The vessel body is slightly convex, similar to most Jenišovice-type cups from Slovakia (see Novotná 1991, pl. 3: 25, 26; 4: 27, 29; 5: 30, 32, 33).

The decoration of the analysed cup consists of a line of bosses with a diameter of approximately 5 mm, between a line of dots with a diameter of approximately 1 mm (Fig. 4: 1, 2). The decoration of the body begins at the angle of the belly and runs around its perimeter. The line is interrupted where the handle is attached. There are two dots on the left edge of the hammered lower part of the handle, which indicates that the cup body was embossed after the handle was attached (Pl. I: 1c).¹³ It is the only cup from the territory of Slovakia decorated with a separate (dot-boss-dot) band. Other known cups are decorated with two (6 cups) or three (5 cups) boss lines lined with one, exceptionally two rows of dots. Cups decorated with one band appear sporadically in the territory of Romania, namely on the above-mentioned cup from the Sîg depot (Soroceanu 2008, 59, pl. 5: 19) and on the cup originating from the Iron Gates area, reportedly from the Moldava Veche site (South Banat; Soroceanu 2008, 60, pl. 6: 21), and Hungary, where such decoration appears on a type A cup from grave 26 at the Budapest-Békásmegyer burial ground (Kalicz-Schreiber 2010, 33, 34, pl. 18: 10; Patay 1990, 60, pl. 40: 89), and on the type B cup from the Érsekivádkert depot (Patay 1990, 60, pl. 41: 93). A cup with such decoration also comes from Moravia, from

¹² The entire depot from Liptovský Mikuláš-Liptovská Ondrašová is dated to the HB2–HB3, “with greater emphasis on HB2” (Furmánek 1970, 464).

¹³ The body of some cups from the Jenišovice hoard was decorated after the handle was attached, i.e. the hammered dot decoration extends over the handle. Two cups were even repaired first. Then, the handle was attached and the cup was decorated by hammering (Kytlicová 1959, 141, fig. 12: 2; 14: 2; 1991, 47, pl. 2: 12; 3: 15, 17). However, other cups indicate that the cup making process was not unified. In some cups, the hammered bands were interrupted on the place of the handle (indicating that the attachment of the handle was taken into account) and partially covered by the handle, indicating that the handle was attached after decoration (Kytlicová 1991, 47, pl. 3: 18; 4: 23, 26). The hammered decoration is covered by the handle in two more cups, but the decorative band runs around the entire perimeter without interruption (Kytlicová 1991, 47, pl. 3: 16; 5: 27).

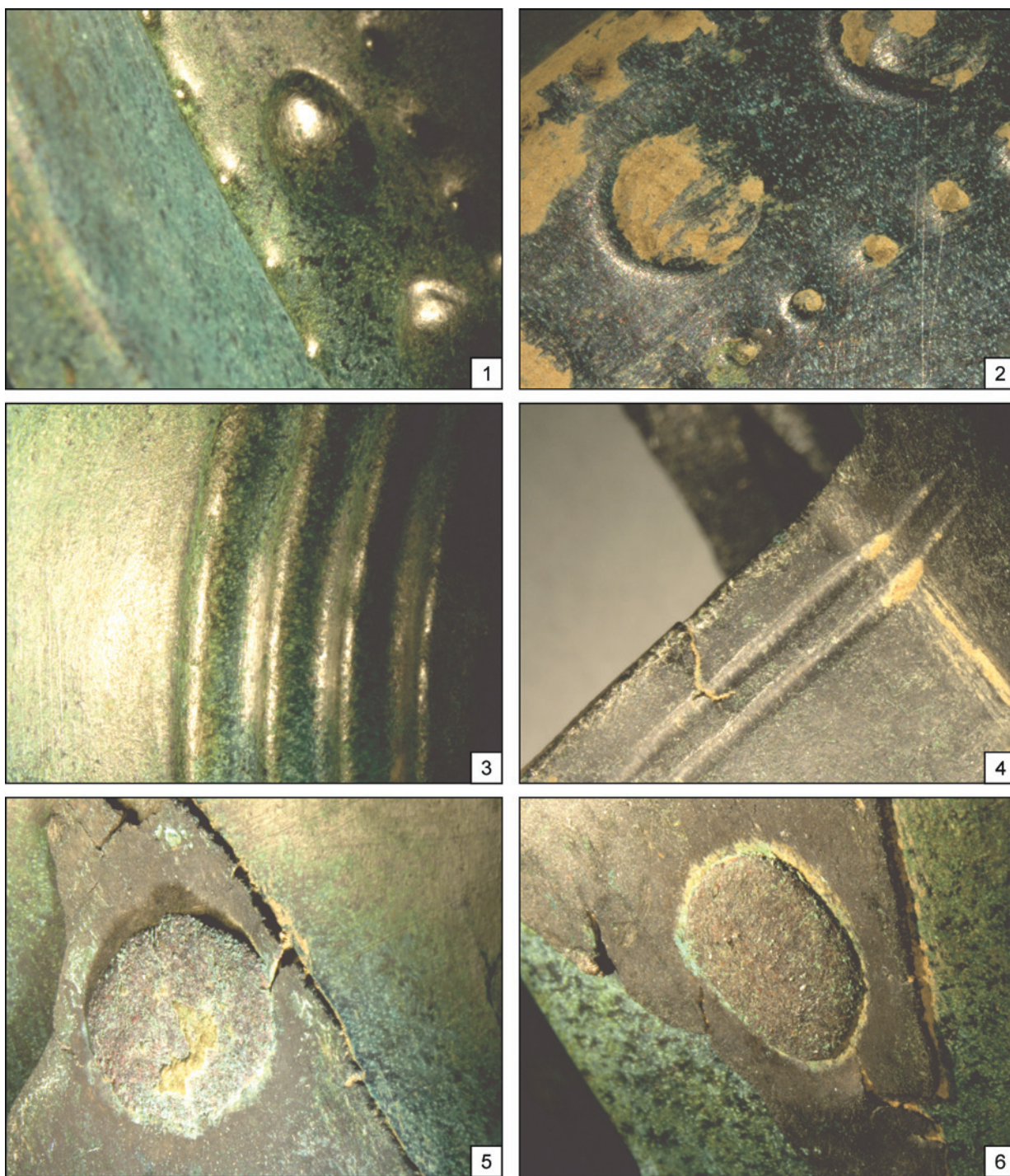


Fig. 4. Bzince pod Javorinou. Detailed view on the cup. Photo by R. Čambal, graphic by E. Makarová.

the above-mentioned urn grave discovered in 1996 in Klentnice (*Kos 1997*, 283, fig. 3: 3) that is most likely a part of the well-known Urnfield cemetery excavated by *J. Říhovský (1965)*. However, no such cups were found in the territory of today's Poland or Austria. Conversely, the single-band decoration often appears on lower, handleless cups/bowls from the territory of eastern France (depot Évans: *Piningre 2002*, fig. 3: 3; *Piningre/Pernot/Ganard 2015*, fig. 118; 123–126; 132), Switzerland (Guévaux, Hauterive, Zürich-Alpenquai: *Piningre/Pernot/Ganard 2015*, fig. 98: 2, 5, 7, 10; *Thrane 1965*, fig. 8a, 8b, 8f), central and northern Germany (hoards Basedow and Quedlinburg, grave find Brandenburg an der Havel: *Martin 2009*, 65, 66, pl. 24: 92–94) and Denmark (hoard Bredmose: *Thrane 1976*, fig. 2, 3; hoard Lunden: *Thrane 1965*, fig. 5a, 5c),

which are classified as type A cups/bowls. However, they usually have bigger bosses with a diameter of 8–9 mm, exceptionally 10 mm, and only a few vessels have boss diameter of 5–6 mm (*Piningre/Pernot/Ganard 2015, 23–64*).

Decoration also includes four horizontal ribs (3 horizontal grooves; Fig. 4: 3) in the lower part of the vessel, 0.5 cm from the bottom of the vessel. In Slovakia, they appeared in different numbers (2×2 , 3 or 4 ribs) and in different places (either close to the bottom or just above the bottom) in nine specimens. It is an element common for cups from the territory of Bohemia (*Kytlicová 1991, pl. 2: 11–14; 3: 15–20*), Moravia (*Nekvasil/Podborský 1991, pl. 1: 7, 8; 2: 11, 14; 3: 15, 16, 21, 22*), Poland (*Gedl 2001, pl. 4: 8, 9; 5: 11; 6: 16*). However, the element is less frequent in the cups from Hungary (*Patay 1990, pl. 40: 90; 41: 95, 97*), Germany (*Martin 2009, pl. 21: 84; 22: 86; 23: 89, 90*), Austria (*Prüssing 1991, pl. 2: 14*) and Romania (*Soroceanu 2008, pl. 4: 17; 5: 18, 19*).



Fig. 5. Bzince pod Javorinou. Detailed view on the handle from the inside. Photo by R. Čambal, graphic by E. Makarová.

The ribbon handle widened at both ends, is decorated with a pair of grooves, placed longitudinally at both edges (Fig. 4: 4). This simple decoration appears on several cups from the territory of Slovakia (*Novotná 1991, pl. 5: 30*), Moravia (*Nekvasil/Podborský 1991, pl. 1: 6; 2: 9, 10, 13*), Bohemia (*Kytlicová 1991, pl. 3: 20*), Hungary (*Patay 1990, pl. 40: 90; 40: 95*), Poland (*Gedl 2001, pl. 5: 10*), Romania (*Soroceanu 2008, pl. 5: 18*) or eastern France (*Piningre 2002, fig. 3: 1*). However, compared to the three longitudinal grooves, this is a less frequent decoration of the handle. The handle is attached to the cup by four (2×2) copper rivets (for elemental composition see Tab. 1). In the upper part, the rivets were hammered into an irregular circular shape (Fig. 4: 5, 6). In the lower part, they were hammered into a circular shape on the outside and into an irregular oblong shape on the inside (Fig. 5).

Jenišovice-type cups are considered to be a characteristic artefact of the beginning of the Final Bronze Age (HB1; *Gedl 2001, 19; Nekvasil/Podborský 1991, 6, 7; Novotná 1991, 31; Piningre/Pernot/Ganard 2015, 23–64; von Brunn 1968, 87*), although they probably started to be made at the end of the Late Bronze Age (at the turn of HA2 and HB1; *Kytlicová 1959, 144, 147, 153; Neustupný E. 1965, 105*). They were the most widespread type of HB1 bronze vessels in Central Europe. They appear from Transylvania through the Tisa region and the northern part of Central Europe to northern Germany and the Danish islands. The centre of their distribution is the territory of Moravia, Bohemia and Slovakia. Cups from Poland are the most north-eastern finds of this type (*Gedl 2001, 19*) and a cup from Tamlaght in Northern Ireland (*Warner 2006, 21, fig. 4*) is the most north-western and the most isolated specimen. Type A and type B cups/bowls have different distributions. Type A cups/bowls are concentrated mainly in the west, in France and Switzerland (mainly in the Jura region and western Switzerland) and in western and northern Germany and Denmark. Type B cups appear mainly in the eastern parts of Central Europe, especially in the Czech Republic, Slovakia, Hungary, Romania and Poland (*Piningre/Pernot/Ganard 2015, 23–64, fig. 20; 26*). The distribution of the two types in different parts of Europe led to a hypothesis of several production centres. Type A, dominated by handleless specimens, is considered to be a product of western origin, made in the Swiss Jura (*Piningre/Pernot/Ganard 2015, 101–121*). It is assumed that type B cups were made in today's Bohemia (*Kytlicová 1959, 147; Nekvasil/Podborský 1991, 6, 7*) and their conceptual origin can be traced back to the “Hungarian-Slovak” region (*Podborský 1967, 17, 23*). There is also a hypothesis that the specimens from the north were not imports, but local products (*Patay 1996, 409; Podborský 1967, 23*).

Bronze studs

In addition to the Jenišovice-type cup, the hoard from Bzince pod Javorinou also contained five bronze studs with a round, slightly convex and rounded shape. The two holes on the opposite sides were

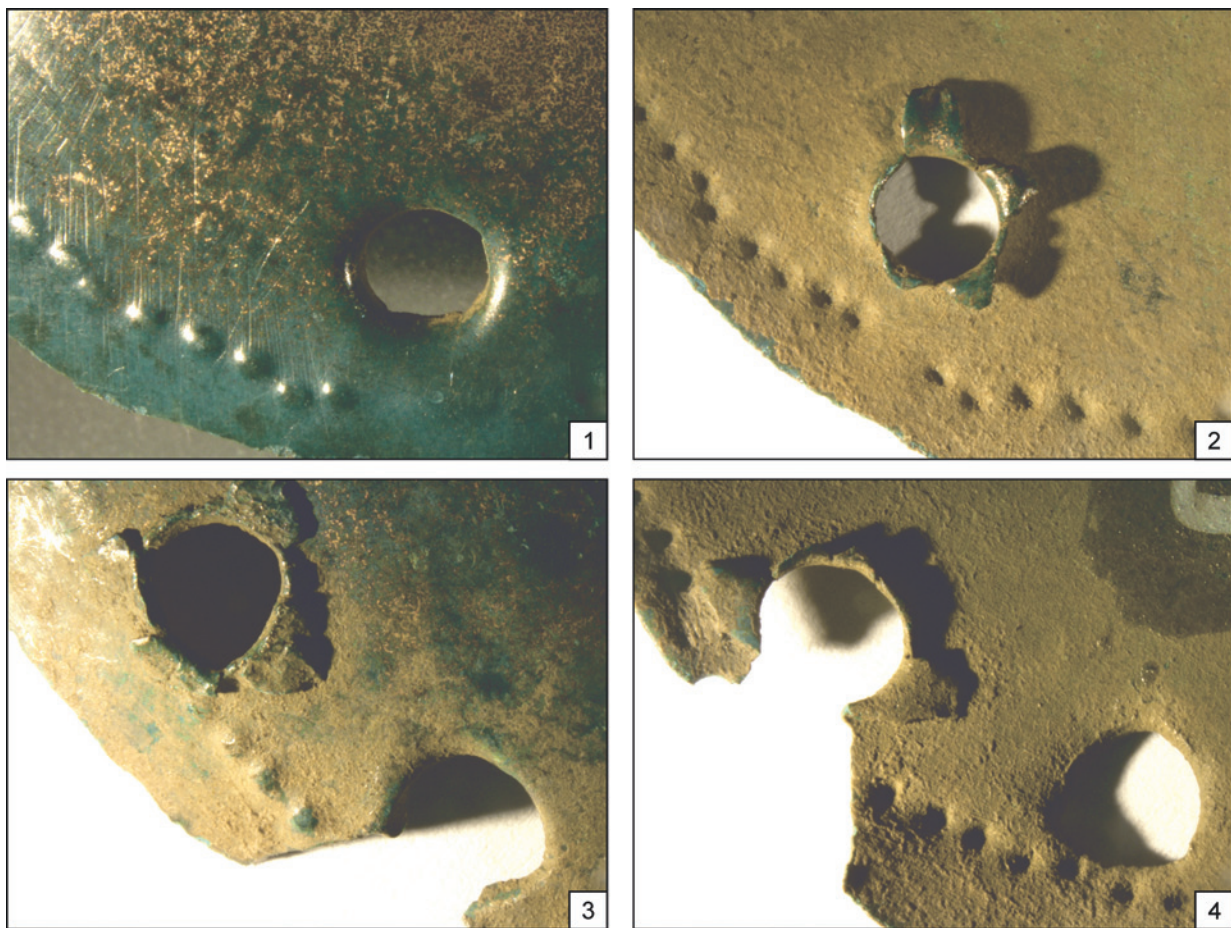


Fig. 6. Bzince pod Javorinou. Detailed view on the studs. Photo by R. Čambal, graphic by E. Makarová.

punched from the outside and their edges were not smoothed (Fig. 6: 1, 2). The studs are decorated with embossed dots around the perimeter (Fig. 6: 1). The studs are slightly damaged, probably by use, especially around the holes. Two of them were repaired (Fig. 6: 3, 4; Pl. I: 2, 4): a new hole was punched near the original, damaged hole, which caused a slight asymmetry. The punching of additional holes also appears in other studs, for example, those from the Liptovská Mara depot. However, according to M. Novotná (1981, 309), the additional holes were punched during production, when the original hole was placed too close to the edge.

Bronze studs with opposite holes are not chronologically or chorologically sensitive objects. They appear in the Early Bronze Age (e.g. Bartík/Farkaš/Jelínek 2019, 43–46, fig. 24; pl. 15: 1–22; 16: 7–36; Olexa/Nováček 2013, 34, fig. 26) but also later, in the Middle Bronze Age (Godiš/Haruštiak 2020, 61–64; Wels-Weyrauch 1978, 52, 89, pl. 92: 17, 18, 22, 24) and in the Urnfield period in the wider Central Europe. They appear rarely in the western part of Central Europe in the Early Urnfield period but they appear in the Danube region and the Carpathian Basin during the entire Late Bronze Age (Kytlicová 2007, 78). Smaller decorative studs appear sporadically in graves in the Lusatian culture in Slovakia. The largest number of studs come from the Late Bronze Age (Makarová 2008, 83). The above-mentioned Liptovská Mara hoard (Houdek 1927, 117; Novotná 1981) is dated to this period (HA1). The depot contained studs of this type with embossed decoration along the edge, and also studs without decoration, with a diameter ranging from about 2 cm to 10.5 cm. The studs from Depot A at Zvolen-Pustý hrad and new finds from excavations at the site in 2001 (Balaša 1946, 93, 94, fig. 3; Beljak 2002, 37–39; Novotná 1970b, pl. V; Paulík 1965a, fig. 4), the Rimavská Sobota depot (Hampel 1886, pl. CXII: 17–22) and the Dreveník II depot are slightly older. In the latter hoard, however, the rounded studs were undecorated and conical studs were embossed along the rim (Neustupný J. 1939, 212, pl. XIII: 1–7; fig. 6: m, n, p). The Hozelec-Dubina depot is also dated to BD–HA1. It contained bronze ornaments, including four studs with two opposite holes and a pair of

embossed dots on the rim (*Hudáková/Timura/Hudák 2019, 28, 29, 33, fig. 22; pl. II*). Studs with two opposite holes appear in depots in the northern Carpathian Basin, i.e. central and northern Slovakia and also in Transcarpathian Ukraine and Transylvania. The most western and north-western depots with a high number of studs outside the Carpathian arc are the Tučapy (Hradisko-Hulín horizon, i.e. BC2), Mankovice and Opava-Kateřinky depots in Moravia (Mankovice horizon, i.e. BD/HA1 and early stage of HA1; *Salaš 2005, 117, 215–218*).

The interpretation of the use of bronze studs varies. They are mostly interpreted as decoration for clothes, and they could have decorated headwear, dresses or cloaks (*Makarová 2008, 105, 107; Naue 1894, 140–142; Paulík 1986, 73, 74; Salaš 2005, 116*). A good example of the use of studs in a costume comes from a female grave of Tumulus culture in Šamorín-Šamot, where bronze studs with opposite holes were preserved *in situ* in the waist area and were interpreted as appliques on the belt or on the hem of a dress (see *Godiš/Haruštiak 2020, 55–65, fig. 5; pl. III: 20–29; IV: D, E*). The recently discovered Hozelec-Dubina depot, which contained, among other ornaments, four studs, is also interpreted as a part of women's clothing, i.e. a decorative headwear or belt (*Hudáková/Timura/Hudák 2019, 37–39, fig. 24*). However, there are assumptions that bronze studs could also have been used as elements of protective equipment – armour or shield (*Paulík 1986; Salaš 2005, 116*), or they could have been the bronze decoration of a wagon (*Novotná 1981, 312*). According to O. Kytlicová (1988, 314), when determining the function of studs, phaleras, poppers and buttons, it is important to consider their technical design, which indicates the type of organic substance they were attached to, while find contexts in graves and accurate assessment of the composition of some mass finds also provide important indications (*Kytlicová 2007, 77*). According to O. Kytlicová, studs are leather ornaments, which is confirmed by several cases where they were found attached to the leather (latest find: *Hudáková/Timura/Hudák 2019, 26–33; Kytlicová 1988b, 310*).

The depot from Bzince pod Javorinou belongs to the Somotor-Lúčky depot horizon defined for Slovakia by M. Novotná (1970b, 132, 133), which corresponds to HB1 and is parallel to the Hajdúböszörmény depot horizon in Hungary (*Mozsolics/Schalk 2000, 23–25*), to horizons Klentnice in southern Moravia and Křenůvka in northern Moravia (*Salaš 2005, 149–151*) and to horizons Jenišovice and Bošín-Chvojenec in Bohemia (*Kytlicová 1991, 6–20; 2007, 179–181, 189*). The depots of horizons in all the above regions contain cups of the Jenišovice type. Each region has its typical bronze vessels, such as Štramberg-type vessels in Moravia or Hajdúböszörmény-type buckets in the Carpathian Basin (decorated with hammered bosses and dots, with sun symbolism and bird protomes), and cauldrons with cross-shaped handle attachment. The last two vessels were also found in Slovakia, probably in the Lúčky depot, which reportedly also contained a conical helmet of Oranienburg type (*Mödlinger 2017, 31–37, 40; Novotná 1970b, 103, 104, fig. 17, 20; 1991, 47, 58; pl. 9: 48; 11: 54*). The horizon of Somotor-Lúčky depots is characterised by Jenišovice-type cups and by younger variants of the Posamenterie type brooch (*Novotná 1970b, 132, 133*). Exceptional finds include wire diadems with four side rosettes, also referred to as rosette diadems (*Makarová 2008, 85, 102*), which are technically based on Posamenterie type brooches. The find of the Jenišovice-type cup, together with bronze studs with opposite holes, which are not very chronologically sensitive, but mostly appear in HA1, could perhaps date this depot to the beginning of HB1.

FIND CONTEXTS OF JENIŠOVICE-TYPE CUPS

Although Jenišovice-type cups are the most common cups and the most common type of bronze ware from the beginning of the Final Bronze Age, they were not used on a mass scale. Currently, we record at least 182 cups/bowls of the Jenišovice type from 82 sites (Fig. 7). The majority of them come from hoards. Exceptionally, they appear in graves or settlement contexts (see List of sites).

The exceptions are the lakeside settlements in Switzerland (Corcelettes, Cortaillod, Guevaux and Zürich-Alpenquai), where eight cups were found (*Martin 2009, 171; Thrane 1965, 169–171, 206, 207, fig. 8*). However, their exact find context is unknown, so it is uncertain whether they were part of the equipment of pile-dwellings or intentionally deposited (ritually sacrificed). For example, bowls from the Corcelettes and Onnens sites show signs of damage and it is questionable whether it is an accidental (fire) or deliberate (symbolic mutilation) damage to the vessels (*Piningre/Pernot/Ganard 2015, 101–121*). In other regions, depots were also sporadically found in settlements or fortified settlements but they are intentionally deposited, not parts of the dwelling equipment. Two sets of Jenišovice-type cups from the site of the Lusatian culture fortified settlement Kotouč near Štramberg in Moravia are an example. Bronze items

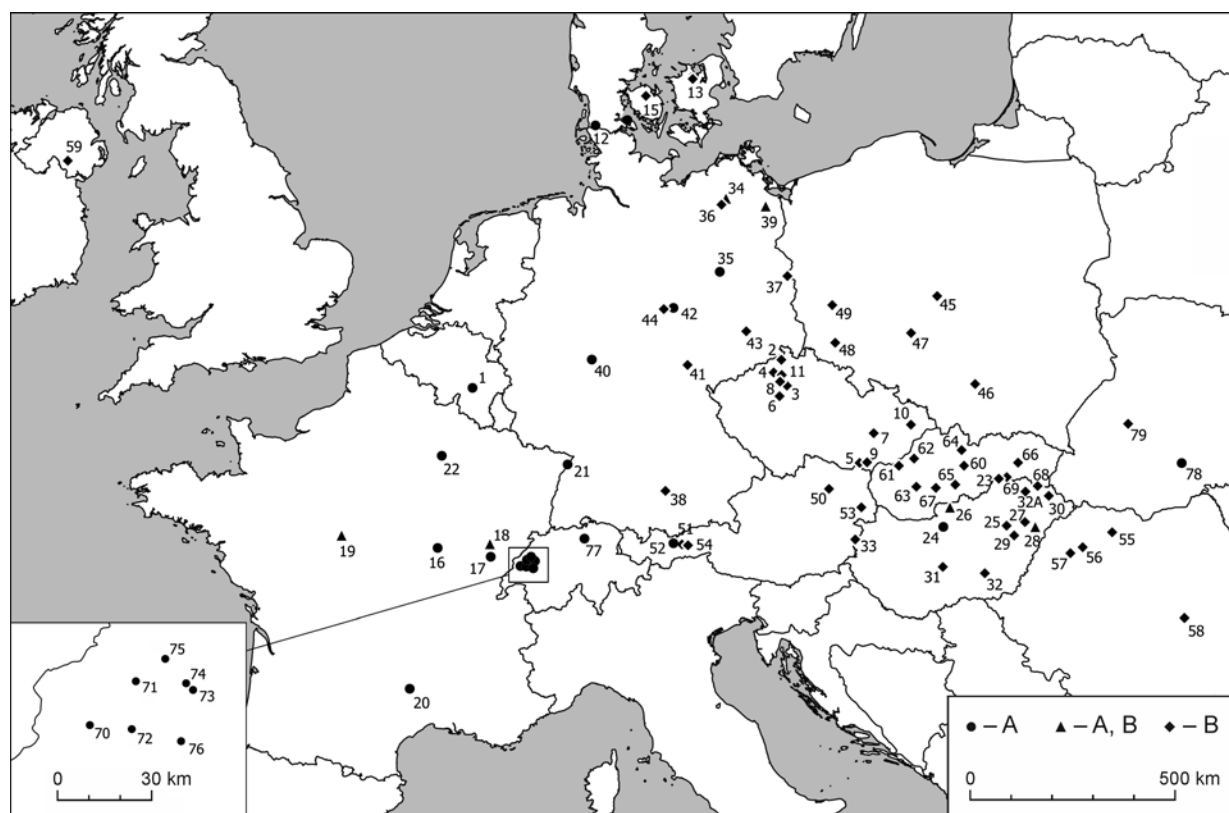


Fig. 7. Spatial distribution of the cups of Jenišovice type according to type A and B (site numbers correlate with list of sites). Data source: © MapTiler © OpenStreetMap contributors <https://www.openstreetmap.org/copyright>; authors K. Hladíková, E. Makarová.

of hoard No. 2 were reportedly found in a large clay pot, which, however, is not preserved. In addition to the reported eight bronze cups (but only six whole vessels and other fragments, including a handle, were preserved), it also contained jewellery and parts of clothing (Podborský 1967, 9, fig. 2). Hoard No. 4 was found in a rampart in “na Panském zátiší” site but its exact find context is unknown. It contained at least 73 items, of which two Jenišovice-type cups, other bronze vessels, jewellery and parts of clothing and working tools (Podborský 1967, 10, fig. 4; 5).

Cups in graves were found sporadically only in Moravia, Poland, Germany and Hungary. An exception is the territory of Austria, where the Jenišovice-type cups were not contained in hoards, but in graves, and there was only one isolated find (see List of sites). However, they differ slightly from typical cups of this type in both shape and decoration (Prüssing 1991, pl. 2: 11–16). In Moravia, an undecorated variant of the Jenišovice-type cup was found in grave 63 (Nekvasil/Podborský 1991, 4, pl. 1: 5) and a decorated one was found in grave 1/1996 at the burial ground in Klentnice. Another decorated cup was found in a damaged grave in Milovice (Nekvasil/Podborský 1991, 4, pl. 2: 10). The graves with cups, probably graves of people with higher social status, were found in the territory of South Moravia inhabited by the Podolí culture, from which only these three cups are known. On the other hand, in central and northern Moravia, i.e. in the Lusatian culture environment, Jenišovice-type cups were found exclusively in depots (Křenůvky; Štramberk – hoard 2 and 4). In addition, two graves with a cup were found in the territory of today’s Hungary. At the Budapest-Békásmegyeri burial ground, a whole Jenišovice-type cup was found in cremation grave 26 (Kalicz-Schreiber 2010, 33, 34, pl. 18: 10) and 10 fragments of bronze sheet probably from a Jenišovice-type cup were found in grave 48 (Kalicz-Schreiber 2010, 45, pl. 27: 19). A cremation Grave No. 1 with a cup was found at the burial ground of the Lusatian culture Przyborów in Poland: a damaged cup was deposited in an urn on burnt bones (Marcinkian 1973, 363, fig. 26; 27). Three cups were found in graves in the territory of present-day Germany: two cups of type A and one cup of type B. A grave in Brandenburg an der Havel (Martin 2009, 65, pl. 24: 93) and a barrow grave U14 at the burial ground Marburg (Ebel 1987, 18, fig. 4) contained one handleless cup/bowl of type A. One handleless cup of type

B was found in cremation grave 47 at the Haunstetten I burial ground, in which a man aged 20–40 was buried (Wirth 1998, 163, 164, pl. 47: 12).

As mentioned above, the vast majority of cups come from hoards. For example, eleven cups out of twelve from Poland were found in four depots. However, the total number of Jenišovice-type cups may be higher, as it is assumed that the lost cups from the hoards Biernacice (3 cups) and Biskupice (1 cup) were of this type (Gedl 2001, 19). In France, the Jenišovice-type cups and their related shapes belong to the most common type of bronze ware, which can be dated to the Final Bronze Age. They were found almost exclusively in hoards. The exceptions are two bowls: a bowl from Cramans with unclear find context, and a bowl from Roeschwoog, an isolated find at the depth of 1.5 m (Piningre/Pernot/Ganard 2015, 179–196). At least the latter bowl could be considered a one-piece (solitary) deposit (Salaš 2005, 13, 14). Likewise, an isolated find from the Kněževes site in Bohemia (Kytlicová 1991, 48) could be a solitary deposit; all other Jenišovice-type cups from the territory of Bohemia come from depots (Kytlicová 1991, 45–49). The bronze cup from the river Danube in the town of Solt in Hungary (Patay 1990, 60, 61) is also likely a (ritual) deposit. C. Metzner-Nebelsick (2003, 106) pointed out the link of Central European “exclusive” depots of bronze vessels to humid environments (streams, rivers) and it is quite probable that this cup was deposited in the Danube River intentionally. Hence, if we considered the isolated finds of cups to be a solitary deposit, all hitherto known cups from, for example, Romania would come exclusively from hoards (Soroceanu 2008, 57–65) and the same would apply to Slovakia. This assumption could be supported by the cup found in Dubnica nad Váhom, which was found near the Pod Pukačkou cave (Novotná 1964, 26; 1991, 27, pl. 5: 33). The depot in Brezno nad Hronom was also found in a cave. It contained two Jenišovice-type cups and 16 bracelets (Novotná 1964, 26; 1991, 27, pl. 19B: 1–10). On the other hand, there might arise doubts about the intentional deposition of the cup from Počúvadlo, which was found on the Sitno hill, in a fortified (?) hilltop settlement. But, the possibility that this could also be a solitary deposit is supported by the above-mentioned hoards from the Štramberk-Kotouč fortified settlement and by hoards of bronze items from the Somotorská hora settlement, of which hoard No. 1 contained four Jenišovice-type cups, five socketed axes, a flat closed bronze circle and amorphous pieces of bronze (Novotná 1991, 27, pl. 4: 29; 5: 30–32), and hoards of bronze items from the Nemecká-Hradisko fortified settlement (Ožďáni 2009). However, these were mostly depots with several items and not a single item.¹⁴ We can also include a hoard from the municipality of Ladice in the group of depots that are related to the settlement of fortifications. It contained 37 fragmented items (except for one hatchet), including a probable fragment of the Jenišovice-type cup. The hoard was deposited freely in the ground on the foothill terrace at the SE foot of the Veľký Lysec massif, where a fortified settlement was located (Veličik/Ožďáni 2020, 211, 215, 223, pl. I: 1). The detailed find context of five cups reportedly originating from Obišovice is not known. Their place of origin is not certain, but it is quite likely that they were contained in a depot consisting of several vessels, including several Jenišovice-type cups. It is also possible that this find could come from the hillfort of the Gáva culture in Stráža (Bartík 2007, 23, 27, 29; Podborský 2012, 325–333). More detailed find context is unknown for the cup from Žarnov, but according to the museum’s catalogue, other bronze objects were found with it (Novotná 1991, 27). Therefore, we may assume that this was probably a hoard, too. The same is the case for the find from the municipality of Madačka, probably a hoard, which contained one Jenišovice-type cup, a flat-bow fibula and two spiral armlets (Paulík 1965b, 61). On the other hand, the find context is known for the hoard in Liptovský Mikuláš-Liptovská Ondrašová: eight bronze cups and one bowl (of Jenišovice type and its derivatives) were deposited in a bronze cauldron, together with a bronze spear and a flat sickle-shaped object. The depot was deposited at a depth of 60 cm in a clay subsoil on a gentle slope near a watercourse (Furmánek 1970, 451).

TOPOGRAPHY OF THE MICROREGION

The studied area around the depot in Bzince pod Javorinou is defined as a microregion in relation to the Bošáčka, Klanečnica, Kamečnica and Vrzavka basins. There are relatively few published finds dating to the Bronze Age in the cadastre of Bzince pod Javorinou. In addition to the hoard, there are finds from an unknown site, which are dated to the Bronze Age. They include a bronze winged axe, which

¹⁴ An exception is a bronze diadem from the Nemecká-Hradisko fortified settlement, which was found 60 cm deep, approximately 40 m from the rampart. And although it is marked as Depot I, the author himself considers it an isolated finding (Ožďáni 2009, 4).

was originally published as an isolated find (Novotná 1970a, 46, pl. 17: 310). However, it may have originally been part of the depot together with a damaged button sickle and tanged sickle (Veliačik/Romsauer 1994, 37). An isolated find of a bronze socketed axe also comes from this cadastre (Novotná 1970a, 84, pl. 35: 626). It is probable that other potential finds in the Kamečnica and Vrzavka basins in Bzince pod Javorinou have not yet been identified.

In the wider area of the microregion, more significant traces of settlement come mainly from the Bošácka valley and Moravsko-lieskovská valley. To place the Bzince pod Javorinou hoard in the context of settlement in the Late and Final Bronze Age in the wider area of the microregion, we will briefly describe the significance of the Bošácka valley (Fig. 8). Evidence of a diverse range of settlement components in the Late and Final Bronze Age in the studied region indicates increasingly dense settlement due to the growing importance of the Bošácka valley as a corridor to the Považie region and an intersection of roads to the north, to Moravia. The defined area contains lowland settlements, hilltop settlements, burial grounds, sites with isolated finds and hoards, which are attributed to the Lusatian culture (Veliačik 1997, 35). In the Bošácka valley, the dominant site in the Late Bronze Age was the Hradiská/Hradištia site in Zemianske Podhradie¹⁵, where the excavation identified

a fortified hilltop settlement with finds mostly dated to HA2–HB1 (Veliačik/Romsauer 1998). The authors of the excavation assume the complete destruction of the fortified settlement by a strong fire and its subsequent reconstruction in HB1. Its reconstruction was probably related to the catastrophic disappearance of the older phase of settlement, evidenced by the burned layers (temperature of 1200–1400 °C), which was confirmed by dating the timbering of the rampart using the ¹⁴C method (Veliačik/Romsauer 1998, 233). Apparently, it controlled a wider region, as evidenced by the long-term settlement and the area of the hillfort (13.4 ha). A hillfort at the Martáková skala site was found in the cadastre of Zemianske Podhradie. However, it was dated to the Late Iron Age (Púchov culture), and was probably also used in the 9th–11th c. (Veliačik/Romsauer 1998). An isolated find of a Schalenknauf-type sword (the Königsdorf type, Kremnica variant) was found in Zemianske Podhradie at the Bezciné site (Novotná 2014, 82, 83, pl. 29: 129). A depot of bronze objects from the Urnfield period is also thought to come from Zemianske Podhradie. It contained a sickle, a “jingle bell” (?), a socketed axe, a spearhead, a massive bracelet, a ring (finger ring?) and an arrowhead (Novotná 1970, 124). In the southwest of the Bošácka valley, there is a hillfort in the cadastre of Dolné Srnie at Hradisko site, dated between HA and HB (Veliačik 1983b, 17; Veliačik/Romsauer 1994, 48), and the Trenčianske Bohuslavice hilltop settlement – Malovecké site (HB), which is the south-eastern point beyond which Bošácka flows into the river Váh (Pieta 2000, 141, 142). The accumulation of hilltop sites with their intensive settlement in the Bronze Age indicates the importance of this microregion. As for lowland settlements, one could mention the Zábřežské (Zábřežná) dated to HA2–HB1 and Pohančenišťa in the cadastre of Bošáca dated to HA2–HB3 (Veliačik 1997, 37). Settlement components, which probably belong to the above-mentioned hillfort, were located at the Železná dolinka site (BD–HA) in Dolné Srnie (Eisner 1933, 105; Veliačik 1983b, 178). The spearhead from Dolné Srnie also comes from this site (Mitáš et al. 2018).

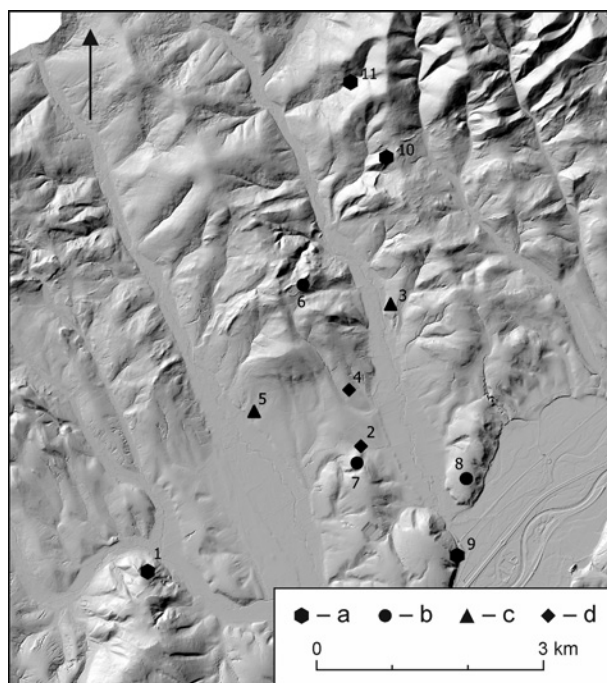


Fig. 8. Spatial distribution of components in selected microregion. 1 – Bzince pod Javorinou; 2 – Bošáca-Zábřežská; 3 – Bošáca-Kopec; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradisko; 8 – Trenčianske Bohuslavice-Malovecké; 9 – Trenčianske Bohuslavice-Turecké; 10 – Bošáca-Pohonitva; 11 – Špania dolina 1, 2. Data source: © ÚGKK SR; author K. Hladíková. Legend: a – hoard; b – hilltop settlement; c – burial ground; d – lowland settlement.

¹⁵ It is a multicultural site.

An inseparable part of settlements were burial grounds, which have so far been documented only to a lesser extent at the Bošáca-Kopce site and in the nearby Moravské Lieskové at the former Kožová site, dated roughly between HA–HB (Fig. 8; *Veliačik* 1997, 36).

The southern part of the middle Považie region, including the Bošácka valley, is also known for the finds of hoards from the Urnfield period. There was a Late Bronze Age find of a depot in Trenčianske Bohuslavice on the eastern slope of Turecké with 95 objects (HA1–HA2; *Veliačik* 1983a, 246, pl. XXXIX; XL: 1–15; 1997, 36). More recent finds from the Bošácka valley include a hoard from the Bošáca, Špania dolina 1 and 2 sites containing 53 artefacts, dated to HA2–HB1 and the transitional phase HA2/HB1, respectively (*Ondrkál* 2018, 288). A cup with a phalera (*Bartík* 2018)¹⁶ was reportedly found at the top of the Pohonitva hill northwest of Zabudišová (part of Bošáca).

VIEWSHED ANALYSIS

The location of hoards allows us to study their placement in the context of the past social landscape, and the identification of potential patterns using spatial analyses may indicate the importance of specific places in the studied period. The analysis of spatial relationships of the depot's location to the natural conditions and other components of the settlement network (contemporaneous with the depot) may reveal spatial patterns that can be used to formulate hypotheses on the past social landscape. Using an appropriate method (viewshed analysis, topographic prominence, cost-surface-analysis), it is possible to model how the social landscape framework was potentially perceived from an individual perspective, whether at the individual or group level. The detected spatial patterns also indicate a wide range of potential human decisions. Models of perception of the social landscape naturally integrate possible intentional actions (*Doneus/Kühntreiber* 2013, 346). Given the available source base for the studied area, the above approach is only possible to a limited extent. One of the tools to approximate the visual perception of the past country is the viewshed analysis. Viewshed analysis is a standard method used in archaeological research of the landscape (*Gillings* 2015; *Rášová* 2014). This analysis uses GIS tools to calculate the mutual visibility of selected points in the landscape or the visibility of the landscape from a specific point in a defined radius. The development of this methodology in archaeology is related to the phenomenological approaches to research, i.e. postprocessual archaeology; however, the application of this methodology using GIS tools brings it closer to the analytical procedures of processual archaeology (*Doneus/Kühntreiber* 2013).

The viewshed analysis of the depot in Bzince pod Javorinou was carried out to determine whether the deposition site was in visual contact with the surrounding settlement. Calculated viewshed(s) results contribute to the interpretation of the purpose of the deposition and to the interpretation of the significance of the deposition site.

In the first step, a simple visibility analysis (single viewshed) was performed in the QGIS software, i.e. a calculation from a single viewpoint. The calculation was performed on a DEM at 5 m resolution. The analysis was performed from the hoard site within a section of 10 × 12 km in a 13 km radius.¹⁷ The output is a raster whose cells are evaluated as invisible (value 0) or visible (value 1; *Kay/Sly* 2001). The strategic points of the Bošácka valley settled during the Urnfield period, i.e. the hilltop sites of Zemianske Podhradie, Dolné Srnie and Trenčianske Bohuslavice and lowland sites represented by settlements and burial grounds, are situated in the defined microregion (Fig. 8).¹⁸ The analysis showed very good visibility of the landscape (assuming the site was not forested) from the depot site. Using the observer's height of 1.6 m, as much as 30% of the landscape in the observation radius was visible from the depot (Fig. 9).¹⁹ All hilltop sites and two lowland components were located in the visible zones. Two lowland sites were visible: the Moravské Lieskové-Kožová burial ground and the Bošáca-Pohančenište settlement. Two sites (the Bošáca-Kopce burial ground and the Bošáca-Zábrežská

¹⁶ Both finds were found using a detector so it is possible that the artefacts come from the same site.

¹⁷ Only areas with components SW from the depot were included in the calculations, i.e. only a section of 10 × 12 km from a 13 km radius was selected. The section was defined as lying in an area that covered a radius of 13 km from each viewpoint.

¹⁸ Depots were not included due to inaccurate localisation. The depots from Bošáca-Špania Dolina 1 and 2 were not visible in the calculation. The depot at the eastern foot of the Turecké slope was visible from one point.

¹⁹ The toponym Plešivec indicates an unforested hill (*Krajčovič* 2014, 334).

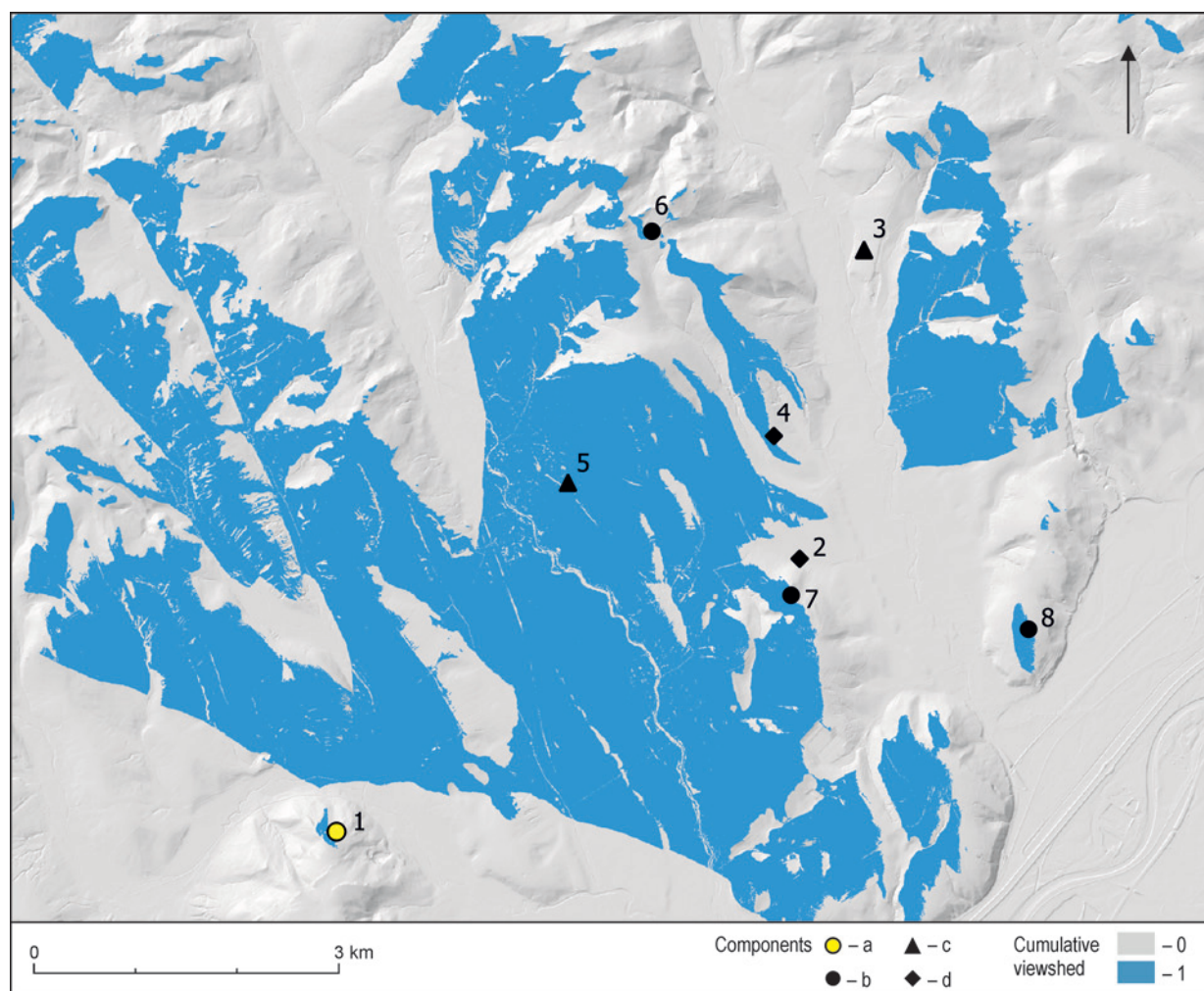


Fig. 9. Single viewshed from the viewpoints of the hoard. 1 – Bzince pod Javorinou; 2 – Bošáca-Zábřežská; 3 – Bošáca-Kopeck; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradisko; 8 – Trenčianske Bohuslavice-Malovecké. Data source: © ÚGKK SR; author K. Hladíková. Legend: a – hoard; b – hilltop settlement; c – burial ground; d – lowland settlement.

settlement) were not visible at all from the depot site. However, visibility analysis is largely limited by the uncertain localisation of these lowland components. The next step was a viewshed analysis of the hilltop settlements in the same radius. Due to the presence of fortifications, the height of the observer was increased by 2 m. Lowland sites were also subject to the viewshed analysis. Partial viewshed analyses were performed at all known components of the settlement network to calculate the cumulative viewshed. Cumulative viewshed is the algebraic sum of two or more simple viewsheds (*Connolly/Lake 2006*). The resulting raster cells range from 0 (invisible) to n , where n is the number of observation points. In our case, the number of viewpoints was 8, including hilltop and lowland positions and the depot site. The cumulative viewshed (Fig. 10) confirmed that the area on the northern slope of the Salašky massif, in which the analysed depot was found, was a very visible place in the defined radius of the studied microregion. The cumulative viewshed of the northern slope ranges from 4 to 6.²⁰ The depot is localised in the area with the highest cumulative viewshed value of 6 (Fig. 11). This area is relatively small, only about 4.6 hectares, so we assume that the depot was deposited intentionally at this site.

²⁰ The value indicates the number of viewpoints from which a point is visible.

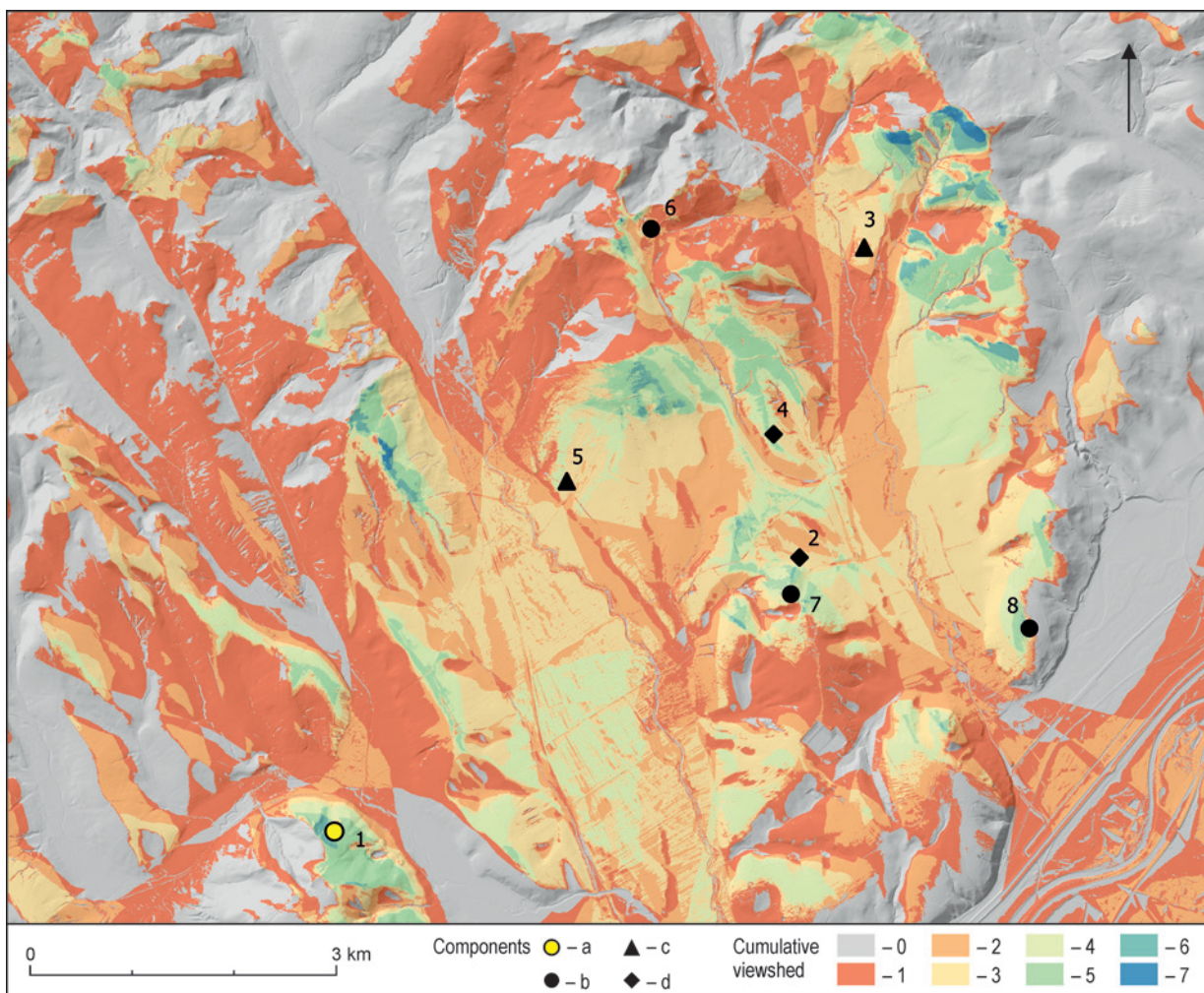


Fig. 10. Cumulative viewshed from the viewpoints in selected area. Viewpoints (sites): 1 – Bzince pod Javorinou; 2 – Bošáca-Zábřežská; 3 – Bošáca-Kopeck; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradiško; 8 – Trenčianske Bohuslavice-Malovecké. Data source: © ÚGKK SR; author K. Hladíková. Legend: a – hoard; b – hilltop settlement; c – burial ground; d – lowland settlement.

DISCUSSION AND CONCLUSION

A depot (in the traditional sense according to the definition of O. Montelius) is a set of at least two intentionally and simultaneously deposited objects, which, however, cannot be part of grave content or represent settlement remains, i.e. a random grouping of finds in a layer or pit. However, there are opinions that a single item, commonly referred to as an isolated find, may also be considered a depot if it was deposited intentionally (Salaš 2005, 12–14). According to M. Novotná (1970, 129), the decisive criterion for classifying a find as a depot is the intention to deposit objects together, while the number of pieces and their properties are not decisive. She is very sceptical with respect to clarifying the reason for depositing these objects and points out that the same depot can often be explained from both a profane and a ritual point of view (Novotná 1987, 327–329). The interpretation of the deposition of objects has changed over time. Currently, depots tend to be interpreted as gift-to-gods rather than items of profane significance based on more detailed information obtained through research (Gori 2014, 282; Metzner-Nebelsick 2003, 99).

One of the key factors in the interpretation of the deposition of objects is the find context, including its location. The composition of the depot and the condition of the artefacts in it undoubtedly play an important role as well. A more accurate topographic location of depots tends to be an exception (e.g. Liptovský

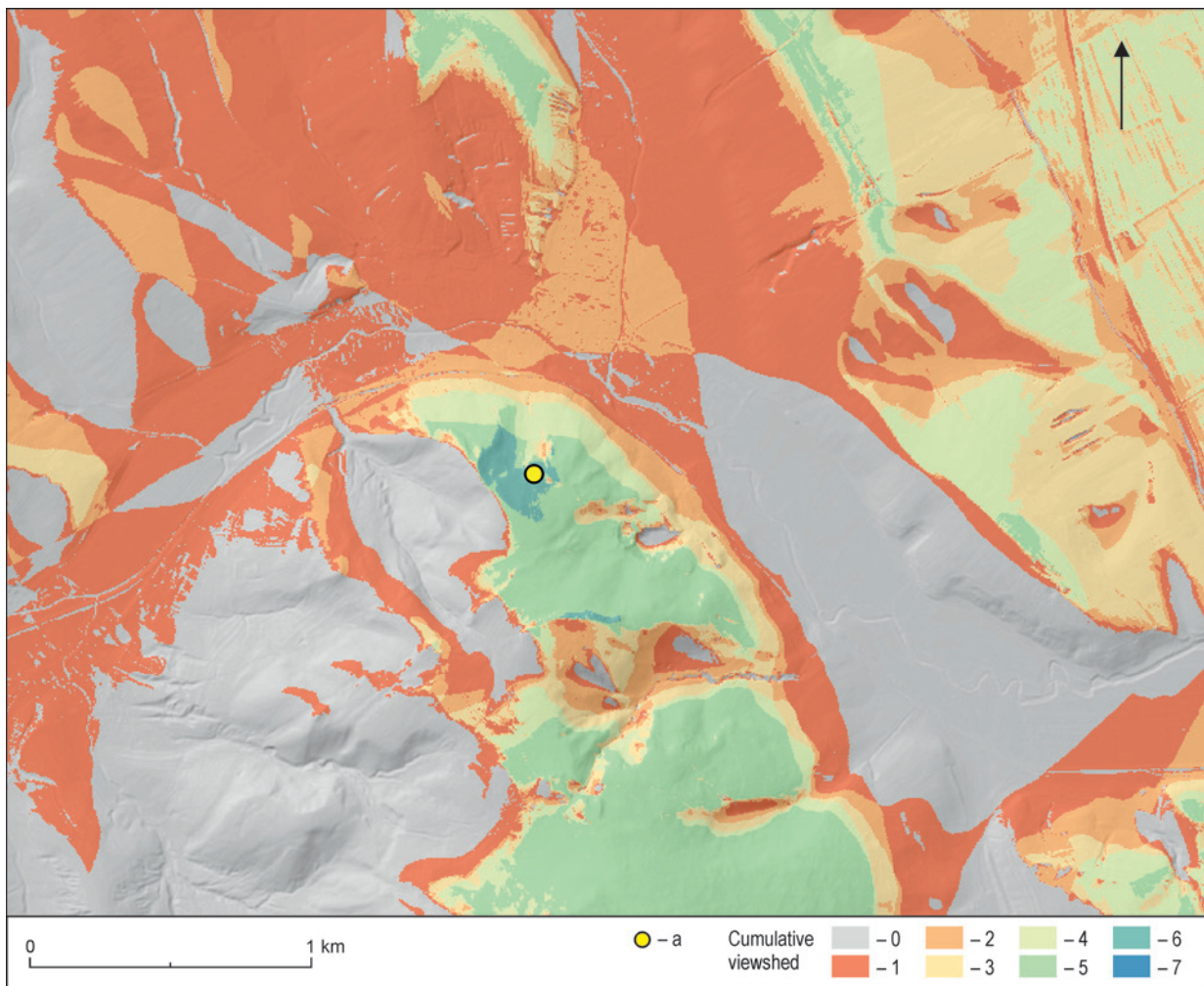


Fig. 11. Cumulative viewshed – detailed view on the area of the hoard from Bzince pod Javorinou. Data source: © ÚGKK SR; author K. Hladíková. Legend: a – hoard.

Mikuláš-Liptovská Ondrašová, Křenůvky, Záluží).²¹ The documentation of the original deposition of individual artefacts in the depots is usually absent. Although a more detailed find context of the depot from Bzince pod Javorinou is unknown, the finder's photo documentation shows the position of the cup, which was situated upside down, and the position of studs, which were located on the side of the cup (Fig. 2a, 2b). This depot may be included in the group of depots freely deposited in the ground. However, it could have been originally deposited in organic packaging, which, for example, M. Salaš assumes for a large number of depots from Moravia (Salaš 2005, 209; Salaš *et al.* 2020, 56, 57). Deposition of the vessel upside down is not completely exceptional. For example, all four cups in the Křenůvky depot were turned upside down (Salaš 2005, 209). In the Záluží depot, all bronze items were deposited in a ceramic vessel while one upside-down cup was covering another one (Neustupný E. 1965, 98). And a cup covering another cup, reportedly containing ash, in the depot from Somotorská hora was also probably turned upside down (Andel 1955, 445). The intentional arrangement of the artefacts and the relatively shallow position of this depot²² indicate a ritual depot. Ritual depots are mass finds that are deposited at a place

²¹ The examples relate to depots that contained Jenišovice-type cup(s). However, these are accidental finds that were not uncovered and documented by archaeological excavation so the information about the topographic location and find context is very poor. An exception from Slovakia is the Hozelec-Dubina depot, which was found during archaeological excavation. Although the depot did not contain a Jenišovice-type cup, it contained four studs with opposite holes and other jewellery/ parts of clothing (Hudáková/Timura/Hudák 2019, 26–39).

²² The depot was deposited approximately 25–30 cm deep. However, it is also necessary to take into account that the terrain has risen a bit.

from which they cannot be recovered. They are usually composed of specific objects, often in combination with other elements, which can be interpreted as remains of ritual practices (such as animal bones, remains of fire, etc.; Gori 2014, 274). The upside-down vessel from Bzince pod Javorinou possibly covered such remains of ritual practices, but it was not handled professionally so it is impossible to comment on the possible “content” hidden under the cup.

Bronze vessels were luxury goods that had a strong link to the social elites. They are thought to have been used in the production and consumption of alcoholic beverages as drinking sets (Metzner-Nebelsick 2003, 100). In addition, bronze vessels as prestigious items are understood not only as items “suitable” for exchange, but also as gifts. It was through the exchange of gifts, which probably took place during meetings involving alcoholic beverages, that new alliances were established and strengthened (Dietler 2006, 230–232). Such alliances were not only formed between people, but they could also have been formed and strengthened between members of the elite and the gods. By depositing vessels in the ground, they demonstrated to other members of society their contacts with the gods, and thus their prominent position (Gori 2014, 283; Metzner-Nebelsick 2003, 111).

The joint deposition of a Jenišovice-type cup together with five bronze studs with two opposite holes,²³ which appears in Slovakia especially in the Early Urnfield period (see above), is interesting in this respect. Some items, especially weapons and jewellery, could have been inherited from one generation to another (Salaš 2018, 147). Perhaps their combination could be interpreted similarly to M. Novotná's (1987, 327, 328) interpretation of a depot from a cave in Dobšiná,²⁴ i.e. as a votive gift in which older traditions are reflected.

Several published cups were damaged and not functional.²⁵ Some cups, including the one from Bzince pod Javorinou, showed traces of dents (e.g. Kužnica Skakawska: Gedl 2001, pl. 5: 11). Both dents in the cup from Bzince pod Javorinou were most likely caused prior to deposition in the ground. However, it is difficult to establish whether it was intentional damage, which can be understood as ritual behaviour, or damage caused by the use of the vessel. The dent on the vessel surface could have resulted in later corrosion and sheet degradation in post-deposition processes, leading to visible cracks. As for the studs, there are significant traces of use, even of repair. The use of repaired studs is also documented on the belt from a richly equipped woman's grave in Šamorín-Šánot (Godiš/Haruštiak 2020, 55–65, fig. 5; pl. III: 20–29; IV: D, E). It is therefore clear that, despite the damage, these were valuable artefacts and their damage did not prevent their further use.

Bronze vessels were rarely found in graves. They are perceived as objects whose testimony mainly concerns the social, eventually ritual or cult aspect, and together with other luxury items, such as weapons, components of horse harness or wagons, are regarded as a sign of deceased's higher social status (Kytlicová 1988a, 342; Metzner-Nebelsick 2003, 108, 109). There are no lavish graves of the Lusatian culture in the territory of present-day Slovakia. There are few metal artefacts in the graves, most often parts of clothing and jewellery in contrast with numerous metal artefacts in depots (Makarová 2008, 117). It is therefore appropriate to think about some hoards as substitutes for lavish burials, whose content contrasts with poor finds from burial grounds (Gori 2014, 283). This underlines the importance of the place where the depot was deposited so it can be seen as a special space (sensu Foucault 1996 – “other spaces or heterotopia” – Fontijn 2019; Hansen 2012; Vachta 2016). The person(s) who deposited a set of objects in the ground did not have to be just the bereaved, as is the case with graves. This person could have been an individual, no doubt a representative of the local elite, who, while still alive, wanted to highlight their important position in the society, believing that they would be able to use the object again in the other-world, or they wanted to secure their leading position in the society by a sacrifice of luxury items to gods.

It is also essential to know the location of depots to interpret them in the landscape context. Depot finds show a link to hilltop sites, their uppermost parts, slopes or foothills, which are topographically advanta-

²³ The combination of a Jenišovice-type cup and bronze studs of another type (studs/buttons with a loop on underside) appears in several hoards from the territory of today's Czech Republic (Jenišovice, Kamýk, Libkovic nad Řípem, Záluží). However, the depots also contained other items: jewellery and parts of clothing, which could have been ornaments on women's clothing (Kytlicová 1988b, 316, 317). The hoard from Liptovská Mara also contained, in addition to a large number of bronze studs with opposite holes and several jewels, a fragment of bronze sheet, which I. Houdek (1927, 117) described as a fragment of a vessel. However, M. Novotná (1981, 309–312) criticised this interpretation, considering this item a possible part of a wagon.

²⁴ A Kuyavia neckring was found in the depot, along with bronze objects dated to other periods.

²⁵ For example: Biernacice, Biskupice (Gedl 2001, pl. 3: 6, 7), Brezno nad Hronom (Novotná 1991, pl. 4: 27), Egyek (Patay 1990, pl. 40: 90–92), Lăpuș II (Soroceanu 2008, pl. 3: 13), Liptovský Mikuláš-Liptovská Ondrašová (Furmánek 1970, fig. 3–5; 8; 10), Madačka (Novotná 1991, pl. 3: 25), Síg (Soroceanu 2008, pl. 5: 18), Velem-Szent Vid (Patay 1990, pl. 42: 98).

geous, strategically situated sites. They are often located on the edge of the contemporary ecumene, but their strategic location is determined by the proximity of watercourses or confluences and the overall landscape. They are often located on the edges or at the mouths of important geomorphological units through which roads led (Salaš 2005, 195–206; 2018, 145). This also applies to the Salašsky massif, which lies on the border of the Little and White Carpathians with a road connecting the middle Považie region with the Pomoravie region. It is clear that the choice of the depot site was influenced by several factors. Hoards were deposited in places of special significance (emotional, social or memorable – Neumann 2010, 242). We partially understand deposit sites in the context of M. Foucault's concept of heterotopias ("other sites"),²⁶ which was applied by S. Hansen (2012) for a broader methodological framework for deposit sites in the Bronze Age (Neumann 2010, 242). The Salašsky massif is also such "other space". It could have been perceived as a mythical hill or sacral space, which is, in addition to the find, partially indicated by its good visibility (Fig. 10; 11). The symbolic significance of elevated sites is evident not only for high hills visible from afar, but also for prominent and lower terrain dominants (Bergh 2014, 3; Smrž/Blažek 2002, 804, 805). This applies to the Salašsky massif (Plešivec site). Hills or elevated spaces have always played an important role in people's lives in prehistoric and historical periods. In the context of local ideologies and beliefs, they were perceived as sacred places, places reaching to the heavens, places where deities (supernatural entities), mythical beings²⁷ or heroized ancestors lived or met. Hill had a symbolic connection to heaven and was perceived as an *axis mundi* (Bergh 2014, 2–4; Bouzek 2002, 811; Eliade 2006, 28–35). To better understand the importance of a hill, it is necessary to know the intensity of the surrounding settlement. Lowland components may be understood as representatives of "ordinary" people looking up to a sacred space, which could have been represented by the massif as a sacred mountain (Bergh 2014, 4). However, in our case, the lowland settlement around the Salašsky massif is very sporadic, which is probably largely related to the state of research. Votive depots are usually located outside settlements (Gori 2014, 274). They could have been deposited in the mentioned sacral area (sacred grove, zone, mountain as a whole), whose traces were not archaeologically identifiable (sensu Hansen 2013 – "votive offerings without temples"). The area where the studied depot was found could have been such an area. The importance of the site is emphasised by its good visibility (northern slope of the Salašsky massif). The viewshed analysis showed that the deposition area was specific compared to the surrounding landscape and its good visibility from key points of the settlement network suggests that the deposition of the cup together with the studs at this site was intentional (see e.g. Vachta 2016, 176). Cumulative viewshed which took into account visibility from all known components of the settlement network, also showed that the deposit site was one of the most visible places in the microregion. The visibility of the area, together with the properties discussed above, document the votive nature of the depot.

Another reason for choosing a depot site could have been the proximity of the road leading from the west to the Bošácka valley. The finds of depots near long-distance or local prehistoric and mediaeval roads could be related not only to the physical passage, but also to the symbolic passage, which required some form of sacrifice. Such travel sacrifices ("Wegeopfer") are common especially in passes in the Alps (Salaš 2018, 148; Smrž/Blažek 2002, 803, 804).

The Final Bronze Age was a period of fundamental economic change. It was reflected in more significant social stratification in the initial phase and building of a new type of settlement form – hillfort with a central function (Gašpar 2018, 101; Veliačik 1983, 21). During this period, the Lusatian culture reached the maximum settlement density caused by intensive demographic growth (Veliačik 1983, 21). The hoards of the Final Bronze Age reflect the high quality of metallurgical production. After a previous decrease in the finds of hoards in the HA2, there is an increase in the deposition of bronze objects in the HB1 (Somotor-Lúčky horizon; Novotná 1970, 132; Salaš 2005, 147, 149, 219). A certain degree of universality in the form and decoration of metal artefacts in the Final Bronze Age in general (s.c. *metallurgical koiné*), as in the case of the Jenišovice-type cup from Bzince pod Javorinou, could document the existence of social norms and behaviours characteristic of supra-regional communities, which were distributed by far-reaching contacts of the elites (Gori 2014, 271; Metzner-Nebelsick 2003, 111). The find of the Bzince pod Javorinou hoard, dated to HB1, in the area that connected the middle Považie region with the Pomoravie region, indicates that the local elites belonged to a network of supra-regional contacts.

²⁶ Heterotopias or "other spaces" are in relation to other spaces, but the relationships contained in them are questioned, neutralised (Foucault 1996).

²⁷ "Máme i povesti na Hradiská sa vzťahujúce. Povest' hovorí, že Hradiská a Marťáková skala (o ktorej nižšie bude reč) obývané boli obry. Raz obrovské dievča oráča s pluhom i zápražou zobralo do zástery a zanieslo si ho s ňou hračku do „zámku“. Dľa inej povesti stálo na Hradiskách mesto obry obývané, ktoré sa ale prepadlo. Bolo to tak dávno, keď ešte celá Bošácka dolina až po Bohuslavice na Považí, hlbokým jazerom bola." (Holuby 1901).

LIST OF SITES WITH JENIŠOVICE-TYPE CUP(S)²⁸ (cf. Fig. 7)

Belgium

1. Sinsin – context?: 1 piece of type A (fragments; *Piningre/Pernot/Ganard 2015*, 23–64, fig. 20).

Czechia

2. Huntířov – hoard: 1 piece of type B (undecorated; *Chvojka/Jiráň/Metlička et al. 2017*, 83, 84, 170, pl. 96: 5).
3. Jenišovice – hoard: 14 pieces of type B (*Kytlicová 1991*, 45, pl. 2: 11–14; 3: 15–18; 4: 22–26; 5: 27).
4. Kamýk – hoard: 1 piece of type B (*Kytlicová 1991*, 45, 46, pl. 3: 20).
5. Klentnice – grave 63: 1 piece of type B (undecorated; *Kytlicová 1991*, 45, 46, pl. 3: 20; *Říhorský 1965*, 19, pl. XVII: 63b, h).
 - Grave 1/1996: 1 piece of type B (decorated; *Kos 1997*, 283, fig. 3: 3).
6. Kněžves – isolated find (solitary deposit?): 1 piece of type B (undecorated; *Kytlicová 1991*, 46, pl. 5: 29).
7. Křenůvky – hoard: 4 pieces of type B (*Nekvasil/Podborský 1991*, 4, 5, pl. 1: 6–8; 2: 9).
8. Libkovic pod Řípem – hoard: 1 piece of type B (*Kytlicová 1991*, 46, pl. 4: 21).
9. Milovice – grave: 1 piece of type B (*Nekvasil/Podborský 1991*, 4, 5, pl. 2: 10).
10. Štamberk – hoard No. 2: 6 + 2? pieces of type B (*Nekvasil/Podborský 1991*, 4, 5, pl. 2: 11–14; 3: 15–19; *Podborský 1967*, 9, fig. 2: 1–8).
 - Hoard No. 4: 2 pieces of type B (*Nekvasil/Podborský 1991*, 5, pl. 3: 20, 21; *Podborský 1967*, 10, fig. 4: 5, 6).
11. Záluží – hoard: 2 pieces of type B (decorated and undecorated; *Kytlicová 1991*, 45, pl. 3: 19; *Neustupný E. 1965*, 97–114, fig. 2–5).

Denmark

12. Bredmose – hoard: 2 pieces of type A (*Thrane 1976*, 168–171, fig. 2, 3).
13. Løgtved Mose – hoard: 3 pieces of type B (*Thrane 1965*, 164, 165, fig. 6: a–c).
14. Lunden auf Als – hoard/grave?: 3 pieces of type A (another 3 are missing; *Thrane 1965*, 162–164, fig. 5: a–c).
15. Øgemose-Kirkendrup – hoard: 4 pieces of type B (*Thrane 1965*, 165–168, fig. 7: a–d).

France

16. Blanot – hoard: 1 piece of type A (*Piningre/Pernot/Ganard 2015*, 179–196, fig. 165: 2).
17. Cramans – context?: 1 piece of type A (*Piningre/Pernot/Ganard 2015*, 179–196, fig. 169).
18. Evans – hoard: 25 pieces of type A, 7 pieces of type B (decorated and undecorated; *Piningre 2002*; *Piningre/Pernot/Ganard 2015*, 147–177, fig. 118–147).
19. Fresnes – hoard: 2 pieces of type A, 1 piece of type B (*Piningre/Pernot/Ganard 2015*, 179–196, fig. 170).
20. Mas-Saint-Chély (Saint-Chély-du-Tarn) – hoard: 1 piece of type A (undecorated; *Piningre/Pernot/Ganard 2015*, 179–196, fig. 174: 6).
21. Roeschwoog – isolated find (solitary deposit?): 1 piece of type A (*Piningre/Pernot/Ganard 2015*, 179–196, fig. 176).
22. Saint-Martin-sur-le-Pré – hoard: 1 piece of type A (*Piningre/Pernot/Ganard 2015*, 179–196, fig. 180; 181: 2).

Hungary

23. Bódvaszilas-Nagy Bene-bérc – hoard: 1 piece of type B (*Szathmári 2015*, 417, 424–428, fig. 4: 1; 6).
24. Budapest-Békásmegyer – grave 26: 1 piece of type A (*Kalicz-Schreiber 2010*, 33, 34, pl. 18: 10; *Patay 1990*, 60, pl. 40: 89).
 - Grave 48: 1 piece, type? (fragments; *Kalicz-Schreiber 2010*, 45, pl. 27: 19).
25. Egyek – hoard: 3 pieces of type B (*Patay 1990*, 60, pl. 40: 90–92).
26. Érsekúdkert – hoard: 1 piece of type A, 1 piece of type B (*Patay 1990*, 60, pl. 40: 93).
27. Hajdúböszörmény – hoard: 1 piece of type B (*Patay 1990*, 60, pl. 41: 94).
28. Hajdúsámson – hoard II: 2 pieces of type B (1 without a handle, 1 undecorated; *Patay 1990*, 61, 62, pl. 42: 100, 101).
 - Hajdúsámson-Farkaslapos – hoard: 1 piece of type A (undecorated without a handle; *Patay 1990*, 62, pl. 42: 102).
29. Nádudvar – hoard: 1 piece of type B (undecorated; *Patay 1990*, 62, pl. 42: 103).
30. Pap II – hoard: 1 piece of type B (*Mozsolics/Schalk 2000*, pl. 73: 1; *Patay 1990*, 60, 61, pl. 41: 95).
31. Solt – river find (hoard?): 1 piece of type B (*Patay 1990*, 61, pl. 41: 96).
32. Szentes-Nagyhegy II – hoard: 1 piece of type B (*Mozsolics/Schalk 2000*, pl. 94: 3; *Patay 1990*, 61, pl. 41: 97).

²⁸ The aim of the paper was not to publish a complete list of sites. There might be missing some archaeological sites containing the Jenišovice-type cup(s).

- 32A. Tolcsva-Várhegy (?) – hoard: 1 piece of type B (*Szabó 2013*, fig. 4: 4; 5: 2).
 33. Velem-Szent Vid II – hoard: 1 piece of type B (*Mozsolics/Schalk 2000*, pl. 114: 10a, 10b; *Patay 1990*, 61, pl. 42: 98).
 • Not listed – unknown site – context?: 1 piece of type B (*Patay 1990*, 61, pl. 42: 99).

Germany

34. Basedow – hoard: 2 pieces of type A, 2 pieces of type B (*Martin 2009*, 65, pl. 21: 83, 84; 23: 91; 24: 92).
 35. Brandenburg an der Havel – grave: 1 piece of type A (*Martin 2009*, 65, pl. 24: 93).
 36. Dahmen – hoard: 1 piece of type B (*Martin 2009*, 65, pl. 22: 85).
 37. Frankfurt an der Oder – grave: 1 piece of type B (*Martin 2009*, 66, pl. 25: 96).
 38. Haunstetten I (Augsburg-Haunstetten) – grave 47: 1 piece of type B (*Wirth 1998*, 163, 164, pl. 47: 12).
 39. Klein Luckow – hoard: 1 piece of type A, 2 pieces of type B (*Martin 2009*, 65, pl. 22: 86, 87; 23: 88).
 40. Marburg – hrob U14: 1 piece of type A (*Ebel 1987*, 18, fig. 4).
 41. Pößneck-Schlettwein – hoard: 1 piece of type B (*Martin 2009*, 65, pl. 23: 89).
 42. Quedlinburg – hoard: 1 piece of type A (*Martin 2009*, 65, 66, pl. 24: 94).
 43. Riesa-Gröba – hoard: 1 piece of type B (*Martin 2009*, 65, pl. 23: 90).
 44. Thale – hoard: 1 piece of type B (*Martin 2009*, 66, pl. 24: 95).

Poland

45. Biernacice – hoard: 2 pieces of type B (3 pieces are lost; *Gedl 1991*, 17, 18, pl. 2: 5; 3: 6).
 46. Biskupice – hoard: 1 piece of type B (1 piece is lost; *Gedl 1991*, 18, pl. 3: 7).
 47. Kuźnica Skakawska – hoard: 4 pieces of type B (*Gedl 1991*, 18, pl. 4: 8, 9; 5: 10, 11).
 48. Podgórník/Jerzmanice Zdrój – hoard: 3 pieces of type B (1 piece is lost; *Gedl 1991*, 18, 19, pl. 6: 12–14).
 49. Przyborów – grave 1: 1 piece of type B (*Gedl 1991*, 19, pl. 6: 16; *Marcinkian 1973*, 363, fig. 26; 27).

Austria

50. Franzhausen-Kokoron – grave 722: 1 piece of type B (*Lochner/Hellerschmid 2016*, grave 722, Fn. 3; *Prüssing 1991*, 25, pl. 2: 15A).
 51. Innsbruck-Wilten – grave 31: 1 (+ 1?) piece of type B (*Prüssing 1991*, 25, pl. 2: 12, 13).
 52. Mühlbachl – grave 83: 1 piece of type A (*Prüssing 1991*, 25, pl. 2: 11).
 53. Sommerein am Leithagebirge – isolated find (solitary deposit?): 1 piece of type B (*Prüssing 1991*, 25, pl. 2: 14).
 54. Volders (?) – grave 349: 1? piece, type? (only a handle; *Prüssing 1991*, 25, pl. 2: 15).

Romania

55. Lăpuș II – hoard: 2 (+ 1?) pieces of type B (*Soroceanu 2008*, 57, 58, pl. 3: 13; 4: 14, 15).
 56. Moigrad I – hoard: 1 piece of type B (*Soroceanu 2008*, 58, fig. 4, pl. 4: 16).
 57. Sîg – hoard: 5 pieces of type B (3 decorated, 2 undecorated; *Soroceanu 2008*, 58, 59, 62, 63, fig. 5a, 5b; pl. 4: 17; 5: 18, 19; 7: 23, 24).
 58. Zagon – hoard: 1 piece of type B (*Soroceanu 2008*, 60–62, pl. 6: 22).
 • Not listed – Transylvania – hoard?: 1 piece of type B (*Soroceanu 2008*, 59, 60, pl. 5: 20).
 • Not listed – South Banat District – isolated find (solitary deposit?): 1 piece of type B (*Soroceanu 2008*, 60, pl. 6: 21).

North Ireland

59. Tamlaght – hoard: 1 piece of type B (fragment; *Warner 2006*, 21, fig. 4).

Slovakia

60. Brezno nad Hronom – hoard: 2 pieces of type B (*Novotná 1964*, 26; 1991, 27, pl. 3: 26; 4: 27; *Paulík 1965b*, 61).
 61. Bzince pod Javorinou – hoard: 1 piece of type B.
 62. Dubnica nad Váhom – isolated find (solitary deposit?): 1 piece of type B (*Novotná 1964*, 26; 1991, 27, pl. 5: 33).
 63. Ladice (?) – hoard: 1? piece, type? (fragment; *Veliačik/Ožďani 2020*, 211, 215, 223, pl. I: 1).
 64. Liptovský Mikuláš-Liptovská Ondrašová – hoard: 3 pieces of type B (+ 6 cups related to the Jenišovice type; *Furmánek 1970*, fig. 14: 3; 15: 5, 6).

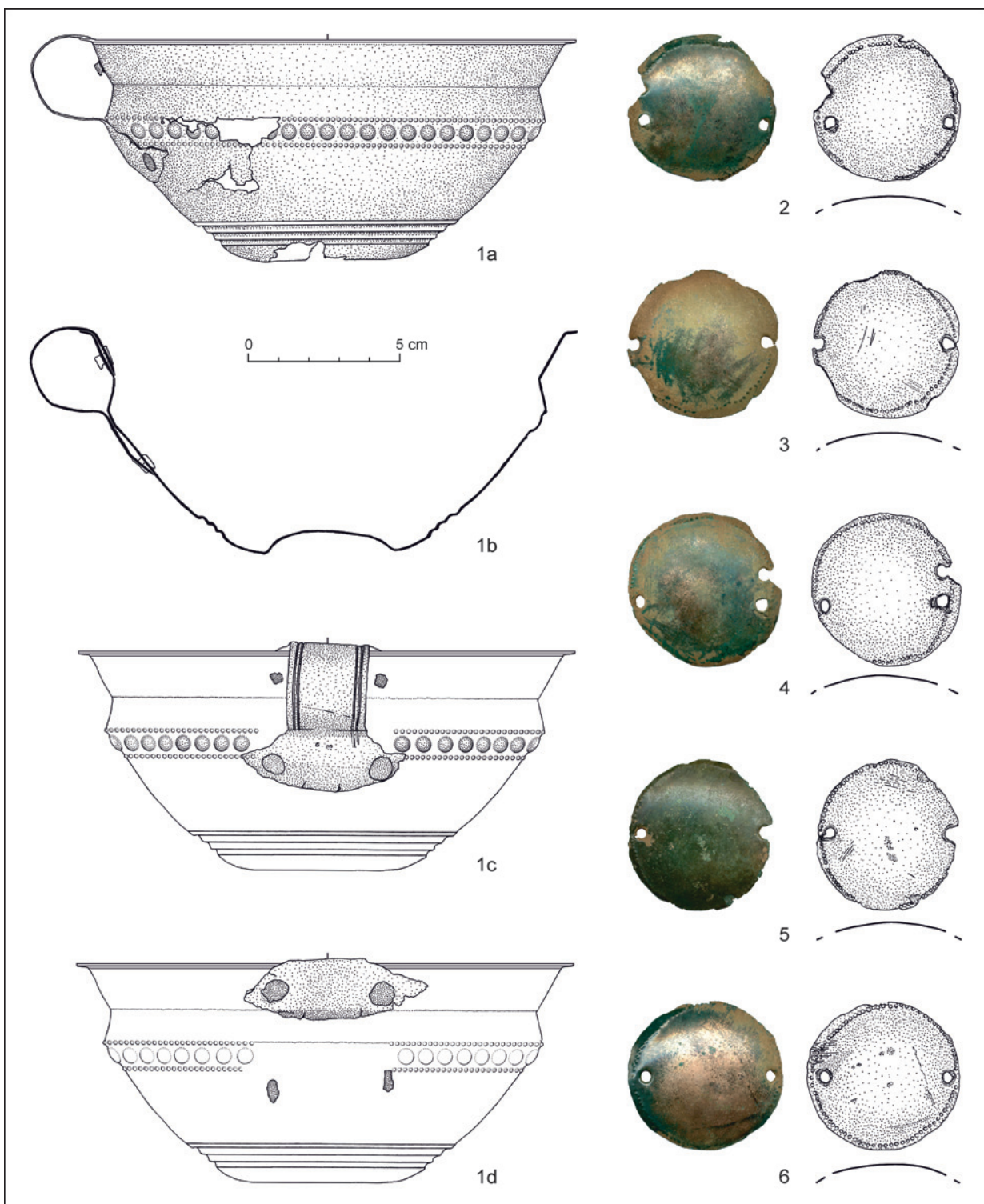
65. Madačka – hoard?: 1 piece of type B (*Novotná 1991, 26, 27, pl. 3: 25; Paulík 1965b, 61*).
66. Obišovce (?) – context? (hoard?): 5 pieces of type B (*Bartík 2007, 17, fig. 2: 2; 4; Podborský 2012, 325–329, fig. 1–4*).
67. Počúvadlo – isolated find (solitary deposit?): 1 piece of type B (*Novotná 1991, 27, pl. 4: 28*).
68. Somotor-Somotorská hora – hoard: 4 pieces of type B (*Andel 1955, 445, 446, fig. 211; Novotná 1991, 27, pl. 4: 29; 5: 30–32*).
69. Žarnov – context?: 1 piece of type B (*Novotná 1991, 27, pl. 6: 34*).

Switzerland

70. Corcelettes – context? (lakeside settlement): 3 pieces of type A (*Piningre/Pernot/Ganard 2015, fig. 98: 1, 6, 11; Thrane 1965, 206, 207, fig. 8: c–e*).
71. Cortaillod – context? (lakeside settlement): 1 piece of type A (*Piningre/Pernot/Ganard 2015, fig. 98: 8; Thrane 1965, 206, fig. 8: h*).
72. Estavayer – context?: 1 piece of type A (*Piningre/Pernot/Ganard 2015, 23–64, fig. 20, 98: 9*).
73. Greng – context?: 1 piece of type A (*Piningre/Pernot/Ganard 2015, 23–64, fig. 20; 98: 3*).
74. Guévaux – context? (lakeside settlement): 2 pieces of type A (*Piningre/Pernot/Ganard 2015, fig. 98: 10; Thrane 1965, 207, fig. 8: a, b*).
75. Hauterive-Champréveyre – context?: 1 piece of type A (*Piningre/Pernot/Ganard 2015, 23–64, fig. 20; 98: 7*).
76. Onnes – context?: 1 piece of type A (*Piningre/Pernot/Ganard 2015, 23–64, fig. 20; 98: 4*).
77. Zurich-Alpenquai – ? (lakeside settlement): 2 pieces of type A (*Piningre/Pernot/Ganard 2015, fig. 98: 2; Thrane 1965, 207, fig. 8: f, g*).

Ukraine

78. Ozeryany – hoard: 1 piece of type A? (fragment; *Gedl 1991, 62, pl. 66: A4*).
79. Nedilys'ka – hoard: 1 piece of type B (*Gedl 1991, 63, pl. 76: C3*).



Pl. I. Cup of Jeničovice type and studs from Bzince pod Javorinou. Photo and drawing by R. Čambal.

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Depot z neskorej doby bronzovej so šálkou typu Jenišovice zo Bziniec pod Javorinou

Katarína Hladíková – Erika Makarová

Súhrn

Cieľom predloženej štúdie je analýza depotu, ktorý sa náhodne našiel v katastri obce Bzince pod Javorinou (obr. 1). Depot tvorí bronzová tepaná šálka typu Jenišovice a päť kusov bronzových pukličiek s protiahlymi otvormi. Nálezová situácia bola fotograficky zdokumentovaná nálezcom a poskytnutá Vlastivednému múzeu v Hlohovci, v ktorom je všetkých šesť predmetov uložených pod inventárnymi číslami 461 a 462/1–5. Celková hmotnosť depotu je 175,23 g.

Metodika analýzy a interpretácie depotu pozostáva z dvoch hlavných krokov. V prvom kroku sme realizovali tradičnú typologicko-chronologickú analýzu jednotlivých artefaktov z depotu a skúmali sme materiálové zloženie predmetov s využitím XRF analýzy. V druhom kroku sme svoju pozornosť zamerali na širšie priestorové vzťahy depotu. Primárne sme realizovali analýzu viditeľnosti v prostredí GIS s cieľom detekovať význam miesta uloženia depotu v kultúrnej krajine neskorej doby bronzovej v širšom mikroregióne.

Šálka bola v zemi uložená približne v 25–30 cm hĺbke a bola otočená dnom nahor, uškom smerujúcim na západ. Tesne k vonkajšej stene nádoby na východnej strane priliehali pukličky, ktoré boli vložené do seba (obr. 2a, 2b). Depot sa nachádzal na severnom svahu masívu Salašky v Malých Karpatoch, v polohe Plešivec v katastri obce Bzince pod Javorinou (časť Horné Bzince; obr. 1: 1), v blízkosti jednej z vetiev úvozovej siete vedúcej cez masív Salašiek viditeľnej na LiDARE (obr. 1: 2).

Šálka a všetkých päť pukličiek boli podrobené nedeštruktívnej povrchovej XRF analýze s cieľom určiť základné prvkové zloženie. Výsledky spektrálnej röntgenovej analýzy (tabeľa 1) ukázali, že šálka bola vyrobená z bronzového plechu. Pásikové ucho pripojené k šálke bolo vyrobené z bronzu, ale nity, ktorými bolo pripevnené k šálke, boli medené. Pukličky boli tiež vyrobené z bronzu. Analýzy prvkového zloženia boli realizované aj v prípade šálok z iných európskych lokalít. Avšak vzhľadom na nízky počet realizovaných analýz šálok typu Jenišovice je stále problematické vyjadriť sa bližšie k samotnej proveniencii týchto nádob.

Šálky typu Jenišovice sa považujú za charakteristický artefakt počiatku neskorej doby bronzovej, t. j. stupňa HB1, hoci sa zrejme začali vyrábať už na sklonku mladšej doby bronzovej (prelom stupňov HA2 a HB1). Objavujú sa od Sedmohradska cez Potisie a severnú časť strednej Európy až po severné Nemecko a dánske ostrovy, pričom centrom ich rozšírenia je územie Moravy, Čiech a Slovenska. Šálky z Poľska predstavujú najseverovýchodnejšie nálezy tohto typu a šálka z Tamlaght v Severnom Írsku zas predstavuje najseverozápadnejší a najizolovanejší exemplár. Šálky/misky typu A a B majú pritom rôznu distribúciu (obr. 7), ktorá viedla k názorom o viacerých centrách ich produkcie. Typ A, u ktorého dominujú bezuché exempláre, sa považuje za produkt západnej proveniencie, vyrábaný v oblasti Švajčiarskej Jury, pri šálkach typu B sa predpokladá, že boli vyrábané v oblasti dnešného Česka, pričom ideový pôvod týchto šálok sa hľadá v „uhorskoslovenskej“ oblasti. Okrem toho sa objavuje i názor, že exempláre zo severského okruhu neboli importami, ale produktami miestnej výroby.

Bronzová šálka zo Bziniec pod Javorinou (obr. 3; tab. I: 1a–1d) typologicky patrí k šálkam typu Jenišovice, typu B. Z územia Slovenska je (vrátane prezentovanej šálky) doposiaľ s istotou známych 19 exemplárov. Okrem toho by fragment šálky typu Jenišovice mohol predstavovať aj fragment plechu pochádzajúci pravdepodobne zo spodnej časti tepanej nádoby s dnom, zvýrazneným trojicou koncentrických žliabkov, ktorý bol súčasťou depotu zlomkových predmetov z obce Ladice. Šálka zo Bziniec pod Javorinou zodpovedá skôr šálkam nižších tvarov, má lievikovite sa rozširujúce hrdlo s von vyhnutým okrajom, subvertikálne plecía, mierne konvexné telo a dovnútra prehnuté dno. Pásikové ucho zdobené dvoma rytými súbežnými líniami pri okrajoch je na oboch koncoch rozšírené a 2 × 2 nitmi pripevnené k šálke hore zvnútra a dole zvonka. Výzdoba pozostáva zo štyroch horizontálnych líšt (tri vodorovné žliabky) v spodnej časti nádoby a z jedného radu pukličkových vypuklín. Ten je zhora aj zdola lemovaný radom perličkových vypuklín, nachádzajúceho sa na tele nádoby pod lomenou výduťou (obr. 4). Takáto výzdoba je u nás výnimočná. Objavuje sa predovšetkým na bezuchých šálkach/miskách z územia východného Francúzska, Švajčiarska, stredného a severného Nemecka a Dánska, ktoré patria k šálkam/miskám typu A. Za výzdobu môžeme považovať aj štyri horizontálne líšty (tri vodorovné žliabky) v spodnej časti nádoby, umiestnené 0,5 cm od dna nádoby.

Súčasťou depotu zo Bziniec pod Javorinou bolo okrem šálky typu Jenišovice aj päť bronzových pukličiek, ktoré majú okrúhly, mierne vypuklý a zaoblený tvar. Dva prebité otvory na protiahlych stranách boli prerazené z vonkajšej strany, pričom ich okraje neboli obrúsené (obr. 6: 1, 2). Pukličky sú po obvode zdobené vybiňanou výzdobou vo forme drobných perličiek (obr. 6: 1). Sú mierne poškodené, asi používaním, a to predovšetkým v mieste otvorov. Dva z nich boli dokonca reparované (obr. 6: 3, 4; tabeľa 1: 2, 4). Kúsok od pôvodného poškodeného otvoru bol vytvorený nový otvor, čím došlo k miernej asymetrii. Bronzové pukličky s protiahlymi otvormi nie sú chronologicky ani chorologicky príliš citlivými predmetmi. Stretávame sa s nimi už v staršej dobe bronzovej, ale aj neskôr, a to v strednej dobe bronzovej a v dobe popolnicových polí v strednej Európe. Interpretácia využitia bronzových pukličiek je rôzna. Väčšinou sa považujú za ozdobné nášivky na odev, pričom mohli tvoriť výzdobu pokrývky hlavy, šiat či plášťa. Objavujú sa však

i názory, že bronzové pukličky mohli mať uplatnenie aj ako prvky ochrannej výstroje – panciera či štítu, alebo mohli plniť funkciu bronzovej výzdoby voza.

Hoci šálky typu Jenišovice sú najrozšírenejšími šálkami a celkovo najbežnejším typom bronzového riadu na začiatku neskorej doby bronzovej, nejde o typ predmetu, ktorý by bol masovo rozšírený. V súčasnosti evidujeme minimálne 182 šálok/misiek typu Jenišovice z 82 lokalít (obr. 7). Prevažná časť pritom pochádza z depotov. V hrobových celkoch či v sídliskových kontextoch sa objavujú skôr výnimočne. Takouto výnimkou sú sídliská na brehoch jazier vo Švajčiarsku. Ich presné nálezové okolnosti však nie sú známe, preto nie je isté, či boli súčasťou vybavenia nákolných stavieb, alebo boli zámerne deponované (rituálne obetované). Taktiež aj z iných území ojedinele pochádzajú niektoré depoty z areálu sídliska, resp. hradiska, avšak v týchto prípadoch ide o zámerne uložené súbory – depoty, nie o súčasť vybavenia obydli. Rovnako i z územia dnešného Slovenska pochádza niekoľko depotov, ktoré sa viažu k hradiskám (Počúvadlo, Somotor-Somotorská hora, Ladice). Ako súčasť hrobového inventára sa šálky ojedinele objavujú len na území Moravy, Poľska, Nemecka a Maďarska. Výnimku predstavuje územie Rakúska, kde šálky typu Jenišovice neboli zložkou depotov, ale tvorili súčasť hrobového inventára. Zo Slovenska nie je z hrobového kontextu doposiaľ známy ani jeden exemplár. Dva depoty (Brezno, Dubnica nad Váhom) sa viažu k jaskyni.

Analýza viditeľnosti miesta depotu zo Bziniec pod Javorinou bola realizovaná s cieľom zistiť, či miesto deponovania bolo vo vizuálnom kontakte s okolitým osídlením. Jej výsledky prispievajú k interpretácii účelu deponovania, ako aj k interpretácii významu miesta deponovania. Ukázala veľmi dobrú viditeľnosť krajiny, z miesta depotu bolo pri výške pozorovateľa 1,6 m z definovaného výrezu viditeľných 30 % krajiny (obr. 9). V zónach viditeľnosti boli všetky vyšinné polohy a dva nížinné komponenty. Súčtová viditeľnosť (*cumulative viewshed*; obr. 10; 11) potvrdila, že priestor severného svahu masívu Salašiek, v ktorom sa našiel analyzovaný depot, bol veľmi dobre viditeľným miestom v sledovanom mikroregióne v definovanom rádiuse.

Jedným z kľúčových faktorov pri interpretácii deponovania predmetov sú nálezové okolnosti, a to vrátane jeho lokalizácie. Dôležitú úlohu nepochybne zohráva aj samotné zloženie depotu a stav obsiahnutých artefaktov. Presnejšia topografická lokalizácia depotov je skôr výnimkou. Rovnako dokumentácia pôvodného uloženia jednotlivých artefaktov v rámci depotov väčšinou absentuje. Cieľené usporiadanie artefaktov a pomerne plytké uloženie tohto depotu indikujú, že by mohlo ísť o rituálny depot. Za rituálne depoty sú považované také hromadné nálezy, ktoré sú uložené na mieste, z ktorého nemôžu byť znovu získané. Zvyčajne sú zložené z konkrétnych predmetov, často v spojení s ďalšími prvkami, ktoré môžu byť interpretované ako pozostatok rituálnych praktík (napr. zvieracie kosti, zvyšky ohňa, atď.). Prevrátená nádoba zo Bziniec pod Javorinou mohla pozostatky po rituálnych praktikách zakrývať, ale nemôžeme to s určitosťou tvrdiť, pretože nebola odborne vyzdvihnutá.

Bronzové nádoby predstavovali luxusný tovar, ktorý mal silnú väzbu na spoločenské elity. Predpokladá sa, že boli používané pri výrobe a požívaní alkoholických nápojov ako servis na pitie. Navyše bronzové nádoby ako prestížne predmety sú chápané nielen ako artikly „vhodné“ na výmenu, ale aj na darovanie. Zaujímavé je pritom spoločné deponovanie šálky typu Jenišovice spolu s piatimi bronzovými pukličkami s dvoma protihľými otvormi, ktoré sa u nás objavujú najmä v období starších popolnicových polí.

Viaceré publikované šálky boli poškodené, neboli vo funkčnom stave a niektoré vykazovali stopy prehnutia. Obidve preliačenia šálky zo Bziniec pod Javorinou boli s najväčšou pravdepodobnosťou spôsobené ešte pred uložením nádoby do zeme. Či však išlo o intencionálne poškodenie v zmysle zámerného znehodnotenia, ktoré môžeme chápať ako rituálny prejav alebo o poškodenie spôsobené pri používaní nádoby, je ťažko doložiteľné.

Bronzové nádoby sa len v ojedinelých prípadoch objavili v hrobách. Išlo väčšinou o hroby označované ako tzv. kniežacie, resp. hroby osôb s vysokým sociálnym postavením. V prostredí lužickej kultúry na území dnešného Slovenska sa s takýmito honosnými hrobmi nestretávame. V hrobách sa nachádza nízky počet kovových artefaktov, najčastejšie ide o súčasti odevu a šperk v kontraste s vysokým počtom kovových artefaktov v depotoch. Preto uvažujeme o niektorých depotoch ako o substitúcii honosných pohrebov, ktorých obsah je v kontraste s chudobnými nálezmi nielen z pohrebisk. Podčiarkuje sa tým aj samotný význam miesta, kde bol depot uložený a umožňuje naň nahliadať ako na špeciálny priestor (sensu Foucault 1996 – „other places or heterotopia“).

Pre interpretáciu depotov v kontexte krajiny je dôležité aj poznanie ich umiestnenia. Nálezy depotov vykazujú väzbu na vyšinné lokality, ich vrcholové časti, svahy, prípadne úpätia, ktoré predstavujú topograficky výhodné a strategicky situované polohy. Často sa nachádzajú na okraji dobovej oikumeny, avšak ich strategická poloha je určená blízkosťou vodných tokov či sútokov a celkovým usporiadaním krajiny – často sa nachádzajú aj na okrajoch alebo v ústí významných geomorfologických útvarov, ktorými viedli komunikačné trasy. Takýmto prípadom je aj masív Salašky, ktorý leží na rozhraní Malých a Bielych Karpát a zároveň pod ním pravdepodobne viedla aj cesta spájajúca stredné Považie s Pomoravím. Miesta uloženia depotov čiastočne chápeme v kontexte konceptu heterotópií („iné miesta“) M. Foucaulta, ktoré z dôvodu širšieho metodického uchopenia pre miesta deponovania v dobe bronzovej aplikoval S. Hansen. Takéto „iné miesto“ predstavuje aj masív Salašky, ktorý mohol byť vnímaný ako mýtická hora, resp. sakrálny priestor, čo čiastočne okrem samotného nálezu indikuje aj jeho dobrá viditeľnosť (obr. 10; 11). Symbolický význam vyšinných polôh je zjavný nielen u vysokých, zďaleka viditeľných kopcov, ale aj pri nápadných, i keď nižších terénnych dominantách. A práve takou je i masív Salašky (poloha Plešivec). Hory, resp. vyvýšeniny, zohrávali v živote ľudí naprieč prehistorickými a historickými obdobiami vždy dôležitú rolu. V kontexte lokálnych ideológií a viery boli vnímané ako posvätné miesta, siahajúce až k nebesiam, kde sídlili alebo sa schádzali božstvá, mýtické bytosti, heroizovaní predkovia. Votívne depoty sú zvyčajne lokalizované mimo sídlisk a mohli byť deponované v rámci spomínaného sakrálneho priestoru (posvätný háj, okrsk, hora ako celok), ktorého stopy neboli archeologicky identifikovateľné (sensu Hansen 2013 – „votive offerings without temples“). Takýmto areálom mohol byť aj priestor, v ktorom sa našiel predmetný depot, pričom význam polohy zdôrazňuje jej dobrá viditeľnosť (severný svah masívu Salašky). Analýza viditeľnosti ukázala, že priestor

deponovania bol v porovnaní s okolitou krajinou špecifický a jeho dobrá viditeľnosť z kľúčových bodov sídelnej siete naznačuje, že deponovanie šálky spolu s pukličkami na tomto mieste bolo cieľené. Rovnako súčtová viditeľnosť (*cumulative viewshed*), ktorá brala do úvahy viditeľnosť zo všetkých známych komponentov sídelnej siete ukázala, že miesto deponovania patrilo k najviditeľnejším miestam v mikroregióne. Viditeľnosť priestoru predstavuje spolu s už vyššie diskutovanými vlastnosťami ďalší z dokladov svedčiaci o votívnom charaktere depotu. Do úvahy však prichádzajú aj iné dôvody voľby miesta pre uloženie depotu.

Neskorá doba bronzová bola obdobím zásadných hospodárskych zmien. Tie sú v počiatočnej fáze reflektované vo výraznejšej sociálnej diferenciacii a v budovaní nového typu sídliskovej formy – hradísk s centrálnou funkciou. V tomto období dosahuje lužická kultúra maximálnu hustotu osídlenia zapríčinenú intenzívnym demografickým rastom. V depotoch neskej doby bronzovej sa odzrkadľuje vysoká úroveň kvality metalurgickej produkcie. Po predchádzajúcom poklese výskytu depotov v stupni HA2 dochádza v stupni HB1 (horizont Somotor-Lúčky) k nárastu deponovania bronzových predmetov. Určitá miera univerzálnosti vo forme a výzdobe kovových artefaktov v neskej dobe bronzovej (tzv. *metallurgical koiné*), ako v prípade šálky typu Jenišovice zo Bziniec pod Javorinou, mohla byť dokladom existencie sociálnych noriem charakteristických pre komunitu na nadregionálnej úrovni, ktoré sa šírili/distribuovali prostredníctvom ďalekosiahlych kontaktov elit. Výskyt depotu Bzinca pod Javorinou, datovaný do stupňa HB1, v oblasti, ktorá prepájala stredné Považie s Pomoravím, poukazuje na to, že i miestne elity z tejto oblasti boli súčasťou siete nadregionálnych kontaktov.

- Obr. 1. Bzinca pod Javorinou. 1 – lokalizácia depotu (zdroj dát: © ÚGKK SR, autorky K. Hladíková, E. Makarová); 2 – poloha depotu na Lidare. Zdroj dát: © ÚGKK SR; Lidar vizualizácia T. Lieskovský (SvF STU); autorka K. Hladíková.
- Obr. 2. Bzinca pod Javorinou. 1 – fotodokumentácia nálezových okolností depotu; 2 – detailnejší pohľad na depot. Foto Archív Vlastivedného múzea v Hlohovci.
- Obr. 3. Bzinca pod Javorinou. Fotografia šálky typu Jenišovice zo Bziniec pod Javorinou. Foto R. Čambal, grafika E. Makarová.
- Obr. 4. Bzinca pod Javorinou. Detailný pohľad na šálku. Foto R. Čambal, grafika E. Makarová.
- Obr. 5. Bzinca pod Javorinou. Detailný pohľad na uchytnie ucha nádoby z vnútornej strany. Foto R. Čambal, grafika E. Makarová.
- Obr. 6. Bzinca pod Javorinou. Detailný pohľad na pukličky. Foto R. Čambal, grafika E. Makarová.
- Obr. 7. Geografické rozšírenie šálok typu Jenišovice podľa rozdelenia na typ A a B (čísla lokalít sa zhodujú s číslami v zozname lokalít). Zdroj dát: © MapTiler © OpenStreetMap contributors <https://www.openstreetmap.org/copyright>; autorky K. Hladíková, E. Makarová.
- Obr. 8. Distribúcia komponentov v sledovanom mikroregióne. 1 – Bzinca pod Javorinou; 2 – Bošáca-Zábrežská; 3 – Bošáca-Kopec; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradisko; 8 – Trenčianske Bohuslavice-Malovecké; 9 – Trenčianske Bohuslavice-Turecké; 10 – Bošáca-Pohonitva; 11 – Špania dolina 1, 2. Zdroj dát: © ÚGKK SR; autorka K. Hladíková. Legenda: a – depot; b – výšinné sídlisko; c – pohrebisko; d – nížinné sídlisko.
- Obr. 9. Jednoduchá viditeľnosť z bodu depotu v Bziniciach pod Javorinou. 1 – Bzinca pod Javorinou; 2 – Bošáca-Zábrežská; 3 – Bošáca-Kopec; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradisko; 8 – Trenčianske Bohuslavice-Malovecké. Zdroj dát: © ÚGKK SR; autorka K. Hladíková. Legenda: a – depot; b – výšinné sídlisko; c – pohrebisko; d – nížinné sídlisko.
- Obr. 10. Súčtová viditeľnosť z vybraných pozorovacích bodov v sledovanom mikroregióne. Pozorovacie body (lokality): 1 – Bzinca pod Javorinou; 2 – Bošáca-Zábrežská; 3 – Bošáca-Kopec; 4 – Bošáca-Pohančenište; 5 – Moravské Lieskové-Kožová; 6 – Zemianske Podhradie-Hradište; 7 – Dolné Srnie-Hradisko; 8 – Trenčianske Bohuslavice-Malovecké. Zdroj dát: © ÚGKK SR; autorka K. Hladíková. Legenda: a – depot; b – výšinné sídlisko; c – pohrebisko; d – nížinné sídlisko.
- Obr. 11. Súčtová viditeľnosť – detailný pohľad na priestor s miestom uloženia depotu Bzinca pod Javorinou. Zdroj dát: © ÚGKK SR; autorka K. Hladíková. Legenda: a – depot.

Tabela 1. Výsledky prvkového zloženia XRF povrchovej analýzy. Meranie R. Čambal.

Tab. I. Šálka typu Jenišovice a pukličky zo Bziniec pod Javorinou. Foto a kresba R. Čambal.

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