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NOTES ON BEADS FROM RICHLY FURNISHED FINDS IN THE TISZA BASIN DATING TO THE D2/D3-D3 PERIOD

ALEXANDRA PREDA

ABSTRACT:

Beads formed an integral component of personal adornment among people belonging to a wide range of regions and time periods, and that is also the case for the people living in the Tisza Basin during the Migration Period. This study examines the beads from the published material recovered from contexts in the study area dated in the D2/D3-D3 period, which is generally associated with the early Gepid period. By focusing on richly furnished finds, we aim to provide an overview regarding the types of beads worn and highlight those types which can provide further information regarding aspects like chronology, regional practices and cultural connections as expressed through those with access to widespread resources during the Migration Period.

RÉSUMÉ: NOTES SUR LES PERLES PROVENANT DE DÉCOUVERTES RICHES DANS LE BASSIN DE LA TISZA, DATANT DE LA PÉRIODE D2/D3-D3

Les perles constituaient un élément intégral de la parure personnelle chez les populations appartenant à un large éventail de régions et de périodes chronologiques, et cela est également le cas pour les populations vivant dans le bassin de la Tisza durant la période des Migrations. Cette étude examine les perles issues du matériel publié provenant de contextes situés dans la zone d'étude et datés de la période D2/D3-D3, généralement associée à la phase ancienne de l'époque gépide. En se concentrant sur des découvertes richement dotées, nous visons à fournir une vue d'ensemble des types de perles portés et à mettre en évidence les types susceptibles d'apporter des informations supplémentaires concernant des aspects tels que la chronologie, les pratiques régionales et les connexions culturelles, telles qu'exprimées par ceux ayant accès à des ressources largement diffusées durant la période des Migrations.

KEYWORDS: beads; Migration Period; Tisza Basin; early Gepid period; elite costume.

MOTS-CLÉS: perles ; période des Migrations ; bassin de la Tisza ; période gépide ancienne ; costume d'élite.

The geographical framework of our study, delimited largely to the west and south by the Danube River and to the north, northwest, east and southeast by the Eastern Carpathians, is an area that encompasses multiple historical and administrative regions (Crişana, Transilvania, Banat, Bačka) which today are divided into 3 countries: Hungary, Romania and Serbia. During the period approached in our study D2/D3-D3, roughly between the years 430/440-480/490 CE, this area, as a large part of the broader Middle Danube zone, is characterised by intense transformation and cultural interactions.¹ The written sources mark this timeframe as the end of the Hunnic empire, and the beginning of the Gepid kingdom, the turning point being represented by the year 454 CE, when the Gepids defeated the sons of Attila at Nedao.² In the archaeological record, the material culture is primarily defined by the inventories of richly furnished graves, which are typically isolated, part of small funerary groupings or, in some cases, the oldest burials of newly formed row-grave cemeteries (*Reihengräberfelder*).³ When it comes to defining the costume of the people found in these graves, especially of the women, archaeology reflects a broadly shared repertoire of dress elements (large silver sheet fibulae, polyhedral earrings, bead necklaces, buckles, silver

¹ Mączyńska 2011; Vida 2011; Tejral 2012.

² Jordanes, *Getica*, L, 125-127.

³ Tejral 2012, 128; Dobos 2019, 111-120; Dobos and Bereki 2023, 59, 116-117; Here it is important to mention that, due to the circumstances of discovery being often incidental and the archaeological excavations limited by funding, authority and project limits, some of the isolated graves could be part of smaller or larger necropolises not yet researched.

bracelets and toiletry items) distributed across a wide area and indicative of a common fashion horizon within the elites rather than distinct cultural boundaries, although regional differences are also included.⁴

As far as beads go, their presence as an integral part of the way of dress is recognised by the research; however, the discussion tends to focus on their role within dress, particularly the use as necklaces, pendants hanging from the fibula, chest jewellery, and belt pendants attached either with a silver ring or to a band hanging from the belt, with theories also being proposed for wearing them as bag decorations, bracelets, or sewing them onto clothing such as on head coverings, pockets and around necklines.⁵ In these works discussing the way of dress, analyses of specific varieties and their implications tend to focus on two materials: amber and gold. Amber beads are considered characteristic of the area in this period and the next, often used as a sign of connections with the Baltic area.⁶ Gold bead types, specifically the barrel-shaped and the polychrome decorated ones, serve as indicators of chronology and cultural relations.⁷ Elaboration on other kinds and their implications is a newer concern, typically left to the texts dedicated to each site in particular.⁸ An understandable situation, given both the large number of beads recovered from some archaeological contexts and the variety of materials and types that can occur, which complicates broader synthesis. In this paper, written while our research on the archaeological material from the second half of the 5th century CE and the 6th century CE is still quite young, we wish to create a preliminary overview of the types of beads present in these graves and discuss some of those that stand out, without affirming this to be the definitive report on the subject as we acknowledge that the database of discoveries used here is not exhaustive.

For the analysis undertaken in this article, we used the published information available for 22 archaeological contexts, 21 graves and 1 hoard, spread across 20 sites (Fig. 1). Out of these, we acknowledge that 4 of the graves have been dated more generally to the second half of the 5th century CE (Mezőkövesd-Garden of István Németh, Slimnic, Turda, Gáva) rather than strictly in the target period, and the grave from Valea lui Mihai is dated towards the end of the D3 period.⁹

Out of the gathered contexts, only G.43-Ernei-Köles-kert, G.2-Mezőkövesd-Mocsolyás, and the grave from Turda-Baths of the Roman Castrum were undisturbed at discovery.¹⁰ Apahida 1968 is also a somewhat fortunate case, as the grave was only partially destroyed by the discovery.¹¹ Most of the other graves, including Apahida 1889(?), Barabás-Bagolyvár, Cepar-Cârligate, Dindești-Grădina lui Negreanu, Domoszló-Vizitároló, Gáva-Katóhalom, Gyulavári, Hódmezővásárhely-Sóshalom, Karavukovo, Tiszalök-Árpád utca 1948, Mád and Valea lui Mihai, were destroyed at the time of discovery, most of them having undergone archaeological investigations afterwards.¹² Three other graves, Kiskunfélegyháza, Mezőkövesd-Garden of István Németh and Periam, have unclear circumstances of discovery.¹³ In the case of G.1-Sânpaul, the phenomenon of grave disturbance from antiquity was observed in the thoracic area.¹⁴ Lastly, for Slimnic, although there is no mention of disturbance, the state of the skeleton, which was heavily eroded by the acidic soil, does not allow certainty in this matter.¹⁵ This situation means both that our image of how beads were used must be drawn with caution and that there is a significant likelihood that not all beads originally deposited were either recovered or preserved. The available contextual information supports this possibility. At Gáva, it is known that part of the grave inventory was destroyed; at Mád, beads were overlooked by the original discoverer and only identified during subsequent archaeological investigation; and at G.2-Mezőkövesd-Mocsolyás, beads were observed in the neck area but proved too fragile to be recovered without destruction, a circumstance that could easily have resulted in their complete omission in the case of an accidental discovery.¹⁶

Keeping these facts in mind, the total number of known beads gathered here amounts to 1159 pieces, to which an unknown number is symbolically added for beads mentioned in the literature and used in our discussion when

⁴ Some reference works are Tejral 1988; Kazanski 1989, and Rácz 2016.

⁵ Tejral 1988, 275-276; Martin 1995, 652-675, 678; Rácz 2016, 313-317, 322-327; Preda 2024.

⁶ Csallány 1941, 135; Tejral 1988, 275-276; Curta 2001, 271; Rácz 2016, 321-322.

⁷ Rácz 2016, 325; Horedt and Protase 1970a, 194; Harhoiu and Gora 2000, 57-58; Lăzărescu 2019, 97.

⁸ Some examples with detailed analysis include: Bărbulescu 2008, 59-61; Mihăci-Pálfi 2018, 31, 34-35; Dobos and Bereki 2023, 63-81.

⁹ Csallány 1961, 329-224; Glodariu 1974, 488; Bărbulescu 2008, 88-97, Stanciu 2011, 65, Fig. 14.

¹⁰ Dobos and Bereki 2023, 31, 51, 60; Lovász 2005, 51-52, Abb. 3; Bărbulescu 2008, 26-28.

¹¹ Protase 1972, 163-167.

¹² Finály 1889, 403-405; Oantă-Marghitu 2014, 619; Bóna 2002a, 17; Protase 1960, 569-570; Harhoiu 1998, 169; Némethi 1967, 499; Bóna 2002b, 27; Hampel 1911, 135; Almásky et al. 1997, 58; Nagy 2005a, 64; Nagy 2005b, 80-81; Kiss 1983, 112-114; Kovrig 1951, 113; Roska 1931, 69.

¹³ Kiss 1983, 114; Csallány 1961, 235; Hampel 1905, Bd.2, 6; Harhoiu 1998, 183-184.

¹⁴ Grumeza and Cupcea 2020, 413-414.

¹⁵ Glodariu 1974, 483-484.

¹⁶ Hampel 1911, 135; Almásky et al. 1997, 58; Kovrig 1951, 113; Lovász 1999, 239.

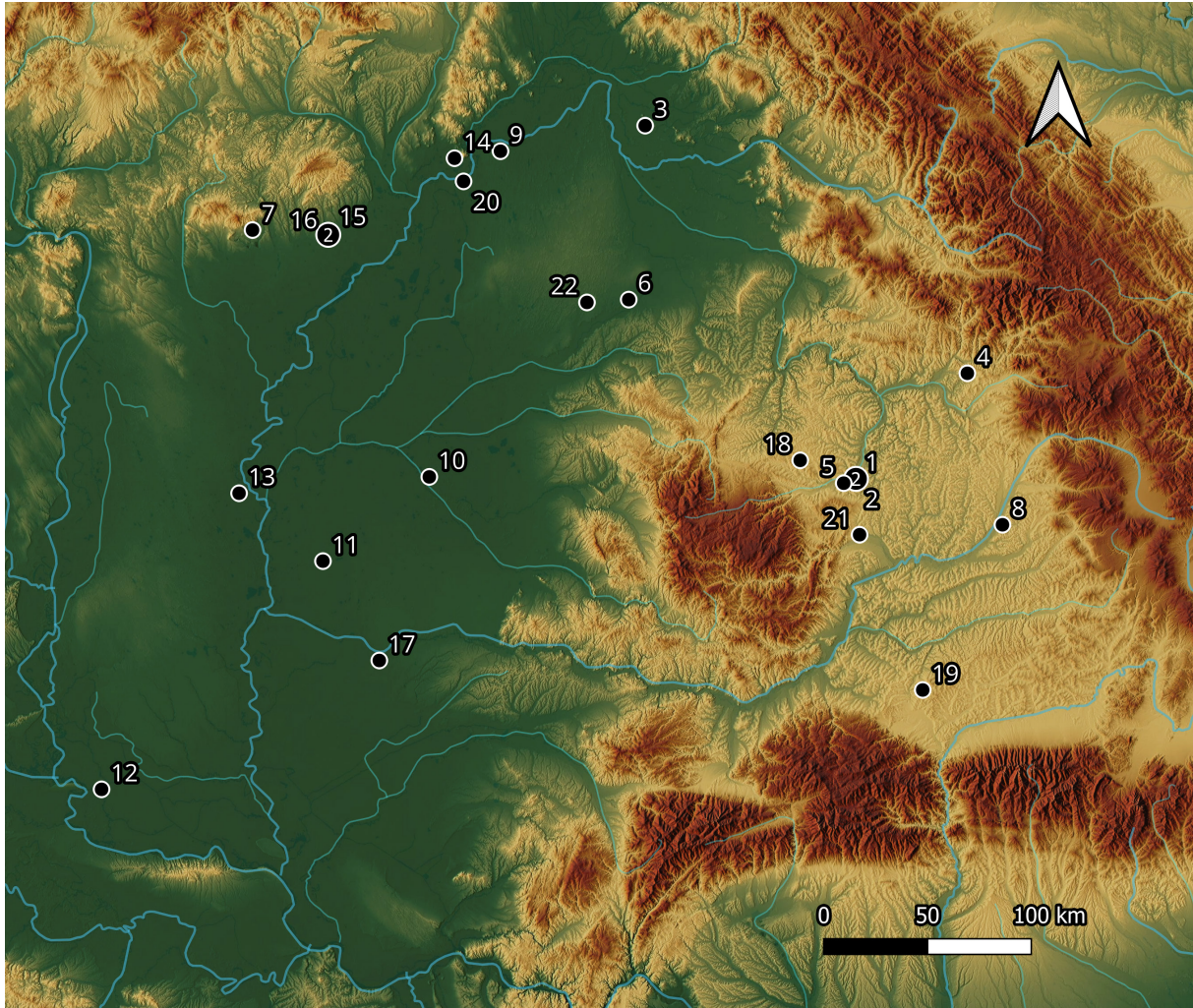


Fig. 1. The contexts included in the study are: 1. Apahida 1889(?); 2. Apahida 1968; 3. Barabás-Bagolyvár; 4. Cepari-Cârligate; 5. Cluj-Someșeni Hoard; 6. Dindești-Garden of Negreanu; 7. Domoszló-Vizitáról; 8. G.43- Ernei-Köles-kert; 9. Gáva-Katóhalom; 10. Gyulavári; 11. Hódmezővásárhely-Sóshalom; 12. Karavukovo (Bácsordas); 13. Kiskunfélegyháza; 14. Mád; 15. Mezőkővesd-Garden of István Németh; 16. G.2-Mezőkővesd-Mocsolyás; 17. Periam; 18. G.1-Sânpaul; 19. Slimnic; 20. Tiszalök-Árpád utca; 21. Turda-Baths of the Roman Castrum, 22. Valea lui Mihai-Garden of Alexandru Stantz.

relevant, but without known numbers or images.¹⁷ Out of these approximately 990 beads spread across 13 contexts are made of glass, approximately 63 beads spread across 13 sites and 14 contexts are amber, 35 spread across 4 sites and 5 contexts are made of gold, approximately 21 spread across 5 contexts are chalcedony, to which 1 agate bead from Tiszalök can be added, as well as approximately 20 found in 2 contexts which are carnelian; 7 beads from 2 contexts are made of limestone, 6 from 2 contexts are made of coral, 6 found in 2 contexts are made of silver and 1 of emerald.¹⁸ There are also 5 beads, 3 from G.2-Mezőkővesd-Mocsolyás and 2 from Mád, for which it is unclear whether they are glass or amber, and 4 from Cepari-Cârligate, which have been published as both glass and bronze, and as such cannot be treated typologically.¹⁹

¹⁷ Kovrig 1951, 113; Lovász 1999, 239; Bóna 2002a, 18.

¹⁸ Hampel 1905, Bd. 2, 6, Bd. 3, Taf. 7/6-11; Hampel 1911, 143-146, V/1-3,5; Kovrig 1951, 113-114, Tab. XLII, Tab. XLVI; Protase 1960, 569-571, Abb. 2/5; Csallány 1961, 235, Taf. CVXV/4; Némethi 1967, 501, 503-504, Fig. 2; Horedt and Protase 1970a, 189, 194, 197, Pl. III/1-12, Pl. VIII/3; Horedt and Protase 1970b, 88, 90; Horedt and Protase 1972, 166, 169, 175, Pl. IV/4-6, Pl. IX/1-3, Pl. XVI/20-26; Glodariu 1974, 484-485, Abb. 2/3; Kiss 1983, 112-118, Abb. 9/6-8, Abb. 11/1-4; Almássy et al. 1997, 61, 48. kép, 51. kép/1-7; Harhoiu 1998, 183-184; Lovász 1999, 239; Bóna 2002a, 18; Bóna 2002b, 28, Taf. 4-3; Lovász 2005, 52-53, Abb. 3, Taf. 30/3-8; Nagy 2005a, 66, 78-77, Taf. 13/2; Nagy 2005b, 81, 89, Taf. 20/3-4; Bărbulescu 2008, 59-61, Pl. XI/5, Pl. XX/3; Stanciu 2011, 614, Pl. 5; Oanță-Marghitu 2014, 619, 631; Grumeza and Cupcea 2020, 413-414, 420, 423, Fig. 6; Dobos and Bereki 2023, 31-33, 63-81; 168-170, Pl. 43-45.

¹⁹ Rácz 2016, 320, Abb.12/5; Kovrig 1951, 114, Tab. XLVI; Protase 1960, 569-570; Harhoiu 1998, 169.

Given the minimal information accompanying the material in some publications, we can only discuss the manufacture of beads in general terms when we are talking about the whole database. For the glass beads, both of the main methods of manufacture known for this period have been noted: the winding of glass in a semi-liquid state around a mandrel (wound beads), and the drawing of glass in a semi-liquid state, which is first shaped to contain an air bubble in the centre, thereby forming a tube, subsequently cut into individual pieces (drawn beads).²⁰ An interesting aspect noted is that both methods can be present in 2 pieces of the same type found in 1 grave, as is the case for the millet beads found in G.43-Ernei.²¹ To create complex forms, while still warm, the beads can be shaped using tools such as a paddle or a rod, applying pressure to the body to create a specific form or decoration, or the glass may be pressed to or rolled on a mould.²² For other materials like amber, semiprecious stones, and stone, there is a general understanding of the use of cutting, sculpting, polishing, and/or lathe work; rarely are there mentions of the exact methods used for each piece. Besides these general statements, specific methods of processing and decorating beads, made of the above mentioned materials and others, will be discussed separately where possible.

The pieces will be classified according to the typology we published for the Gepid period associated material.²³ We will not detail aspects such as size and colour unless they are outside the norm for a type, as described in the published typology table, or otherwise considered relevant. One exception to this categorisation is the lathe-work amber beads with incised lines (processing marks), for which we use the typology of Tempelmann-Maczyńska, as it is better suited to the category.²⁴

Glass beads are far more numerous than all other categories; this is not due to their omnipresence across contexts, as they are found in only 13, 14 if we count those from Cepari.²⁵ The high numbers are due to the presence in 6 sites of 862 *millet* beads, characterised by their small dimensions and the large numbers in which they are typically found (Fig. 2/1: type IV.01).²⁶ The number of deposited *millet* beads is in fact bigger, with 2 rows of them found at the neck area of G.2-Mezőkővesd-Mocsolyás burial, however, these crumbled during extraction.²⁷ These beads appear in the late Roman period and persist at least into the Avar period; however, their peak popularity seems to occur during the Hunnic period, for which they are considered characteristic.²⁸ In our dataset, the grave from Ernei provided nearly half of the beads of this type, with a total of 410 pieces, and the smallest number comes from Mád with only 19 pieces; notably, as mentioned, this was an accidental discovery as well as one case of the material published having only a brief description of beads, without proper numbers given, our supposed quantity being based on the images published.²⁹ In fact, given that all the undisturbed graves contain this type of beads in large numbers (166 from Turda, at least enough to form 2 rows from Mezőkővesd-Mocsolyás, and 156 from Slimnic, if we consider it undisturbed), it is likely that many of the ones present in the destroyed or disturbed graves were not recovered.³⁰ This remains likely even if we accept as complete numbers like those recovered from G. 1-Sânpaul, a disturbed but well-researched grave, with 55 pieces clearly identified and another 27 beads, which, due to their length, fall outside the typical dimensions for millet variants, but otherwise have no differences and should be considered as belonging to the same type.³¹ For this type, the proposed uses, starting from their small dimensions and their usual placement in graves, are typically for long necklaces arranged in multiple rows or for decoration sewn onto various elements of cloth (dress fronts, head coverings, pockets, bags).³² We have 3 cases with these beads found in the neck area, 2 cases with them found in the neck and chest areas, only 1 case with them found specifically under the skull and 1 case where the placement is not specified.³³ So far, from the most well-documented

²⁰ Neri et al. 2019, 1108; Tempelmann-Maczyńska 1985, 12.

²¹ Dobos and Bereki 2023, 31, 66-67, 69-77.

²² Kanungo 2004, 132, 135-137.

²³ Preda 2024.

²⁴ Tempelmann-Maczyńska 1985, 74-86, Taf.16-18.

²⁵ Bóna 2002a, 18; Nemeti 1967, 501, 503, Fig. 2; Stanciu 2011, 614, Pl. 5/3-7; Bóna 2002b, 28; Dobos and Bereki 2023, 31-33; Nagy 2005a, 75; Kiss 1983, 114, 116, Abb. 11/4; Lovász 1999, 239; Lovász 2005, 51-52, 260, Taf.30/ 2, 3-8; Prohászka 2003, 75, Fig. 4/4; Grumeza and Cupcea 2020, 414-416, 420, Fig. 2, Fig. 3/5, Fig. 6; Glodariu 1974, 484-485, Abb. 2/3; Harhoiu 1998, 187-188, Pl. XC; Kovrig 1951, 113-114, Taf. XLII, Taf. XCV; Bărbulescu 2008, 59-61.

²⁶ Dobos and Bereki 2023, 31; Grumeza and Cupcea 2020, 414; Glodariu 1974, 484; Kovrig 1951, 113; Bărbulescu 2008, 60-61.

²⁷ Lovász 1999, 239.

²⁸ Pásztor 2008, 316-318; Crișan and Opreanu 1991, 120; Párducz 1959, 366.

²⁹ Dobos and Bereki 2023, 31,

³⁰ Dobos and Bereki 2023, 31; Bărbulescu 2008, 60-61; Lovász 1999, 239; Glodariu 1974, 484.

³¹ Grumeza and Cupcea 2020, 414.

³² Some examples for the proposed uses: Dobos and Bereki 2023, 64-65; Bărbulescu 2008, 32-34, 60-61, Pl. XLVI/1; Boros and Vajda 2008, 318-319; Grumeza and Cupcea 2020, 423.

³³ Dobos and Bereki 2023, 31; Lovász 1999, 239; Kovrig 1951, 113; Glodariu 1974, 484; Bărbulescu 2008, 60-61; Grumeza and Cupcea 2020, 414; Kovrig 1951, 113.

finds with exact placement registered, both our contexts and analogies, such as G. 43-Ernei, G.2-Mezőkővesd-Mocsolyás, G.4-Fântânele-Dâmbul Popii and Cx. 4050-Vlaha-Pad, seem to incline more towards their use as long necklaces worn in multiple rows; however, row patterns sewn onto clothes cannot be excluded.³⁴ For the case of these beads found under the skull at Sânpaul, while their use as decoration for a head covering is possible, we would like to note that the deceased was buried in a coffin, which makes it possible for something placed on the neck to have fallen behind the skull, moreover the disturbance of the grave seems to have led to the skull moving lower over the neck.³⁵ It has been noted that at different times, different colours or shades are preferred.³⁶ In our study, although brown and black ones are predominant in numbers, they only come with certainty from 3 sites, all from Transylvania and they do not seem to be perfect analogies for each other; those from Ernei are black with a golden covering and are combined with red and green exemplars, those from Slimnic are brown, and those from Turda combine black and brown shades.³⁷ In the other known cases, we observe a predominance of green beads, present at Mád, Tiszalök and Sânpaul; in this last grave we also find the largest variety, with green combined with blue, red and yellow.³⁸ Lastly, from Mezőkővesd-Mocsolyás, the exemplars were yellow and white.³⁹ This lack of uniformity could represent local preferences motivated by different traditions or influences; however, the dataset is too small to be conclusive. What is certain is that more colour variety is present than in the dataset from our typology, with red being a new addition.⁴⁰

The remaining glass beads consist predominantly of common forms that cannot be limited to a specific area or time period, with spherical and cylindrical variants being the most numerous. Among the spherical variants, 62 pressed spheres, 9 spheres, and 2 hemispheres are recorded (Fig. 2/1: types I.03, I.01, I.05). Cylindrical forms display greater diversity, comprising of 16 short cylinders with curved sides, 4 long cylinders, 2 short cylinders, 2 disks, 2 pressed cylinders with curved sides, 1 long cylinder with curved sides, 1 long coiled cylinder, and 1 short cylinder with longitudinal grooves (Fig. 2/1: types II.06, II.01, II.02, II.03, II.08, II.05, II.10, II.12). Segmented cylinders are represented by 3 specimens: 1 undetermined, 1 with each segment in the form of a cylinder with curved sides, and 1 with deformed segments (Fig. 2/1: types III.04, III.05). Prismatic forms are rare, each represented by a single example: 1 uncertain prism, 1 short quadrilateral prism, 1 long quadrilateral prism, and 1 long prism with cut corners (Fig. 2/1: types VII.01, VII.02, X.02). There are also 3 conical beads present, 2 truncated cones and 1 truncated biconical form (Fig. 2/1: types V.02, V.04). Lastly, 8 beads could not be securely classified due to unclear publishing documentation: 4 specimens that may represent either pressed spheres or disks (Fig. 2/1: type I.03/II.03?), 2 that could be interpreted as either long cylinders or long quadrilateral prisms (Fig. 2/1: type II.01/VII.02?), 1 may be either a sphere or a pressed sphere (Fig. 2/1: type I.01/I.03), and lastly 1 that might be either a truncated cone or a pyramidal frustum (Fig. 2/1: type V.02/VI.01).

Due to their common occurrence and a lack of clearer knowledge of their colours, shades and compositions, most of these characteristics cannot be used to discuss regional differences or chronology. Their distribution across contexts is proportional to their numbers, especially in comparison to the *millet* beads, and as such, the most frequent types found are I.03 in 8 contexts and II.06 in 6, 4 contexts having both types, these shapes being very similar and easily interchangeable.⁴¹ As far as their combinations go, the most interesting aspect is that the largest variety comes from Tiszalök where a lot of the single exemplar pieces come from, here 2 large strings of beads were noted, 1 at the neck and 1 on the outside of the left lower leg, comprising a total of 80 pieces belonging to types: I.01, I.03, II.01, II.06, II.08, II.12, IV.01, VII, VII.02, X.02 (Fig. 2/1).⁴² For the aspect of variety, a similar case is Mád, but here the rarer shapes are present mostly for beads made of other materials.⁴³ A good parallel for both the kind of deposition and variety comes from the G.2-Čurug-Stari Vinogradi.⁴⁴ In general, these strings are typical of the glass elements in the compositions of more complex necklaces from the period.⁴⁵ This underlines that

³⁴ Dobos and Bereki 2023, 64-65; 168, Pl. 43; Lovász 1999, 239; Dobos and Opreanu 2012, 19, 149, Pl. 6; Irimuş 2008, 49-50, Pl. XXI; For a more detailed discussion on the subject, see also: Preda 2024, 233.

³⁵ Grumeza and Cupcea 2020, 415, 423, Fig. 2.

³⁶ Pásztor 1995, 73.

³⁷ Dobos and Bereki 2023, 31; Glodariu 1974, 484; Bărbulescu 2008, 60-61.

³⁸ Kovrig 1951, 113; Grumeza and Cupcea 2020, 414, 420, Fig. 6.

³⁹ Lovász 1999, 239.

⁴⁰ Preda 2024, 266, Pl. V.

⁴¹ Némethi 1967, 499; Stanciu 2011, 614, Pl. 5/4-6; Nagy 2005a, 66, 75, 77, 243, Taf. 13/2; Lovász 2005, 51-52, 260, Taf. 30/2:3-7; Grumeza and Cupcea 2020, 414, 416, Fig. 3/5; Glodariu 1974, 484-485, Abb. 2/3; Kovrig, 113-114, Taf. XLII, Taf. XLII; Bărbulescu 2008, 33, 60-61, Pl. XI/5; Kiss 1983, 116, 118-119, Abb. 11/4.

⁴² Kovrig 1951, 113, Taf. XLII.

⁴³ Ibidem, 114, Taf. XLVI.

⁴⁴ Trifunović 2006, Fig. 1/2, Photo 157.

⁴⁵ Preda 2024, 239-241, 248-250.

rare pieces, such as the prisms with cut corners (Fig. 2/1: X.02) and the short cylinder with longitudinal grooves, also known as a melon bead (Fig. 2/1: II.12), which have their origins attributed to the Roman material culture, and are usually considered to be imports, are more likely to appear in the cases of graves where a larger bead inventory – not dominated by millet beads – is present, a grave where the deceased or their family placed particular emphasis on expression through a large and wide range of bead types.⁴⁶

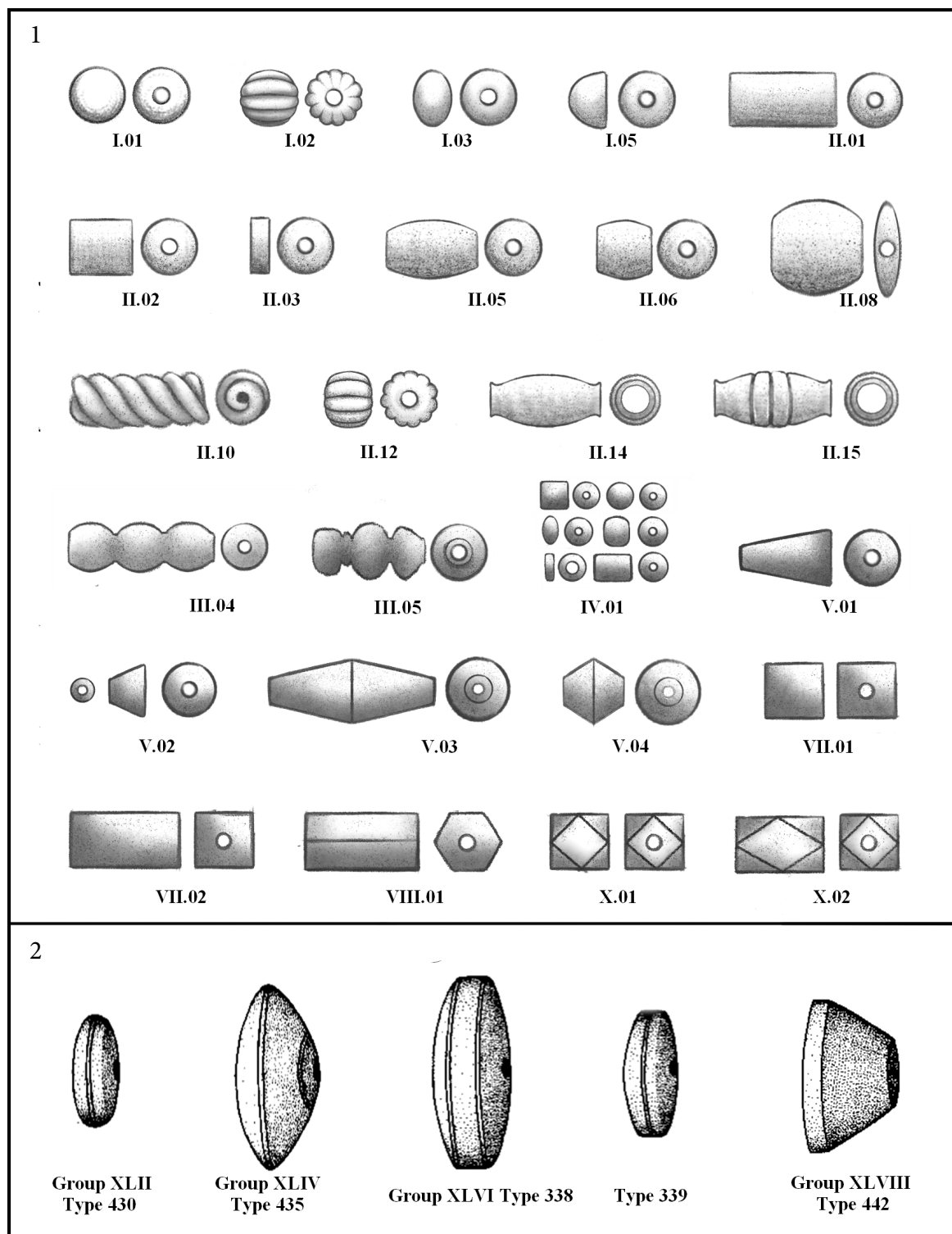


Fig. 2. Bead types: 1. Bead types according to shape (adapted after Preda 2024); 2. Amber lathe work beads, with grooves (adapted after Tempelmann-Maczyńska 1985).

⁴⁶ Tempelmann-Maczyńska 1985, 19, 37-41; Benea 2008, 142, 144, 153.

Among the glass beads, there is a variety of decorated pieces, also named polychrome beads (Fig. 3). A first decorative pattern, recorded for 6 exemplars is the multicoloured dotted pattern realised either by pressing the still malleable body (matrix) into fragments of differently coloured glass and warming it again to combine the pieces, also called crumb beads, or by creating incisions in the matrix which are filled with dots of liquid glass (Fig. 3/1-3).⁴⁷ Three pieces have a blue matrix, 1 from Gyulavári with red and transparent dots (type II.06.01), 1 with green and red dots of the same type from Sânpaul (type II.06.05), and 1 with white, orange and yellow dots from Slimnic (type I.03.01).⁴⁸ Three others do not have mentioned colour schemes but follow the general pattern of a dark matrix with lighter dots: 1 from Kiskunfélegyháza and 1 from Tiszalök (type I.03.01), with 1 from Mád (type I.01.01).⁴⁹

Beads with a multicoloured dotted pattern appear in Roman material from phase B2 and are primarily widespread in the Late Imperial period, with the most common pattern being a black base with colourful dots; nonetheless, the colour schemes present in our material are not absent and gain popularity during the Migration Period.⁵⁰ Generally, these beads occur in small numbers and are irregularly distributed, with concentrations observed in Western Pomerania and at the mouth of the Vistula.⁵¹ Beads with this type of decoration have also been identified, although they are quite rare, in Sarmatian graves from the Banat area and in sites belonging to the Sântana de Mureş-Černjachov culture.⁵² Their usual presence in rich graves within barbarian cultural contexts, the complexity of their manufacturing techniques, and wide distribution have led to the conclusion that they most likely represent imports from Roman workshops.⁵³ In our region, it is worth noting that similar pieces have been identified at the Roman workshop of Tibiscum, which demonstrates Roman production; however, since the centre ceased activity in the 4th century CE, our material cannot be directly attributed to it.⁵⁴ In the Tisza Basin, these beads appear to reach a peak in graves from the D2/D3-D3 period, becoming rare again in the Gepid-associated material after the beginning of the 6th century CE. In this respect, if we compare the dataset from our dissertation, which covers the whole period of the Gepid kingdom, with this study, we have here 6 beads of this kind from a total of 1159 while there we had the presence of 10 beads from a total of 6651, more than half of which came from contexts dated to the early period or generally to the Gepid period due to lack of tightly dated inventory items.⁵⁵ Moreover, worth mentioning here is one of the rare cases, for this area and period, of a grave with such beads in double-digit numbers: G. 63 from Viminacium-Burdelj, where 12 were found, a D2/D3-D3 elite burial not included in our study.⁵⁶ It is not a complete disappearance, as occasional finds have also been noted up to the early Avar period, but we agree with the proposed theory by Alpár Dobos and Mihály Huba Hőgye that their presence after the beginning of the 6th century CE is likely to be as archaic finds.⁵⁷

Another decorative motif is present on 9 beads, with applied lines of glass paste protruding slightly or embedded in the bead's body (Fig. 3/6-10). We have 3 beads with a wavy or zigzag line at the median (Fig. 3/6-7), 2 with a black matrix and a white line, 1 from Barabás-Bagolyvár (type I.03/II.02.05) and 1 from Ernei (type I.05.05), which also has 2 likely accidental lines towards the rounded end, lastly 1 from Periam (type V.02.05), different due to a blue matrix.⁵⁸ Other 2 beads are decorated with 2 interlocking wavy lines forming "8" shaped figures at the median (Fig. 3/8), 1 with a black median and white lines from Ernei (type I.05.06) and another with an unknown colour scheme from Mád (type I.03.06).⁵⁹ Lastly, we have 4 exemplars with the combination of 1 straight line in the median flanked on each side by 1 wavy line (Fig. 3/9-10), all of them have a black matrix, 1 blueish, but 3 coming from Barabás-Bagolyvár, have a blue straight line and yellow wavy ones (type I.03/II.03.08) and the 1 from G.43-Ernei has a red straight line and white wavy lines on each segment (type III.04.08).⁶⁰ All these variants of beads with

⁴⁷ Beck 2006, 42, 62-63; Benea 2004, 74-75, 212-213; Dobos and Bereki 2023, 76.

⁴⁸ Nagy 2005b, 81, 243 Taf. 13; Grumeza and Cupcea 2020, 414-416, Fig. 2-3; Glodariu 1974, 484-485, Abb. 2; Harhoiu 1998, 187-188, Pl. XC.

⁴⁹ Kiss 1983, 115, 118, Abb.11; Kovrig 1951, 113-114, Taf. XLII, Taf. XCV.

⁵⁰ Tempelmann-Maczyńska 1985, 49, Taf. 4.

⁵¹ Ibidem.

⁵² Grumeza 2020, 438, Fig. 1; Gopkalo 2008, 46, Taб. V.

⁵³ Gopkalo 2008, 47; Grumeza 2020, 440-441.

⁵⁴ Benea 2004, 74-75, 213-214, 302, 337, Typ. XII, Fig. 33.

⁵⁵ Ivanišević et al. 2006, 73-76; Dobos and Bereki 2023, 76-77; Preda 2023, 44-45, 367, Anex. 17; Some are also mentioned in Preda 2024, 235, 248, 250; Ferencz et al. 2009, 442-444, 461, 473, Pl. V, Pl. XVII; Comşa and Ignat 1971; Bóna and Nagy 2002, 34-189, 63-66, Abb. 31, Taf. 20-21; Török 1936, 105; Csallány 1961, 174, Pl. CXIV; Nagy 2005c, 98, 251, Taf. 21; Csallány 1961, 31-33, Taf. VIII, Taf. XI.

⁵⁶ Ivanišević et al. 2006, 157-159, Pl. 9, Fig. 51.

⁵⁷ Pásztor 1997; Dobos and Bereki 2023, 76-77.

⁵⁸ Bóna 2002a, 18; Dobos and Bereki 2023, 31, 71, 169, Fig. 23, Pl.24; Hampel 1905, Bd. 2, 5-6, Bd. 3, Taf. 7; Harhoiu 1998, 183-184, Taf. XCV.

⁵⁹ Dobos and Bereki 2023, 32, 71, 169, Fig. 23, Pl. 24; Kovrig 1951, 113, Taf. XLIV.

⁶⁰ Bóna 2002a, 18; Dobos and Bereki 2023, 32-33, 71, 172, 188, Fig. 23, Pl. 27, Pl. 43.

line decoration tend to have a wide area of distribution as well as a large time frame, across Europe continuing to appear in the Migration Period, typically in very small numbers, which is an image that is valid for our area and timeframe as well as their immediate vicinity, with one exception found at Tiszaföldvár-Érhalom where 9 pieces of the variant with a wavy line were found.⁶¹ In this case as well, for the simple lines and the 2 interlocking wavy lines beads, some exemplars were found at Tibiscum.⁶²

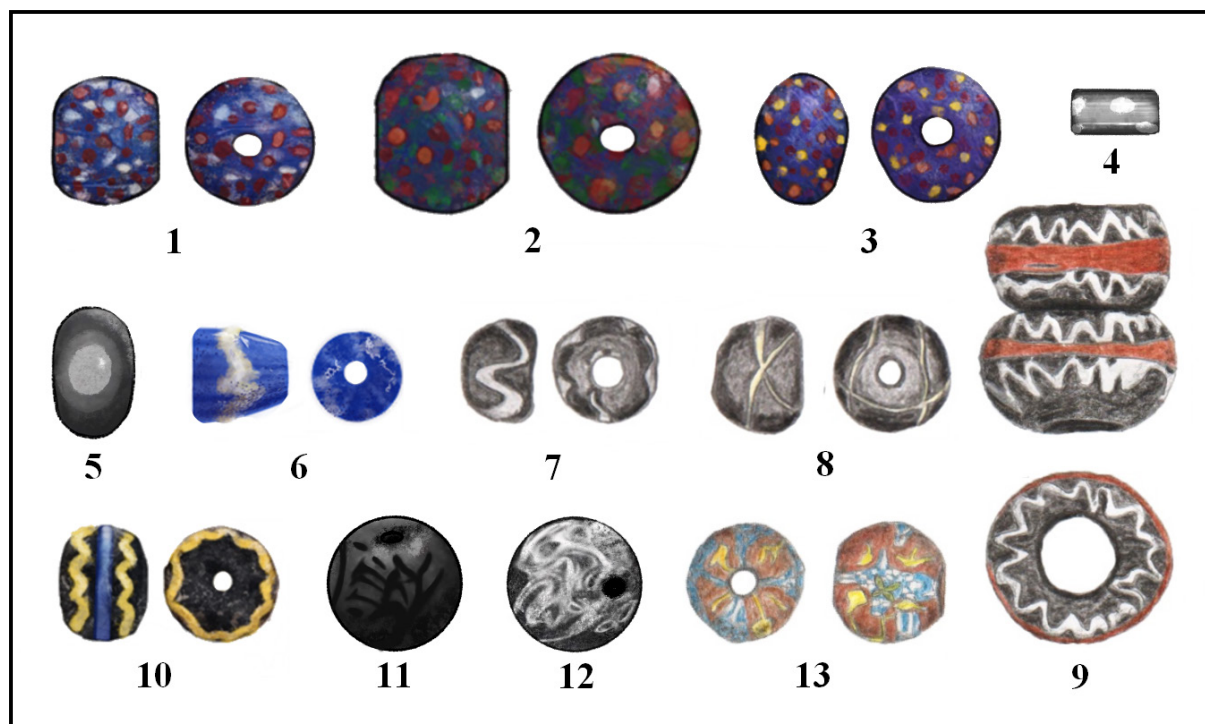


Fig. 3. Decorated glass beads: 1-3. Multicoloured dots/crumb decoration (type: .01); 4. Applied simple eyes; 5. Applied peacock eyes (type: .04); 6-7. Applied wavy line (type: .05) (after Doboş and Bereki 2023); 8. Applied interlocking wavy lines (type: .06) (after Doboş and Bereki 2023); 9-10. Applied alternating wavy and straight lines (type: .08) (9- after Doboş and Bereki 2023); 11. Irregular intersecting applied lines(?); 12. Millefiori, swirl pattern(?); 13. Millefiori, vegetal and checkered pattern (after Doboş and Bereki 2023).⁶³

There are also beads that appear to have been realised in the *millefiori* or mosaic style, a complex production method involving multiple stages of colouring, arranging, heating, and shaping glass rods of various colours to form beads displaying diverse patterns.⁶⁴ The most complex of the 3 is the bead from Ernei (type II.06./), which has a brick red matrix, and a pattern of 4 cross-shaped motifs created through a rectangular 4×4 checkerboard pattern in white and blue, with the pattern elongated at the ends of the crosses, giving the impression of stripes; a mint-green field superimposed at the centre of the cross forms (escutcheon), with light yellow inclusions in the shape of four-lobed leaf outlines arranged diagonally; additional yellow inclusions in the form of irregular lines appear in the 8 sections between the crosses where the red matrix is visible, likewise elongated toward the ends (Fig. 3/13).⁶⁵ For this bead as well, the presence of similar exemplars was noted across a wide area of Barbaricum in the Late Roman Imperial Period and the Migration Period, up to the middle of the 5th century CE.⁶⁶ To this, we can add the affirmation that similar ones are not known from the following period in the Tisza Basin; even so, their rarity as pieces makes them unreliable as dating references.⁶⁷

⁶¹ Tempelmann-Maczyńska 1985, 53, 55-56, Taf. 6/260-266, 293-303; Beck 2006, 66-68; Gopkalo 2008, 52-55, Taf. V/VII-IX; Grumeza 2020, 438, Fig. 1/IV. B; Doboş and Bereki 2023, 74-75; Preda 2024, 248, 271, Pl. X; Cseh 2005, 35, Taf. 40/A.2 Taf. 101/1.

⁶² Benea 2004, 76-77, 203-206, 302, Type. XIII-XIV, 337, Taf. II, Fig. 33.

⁶³ Where available we applied the pattern of decoration as noted in the typology in Preda 2024, Pl. X.

⁶⁴ Volkmann and Theune 2001, 525-528.

⁶⁵ Doboş and Bereki 2023, 77.

⁶⁶ Ibidem; Pásztor 1997.

⁶⁷ Preda 2024.

Two other beads from Mád have also been identified as *millefiori*; however, they are quite different in appearance (Fig. 3/11-12), with irregular patterns of wavy, interlocking lines (type I.01.09): 1 with a light base and dark lines, and another with a dark base and light lines (type I.01./).⁶⁸ The bead with the base darker than the lines more closely resembles swirl glass beads and has likely been formed by rolling together and shaping heated rods of different colours, while the bead with the base lighter than the lines could either be formed this way or be a case of lines formed by applied glass paste.⁶⁹ Without knowing the exact method used or their colouring, we can only say that beads with somewhat similar patterns to the one with dark lines, and of which no 2 identical ones are known, are dated to the Roman Period and Early Migration Period, largely between phases C1b-C2, possibly extending to phase D.⁷⁰ Closer to our region and chronological timeframe, the most similar exemplars come from Viminacium-Više Grobalja G. 100, G. 1582 and G. 2055 two of which are dated D2/D3-D3, and one of which is dated to the second third of the 6th century CE; however, these could be reused pieces taken from older contexts.⁷¹ For the bead with light lines, strictly appearance-wise, a somewhat similar exemplar appears at Tibiscum; but numerous good parallels appear in Merovingian territory, where, although it is unclear if they were produced or imported, it is noted that they had a concentration point in contexts dating from the second half of the 5th century CE and from the 6th century CE, a timeframe which we might be able to restrict if the colours of the piece were known.⁷²

From Tiszalök, we have 2 beads with „eyes” (Fig. 3/4-5): 1 prismatic bead with light-coloured simple eyes on a dark base and 1 with a dark base decorated with a peacock eye motif in lighter colours (type I.03.03).⁷³ To these could be added another bead, in the form of a truncated cone (Fig. 2/1: type V.02) with a dark base and light-coloured simple spots, whose identification as decorated we are uncertain of.⁷⁴ Here, it is most likely that the decoration was realised by applying drops of glass on the unaltered matrix or in indents created on the still-warm body.⁷⁵ For the prismatic one with monochrome eyes, although the exemplars are few, there are some parallels: 1 at Tibiscum and a few in the Merovingian area; but their unusual shape makes them rare in the Barbaricum of the Late Imperial era and the Migration Period.⁷⁶ The same situation appears for the uncertain one, for which an analogy is known from Cieple G. 59/1897, if the shape of our piece is pyramidal.⁷⁷ As for the one with a peacock eye, the decorative motif is widespread, and variants with differing numbers of eyes, eye shapes, colour schemes, and realisation techniques can become characteristic of only a period or area; however, these details are not available for our piece.⁷⁸

After the glass beads, in terms of both quantity and distribution, amber beads represent the next most significant category. In antiquity, most of this material was imported from the Baltic Sea region and the coasts of the North Sea (although deposits also occurred in areas such as Ukraine and Romania), along trade routes that operated over long periods.⁷⁹ During the Migration Period, archaeological discoveries have shown that the distribution of amber shifted toward the end of the 5th century CE, becoming concentrated in Eastern Europe, particularly in the Tisza Basin and Crimea, with a much weaker distribution in the areas between these regions and the regions of origin.⁸⁰ This phenomenon is visible in discussions of costume elements, where amber beads are seen as characteristic of both the elite burials of the 5th century CE and the Gepid-period necropolises that follow, persisting into the early Avar period.⁸¹

The range of bead types present is relatively limited, with an almost exclusive dominance of spherical and cylindrical variants. Among the spherical derivatives, there are 21 pressed spheres, 7 hemispheres, and 1 specimen that may be interpreted either as a sphere or a pressed sphere (Fig. 2/1: types I.03, I.05, I.01/03?). Cylindrical forms include 27 disks, as well as single examples of a short cylinder and a long cylinder with curved sides (Fig. 2/1: types II.03, II.02, II.06). Four conical examples are also present: 2 truncated cones, 1 cone, and 1

⁶⁸ Kovrig 1951, 114, Taf. XCV.

⁶⁹ Beck 2006, 59; Pion 2013; Ivanišević et al. 2006, 57.

⁷⁰ Tempelmann-Maczyńska 1985, 57, Taf. 9-10/337-340.

⁷¹ Ivanišević et al. 2006, 57, 119-122, 211-213, 160, 220-221, Fig. 50, Fig. 54, Fig. 56; Preda 2024, Pl. X/20-23.

⁷² Benea 2004, 337, Fig. 33; Siegmund 1995; Pion 2012, 173-174, 188, Fig. 13/e, 249c; Pion 2013.

⁷³ Kovrig 1951, 113, Taf. XLII; For the Gepid material we did not have beads with monochrome spots/eyes so an identification number for this motif does not exist in the typology, which we intend to revise.

⁷⁴ Ibidem.

⁷⁵ Tempelmann-Maczyńska 1985, 48, 185, Taf. 4; Benea 2004, 214-215; Beck 2006, 63.

⁷⁶ Tempelmann-Maczyńska 1985, 35, 47-52, Taf. 4; Benea 2004, 214-215; Pion 2013, Fig. 27/d; Siegmund 1995, 29, Appendix. B/2.5, Pl. V/2.5.

⁷⁷ Tempelmann-Maczyńska 1985, 35, Taf. 2/125c.

⁷⁸ Tempelmann-Maczyńska 1985, 47-52, Taf. 4-5; Siegmund 1995, 40, Pl. V-35.10, 2.10; Beck 2006, 63; Gopkalo 2008, 49-50, Ta6. V/5, Preda 2024, Pl. X/3.

⁷⁹ Bliujienė 2011, 5, 8.

⁸⁰ Curta 2007, 61-62, Map. 4.1.

⁸¹ Csallány 1941, 135; Tejral 1988, 275-276; Curta 2001, 271, Curta 2007, 62; Rác 2016, 321-322.

truncated biconical form (Fig. 2/1: types V.01, V.02, V.04). Finally, there is a single prismatic specimen, best classified as a short quadrilateral prism, although its length more closely approximates that of a disk-shaped bead (Fig. 2/1: type VII.01). It should be noted that, whereas from the other contexts only up to a maximum of 7 amber beads were found in 1 context, a total of 26 specimens were identified at Mád, keeping in mind that part of this assemblage remains uncertain in terms of identification.⁸²

A few specimens bear grooved lines incised into their surfaces, which also attest to their fabrication using a lathe (Fig. 2/2.1-5).⁸³ From Ernei there are 2 such beads, 1 truncated cone with 2 straight lines, 1 on the sides towards the larger diameter end, the other on the same end forming a circle along the edges of the piece (Fig. 2/2: Group XLVIII Type 442), the other bead, truncated biconical, with 3 straight lines, 2 on the sides at the median, and 1 at the flatter end forming a circle along the edges of the piece (Fig. 2/2: Group XLIV Type 435).⁸⁴ Two disk-shaped ones from Tiszalök, both with 1 straight line along the median, 1 with a convex end (Fig. 2/2: Group XLII Type 430 and Group XLVI Type 439).⁸⁵ Lastly, 2 disk-shaped beads with convex ends from Mád, 1 bead with 2 straight lines on the sides, 1 each near each end, and the other with 1 straight line along the median (Fig. 2/2: Group XLVI Type 338 and Type 339).⁸⁶ Beads decorated in this manner were distributed between phases B2-D3, with a spiking popularity in the Middle Danube region in between phases D1-D3, being even more so than the simple amber beads, elements characteristic of the fashion belonging to the elite fashion of the period, having more of a chronological significance.⁸⁷ Here we mention that such beads appear in row grave burials of the Gepid period only rarely, with 2 more from Ernei, a necropolis dated D2/D3-D3, and another one from G. 31 at Magyarcsanak-Bökeny, a grave belonging to the early phase of the necropolis, dated to the last third of the V century CE.⁸⁸ From Turda, a bead of type I.05, has a series of scratches which could be accidental or intentional incisions meant to reproduce a human face.⁸⁹ If it's the latter, it is likely more so a personal decision on the part of the wearer rather than something which could be significantly extrapolated to the larger context of the period.

Objects made of chalcedony are known as early as the Predynastic period in Egypt, and among the earliest regions where chalcedony exploitation is attested are India, Yemen, Iraq, the Eastern and Western Deserts of Egypt, and Sinai.⁹⁰ It is a material known to have been used in the Roman period for the manufacture of beads, although its quantity was limited from the outset due to its cost.⁹¹ The use of chalcedony beads is considered by Adrien Pásztor to be a component of necklaces made of various precious materials, employed to distinguish social status, following Byzantine fashion, a factor unsurprising to occur in the contexts from our dataset.⁹² Chalcedony beads continue the trend toward spherical and cylindrical forms being dominant. We have 15 sphere derivatives, 11 beads in the shape of pressed spheres (Fig. 2/1: type I.03), 2 spheres (Fig. 2/1: type I.01), 1 hemisphere (Fig. 2/1: type I.05), and 1 bead which could be either a sphere or a pressed sphere (Fig. 2/1: type I.01/I.03?). From the cylindrical variants, we only have 4 exemplars, 3 short cylinders with curved sides (Fig. 2/1: type II.05) and 1 disk (Fig. 2/1: type II.03). The only 2 exemplars of different types are 1 truncated cone (Fig. 2/1: type V.02) and 1 hexagonal prism (Fig. 2/1: type VIII.01). For these beads, the same as with the amber ones, the first aspect of importance is the material, which can translate to economic and cultural relationships, this time more so through the Roman world, while the shapes tend to be common across large areas and temporal periods, or too rare to be of much consequence in analysis.

Carnelian, a reddish variety of chalcedony, is a semiprecious stone often used in the Greek and Roman world for its colour and specific hardness.⁹³ The highest-quality carnelian is considered to originate in India, although deposits are found in many regions, including Brazil, Uruguay, and the eastern coast of England.⁹⁴ The pieces from our contexts, identified as carnelian, come from only 2 sites, Tiszalök and Mád, contexts which show the highest variety of beads.⁹⁵ Most of these have polyhedral shapes: 4 short prisms with cut corners (Mád, type Fig. 2/1: type X.01), and 8 long prisms with cut corners, unclear if flattened or not (Fig. 2/1: type X.02/03(?)), 4 from Mád

⁸² Kovrig 1951, 114, Taf. XCV.

⁸³ Tempelmann-Maczyńska 1985, 24.

⁸⁴ Dobos and Bereki 2023, 31-33, 80-81, 169, Pl. 24/5-6; Tempelmann-Maczyńska 1985, Taf. 16/435, 442.

⁸⁵ Kovrig 1951, 113, Taf. XLII; Tempelmann-Maczyńska 1985, Taf. 16/432, 439.

⁸⁶ Kovrig 1951, 114, Taf. XCV; Tempelmann-Maczyńska 1985, Taf. 16/438-439.

⁸⁷ Tempelmann-Maczyńska 1985, 74-86; Mastykova 2001; Dobos and Bereki 2023, 80-81.

⁸⁸ Ibidem, 20, 40-41, 80-81, 107-109; Nagy 2005c, 103, 113.

⁸⁹ Bărbulescu 2008, 59, Pl. XI/1(2), Pl. XX/3.

⁹⁰ Rapp 2019, 328.

⁹¹ Tempelmann-Maczyńska 1985, 25.

⁹² Pásztor 2008, 315.

⁹³ Streeter 1898, 252.

⁹⁴ Rapp 2019, 328.

⁹⁵ Kovrig 1951, 113-114, Taf. XLII, Taf. XCV.

and 4 from Tiszalök. Spherical beads (Fig. 2/1: type I.01) were only noted for Tiszalök in 6 exemplars. Lastly, at Tiszalök, we also have 1 biconical exemplar (Fig. 2/1: type V.03) and 1 short quadrilateral prism (Fig. 2/1: type VII.01). The difference in bead shape preference within the same material between the 2 sites is striking. While the spherical shape, widely distributed but generally occurring in small numbers, cannot provide much information, the polyhedral carnelian beads are most common in Roman material culture and appear in small numbers in contexts outside the Empire, as is the case with the Sântana de Mureş-Černjachov culture.⁹⁶ Both of these shapes represent popular options for carnelian beads in the Gepid row grave cemeteries.⁹⁷

For the chalcedony beads, we also need to mention an agate bead from Tiszalök (Fig. 2/1: type I.03).⁹⁸ Beads of this material are also some which have a widespread presence in small numbers.⁹⁹ They seem to disappear from this area during the 6th century CE, the 2 cases in which we know they are present from the Gepid age *Reihengräberfelder*, G.2-2006 Floreşti-Polus and G.12-Magyarcsanád-Bökeny, being a grave dated to the late 5th century CE and the other a grave with uncertain dating but, given the chronology of the necropolis, could date to the same period or early 6th century CE as well.¹⁰⁰

Limestone or chalk exhibits the same particularity as carnelian beads, being present only at the 2 sites, Tiszalök and Mád.¹⁰¹ These are predominantly formed out of cylindrical variants, with 3 long cylinders coming from Tiszalök and 1 from Mád (Fig. 2/1: type II.01), also from Mád 1 disk (Fig. 2/1: type II.03), and from Tiszalök 1 short cylinder with curved sides (Fig. 2/1: type II.06). From Mád there is also 1 truncated biconical exemplar (Fig. 2/1: type V.04). Lastly, from Tiszalök 1 short quadrilateral prism (Fig. 2/1: type VII.01). It is important to mention that, in the case of Tiszalök, where the placement is known, only this last bead is found at the shin, part of what could be a deposited necklace or a pendant attached to a strap hanging from the belt, possibly even sewn onto clothing fabric, while the others were found at the neck, likely as part of a necklace. This is relevant to mention since limestone beads occur sporadically in multiple cultural contexts, but they are most typical in the Middle Danube of the Migration Period in contexts belonging to the Sarmatian culture, where multiple exemplars can be found together worn as part of the composition of necklaces or other elements, some present on the lower part of the body, including being sewn onto clothing.¹⁰² Their presence is also notable in the territory of the Hungarian plain in the 6th century CE, but their use in these contexts is limited to 1 to 3 beads per context, usually as pendants or sword knot beads, with 2 notable exceptions being G. 67 and G. 79 from Szolnok-Szanda where they were found at the neck likely forming necklaces, which we considered as the presence of a possible local tradition continuation, that, even more so, could be the case for the graves discussed here.¹⁰³

Coral is also a rarely encountered material, found in only 2 contexts at Turda and Sânpaul.¹⁰⁴ In the case of Turda they are cylindrical in shape, 2 long cylinders and 2 short (Fig. 2/1: types II.01 and II.02), while in the case of Sânpaul the 2 beads are spherical (Fig. 2/1: type I.01). Coral is another material where its use in and of itself is of great relevance, often the shape of the beads being the natural shape of the coral, which has just been cut into segments.¹⁰⁵ Coral lives in seas with warm waters, with an average temperature of 13-16 degrees Celsius, at depths between 3 and 300 m; it is considered that in antiquity the coasts of the Mediterranean Sea and the Red Sea were the main areas of extraction.¹⁰⁶ These beads during the Migration Period are most common in the Black Sea region and are especially associated with sites belonging to the Sântana de Mureş-Černjachov material culture, representing 9.2% of the material analysed by Oksana Gopkalo.¹⁰⁷ They also occur in Sarmatian graves, where such beads are considered either eastern influences or imports from Roman workshops.¹⁰⁸ In Roman material culture, coral beads are generally found in small numbers, with a significant portion of the production from workshops being sold in

⁹⁶ Diaconu 1965, 110; Tempelmann-Maczyńska 1985, 88-89, Taf. 19, 499.

⁹⁷ Preda 2023, 62, 370, Annex. 24; Preda 2024, 263, 270, Pl. II, Pl. IX.

⁹⁸ Kovrig 1951, 113, Taf. XLII.

⁹⁹ Tempelmann-Maczyńska 1985, 25-26, 89, 145, 148.

¹⁰⁰ Opreanu 2012, 5; Nagy 2005c, 100.

¹⁰¹ Kovrig 1951, 113-114, Taf. XLII, Taf. XCV.

¹⁰² Tempelmann-Maczyńska 1985, 25, 162, 241; Georgescu and Bălărie 2017, 119-138; Bărcă 2014, 79, 130-131; Grumeza 2014, 43, 93-96, 101-102, 148, see also the catalogue 157-280.

¹⁰³ Preda 2024, 228, 232, 235, 239-241, 246-252.

¹⁰⁴ Bărbulescu 2008, 60-61, 312-313, 319, Pl. XI/5; Grumeza and Cupcea 2020, 414, 420, Fig.6/13.

¹⁰⁵ Vaday 1989, 106; Grumeza 2014, 102.

¹⁰⁶ Gopkalo 2008, 77.

¹⁰⁷ Ibidem; Crişan and Lăzărescu 2010, 234.

¹⁰⁸ Vaday 1985, 377; Grumeza 2014, 95, 102-103; Benea 2008, 135-136.

the Barbaricum.¹⁰⁹ In the well-dated contexts, coral beads appear only in those from the middle of the 5th century CE and the beginning of the 6th century CE, we could not identify pieces from Avar period contexts.¹¹⁰

One bead identified as an emerald has been noted in the funerary context from Tiszlök (Fig. 2/1: type 1.01). Emerald was used to create adornments of various types, including beads in Roman material culture, into the Byzantine period as well, especially within gold jewellery, with one of the main sources being Egypt.¹¹¹ In the Barbaricum of the Migration Period, such pieces are nearly non-existent. It is worth noting that, since our piece has not been closely investigated, there is a high possibility that it is, in fact, glass, which would be a misidentification that is not uncommon.¹¹²

Beads made of precious metals are quite varied in shape, relative to their numbers. A group of 10 pieces can be identified by their base shape as biconical (Fig. 2/1: type V.03), 7 pieces come from the hoard discovered at Cluj-Someșeni, and 3 from the funerary context at Gáva.¹¹³ To these, we can also add the exemplar attributed to Apahida 1889, which has a more truncated biconical base shape (Fig. 2/1: type V.04).¹¹⁴ Next in number are the polyhedral cubes (Fig. 2/1: type X.01), present in 7 exemplars in the grave Apahida 1968 and 4 in the hoard of Cluj-Someșeni.¹¹⁵ Cylinder derivatives are present, these being the so-called barrel-shaped ones, with 3 cylinders with protuberances at the ends from Periam (Fig. 2/1: type II.13) and from the same site, 3 other cylinders with protuberances at the ends, additionally featuring latitudinal grooves, to which we can add 1 further exemplar from Gáva (Fig. 2/1: type II.14).¹¹⁶ The only sphere derivatives are 6 grooved spheres (Fig. 2/1: type I.02) from Apahida 1968.¹¹⁷

The gold beads assigned to the biconical type distinguish themselves from simple biconical glass forms due to their „polychrome” style decoration, comprising cabochons often combined with networks of cells (*cloisonné* decoration) into which ornamental stones or glass pieces were set; filigree with beaded wire and granulation may also occur on beads.¹¹⁸ In the case of the pieces from Cluj-Someșeni, the more complex form, created by the decoration, has been named in Romanian scholarship as beads in the form of “bucșe de căruță” (cart bushings) (Fig. 4/12-18).¹¹⁹ The decoration, although similar, differs in pattern for the pieces coming from different sites (Fig. 4/8-18). For the beads from Someșeni as analogies, besides the ones from Gáva (Fig. 4/8-10) – which do not have almandine cells at the median – were given beads from Měcholupy, which are not a perfect analogy for either one, in the first place due to having a bipyramidal base shape rather than biconical.¹²⁰ A bead similar to our specimens was also discovered in G. 217 at Cologne-St. Severin, dated to the 6th century, the bead is most similar to those from Gáva, while still having different elements, namely beaded wire in rows in between the cells at the median and toward the ends.¹²¹ This situation might be the result of multiple craftsmen trying to create similar objects to accommodate a preferred style, or of craftsmen producing multiple pieces and intentionally creating different-looking results for each individual, even if the differences are minimal. The production of such beads relates to that of other metallic items with polychrome decoration, which have a complex literature seeking to establish production centres. We will only note that they are often attributed to late Roman ateliers, but studies of items with regionally limited distribution suggest the presence of various local workshops in Barbaricum.¹²² What can be said with certainty is that such items are a trait of the material culture of Germanic elites, combining Greco-Roman and Germanic motifs, and spreading from east to west between the 5th and 7th centuries CE.¹²³

The polyhedral beads (Fig. 4/19-30) are formed of an openwork cube with cut corners, hollow on the inside, with almandine inlays placed within the rectangular and triangular frames formed on each facet, except for the ends, where, around the threading hole, there is usually beaded wire. This exact construction is widespread for the terminations of earrings, whose origins were proposed in the late Roman culture or as brought during the Hunnic movement to the west from the Caucasus region, with the openwork version seeming to appear in the Pontus

¹⁰⁹ Gruber et al. 2019, 129; Grumeza 2014, 102-103.

¹¹⁰ Crișan and Opreanu 1991, 120; Ivanišević et al. 2006, 210, 212, 213, Pl. 37/1582.5, Fig. 56/3-4; Ferencz et al. 2009, 431-432, 443, 461, 473, Pl. V, Pl. XVII.

¹¹¹ Shaw et al. 1999, 207-211; Nikopoulou et al. 2024.

¹¹² Ibidem; 1346-1347, 1351-1352, Tab. 2.

¹¹³ Horedt and Protase 1970a, 189, Pl. III; Hampel 1911, 143-144, Pl. V.

¹¹⁴ Oanță-Marghitu 2014, 619.

¹¹⁵ Horedt and Protase 1972, 175; Horedt and Protase 1970a, 189, Pl. III.

¹¹⁶ Hampel 1905, Bd. 2, 6, Bd. 3, Taf. 7/6-11; Harhoiu 1998, 184, Taf. XCV; Hampel 1911, 143-144, Pl. V.

¹¹⁷ Horedt and Protase 1972, 169, 172.

¹¹⁸ Harhoiu and Gora 2000, 16.

¹¹⁹ Horedt, Protase 1970a, 185-190.

¹²⁰ Annibaldi and Werner 1963, Pl. XLIV/2-4; Svoboda 1965, Tab. XXIX/4;

¹²¹ Doppelfeld 1960, Taf. 26/2; Horedt and Protase 1970a, 194.

¹²² Harhoiu and Gora 2000, 40, 49; Adams 1991, 36, 167-171, 245-246; Hilgner 2018, 306.

¹²³ Ibidem, 299-300.

region; whatever the case, they were strongly adopted by the barbarian elites, but beads are not unknown, with parallels at Zmajev, Kerč, and Olbia.¹²⁴ Those from the hoard discovered at Cluj-Someșeni were considered to be part of a necklace together with the biconical beads, a factor which led Kurt Horedt to identify the hoard as elements of adornment likely belonging to a woman, beads and necklaces being widely considered something only worn by women at the time; today, such assertions are no longer viable.¹²⁵ In the case of the Apahida beads, what is considered the back side of the pieces is a straight sheet of gold without a cassette for inlays, 4 beads lacking the triangular cassettes towards this back part as well, moreover, these exemplars also have round holes at the top and at the bottom not only on their left and right, elements which in themselves suggest another use rather than a necklace. These particularities, together with the fact that they were found in the undisturbed part of the burial, among horse harness elements which were placed in a wooden chest, make it clear that these were used as decoration for the horse harness.¹²⁶ The differences in characteristics of the beads from Someșeni and those from Apahida do not allow us to extrapolate that their use is identical, especially given the framework offered by another European context from Zmajev, where the beads are accompanied only by multiple dress elements and no horse-related items, as such it remain possible for those from Cluj-Someșeni that their use was as a form of adornment for humans, be it as a necklace or another element.¹²⁷

For beads of type II.13 (Fig. 4/1-3), Attila Kiss observed that these simpler pieces have origins in the material culture of the Late Roman Imperial period, often found in the composition of necklaces, while those with incised lines in the median zone of type II.14 (Fig. 4/4-7) represent a derivative of the form, which appears at the beginning of the 5th century and is characteristic of it.¹²⁸ Péter Prohászka notes a peak in their popularity in the second half of the century.¹²⁹ He also put forward an alternative theory to István Bóna's proposed Byzantine manufacture of these beads, namely that, given their popularity in the Carpathian Basin but not in the Balkans along the Danube and the Black Sea, they are likely products of Germanic goldsmiths.¹³⁰

The grooved sphere exemplars from Apahida 1968 (Fig. 4/31-37) are hollow on the interior, produced by joining 2 hemispheres made of gold sheet, which were formed through hammering, cutting and shaping with a die; and decorated in the median zone with a gold band, over which there is beaded wire that is also placed over the raised parts of the grooves and at the ends.¹³¹ The exemplars from Apahida represent complex pieces for which we were not able to find an exact analogy, however, somewhat similar specimens of spherical shape, decorated with spirals and circles formed of beaded wire – decoration more similar to the bead attributed to Apahida 1889 but without the cloisonné cells (Fig. 4/11) – have been discovered in Lombard sites at Keszthely-Fenekpuszta and Nocera Umbra, these sites being later in date, the second quarter of the 6th century to the end of the same century.¹³² The idea of

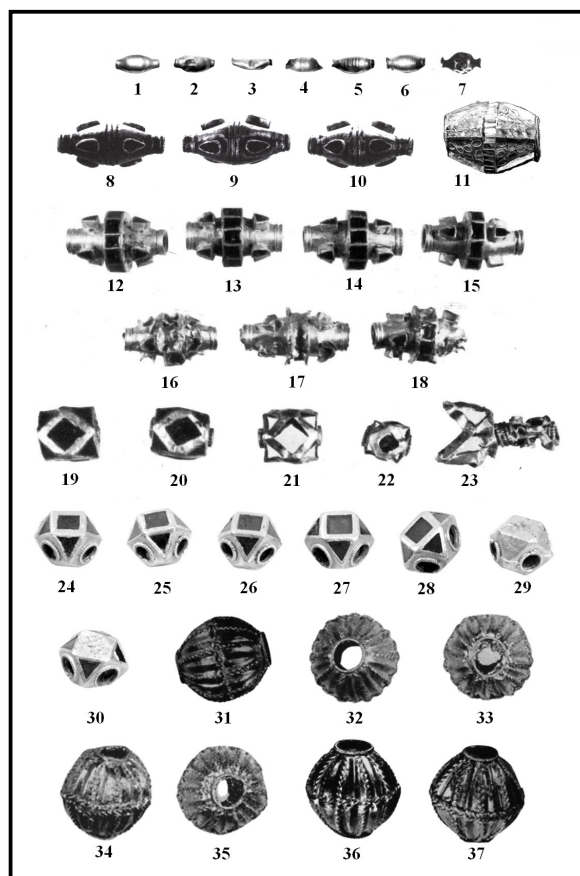


Fig. 4. Beads made of gold: 1-6. Periam (after Prohászka 2003); 7-10. Gáva (after Almásy et al. 1997); 11. Apahida 1889(?); 12-23. Cluj-Someșeni (after Horedt and Protase 1970a); 24-37. Apahida 1968 (24-30 after Amarie 2024); 31-37. after Horedt and Protase 1972).

¹²⁴ Bierbauer 1984, 450, 467; Harhoiu and Gora 2000, 51; Horedt 1979, 243-247, Abb.4; Beninger 1931, 35, Fig. 10; Kiss 1983, 121-122; Kazanski 2022, 103-104, Fig. 2.

¹²⁵ Horedt and Protase 1970a, 189, 191, 194; Preda 2024, 231-232, 236-237, 246, 250-252; Cosma 2019.

¹²⁶ Protase 1972, 173-177.

¹²⁷ Kiss 1983, 121-122.

¹²⁸ Kiss 1995, 314-316; Kiss 1996, 60.

¹²⁹ Prohászka 2003, 83.

¹³⁰ Ibidem; Bóna 1986, 142.

¹³¹ Oanță-Marghitu 2014, 621.

¹³² Rác 2022, 243, 246-247, Fig. 1/1, 4.

belonging to the horse harness has also been proposed for these pieces, however, they were not found together with the other elements of this kind, and instead 3 were in the area of knees and 3 in the upper disturbed area of the grave which could mean decoration for a belt as a pendant or, as Dumitru Protase also mentioned, used as decoration for a bag or sewn onto clothing.¹³³

Among the silver beads, most pieces, namely the 5 from Ernei, are polyhedral (Fig. 2/1: type X.01), to which 1 other, cylindrical, from Turda is added (Fig. 2/1: type II.01), all of which are formed of cut and shaped silver sheet.¹³⁴ The beads from Ernei are unusual in the larger context of the period, yet 10 other pieces from 3 other graves were found in the same necropolis.¹³⁵ We find it likely that these beads are a local fashion. The researchers of this necropolis noted that these could imitate the glass and precious stone polyhedral beads mentioned above.¹³⁶ Remaining close to the earring parallels of the gold polyhedral beads, we mention that silver variants are also present in earrings with polyhedral ends, however, those are generally solid silver, not silver sheet.¹³⁷ The exemplar from Turda has been hesitantly identified as a bead, but the research on the necropolis at Ernei has now identified 5 other graves containing such exemplars, all combined with millet beads, to which they are similar in size.¹³⁸ Given that in each case a single piece is present, these could be elements relating to the way these strings of beads close and open, whether they are part of a „mechanism” or a marker for the closing and opening point. This would also serve to strengthen the idea that millet beads were worn as necklaces. Another possibility is that these beads served as accent pieces; however, the repeated presence of just 1 bead of this kind in necklaces otherwise different in appearance due to their colours makes this less likely.¹³⁹

The way beads were used is elaborated upon in this text only in the cases relevant to specific types. Most of the contexts used here that can provide concrete information, those undisturbed or only partially disturbed, are graves which were included in our article regarding beads associated with the Gepid period, where we also discuss the modes of wearing beads in more detail.¹⁴⁰ Here we will only briefly discuss this aspect, focusing on the contexts which we have not already examined. Grave 43 from Ernei is an example where multiple uses are combined, through which we can showcase most of the known ones, although for some placements, it is difficult to be certain of the exact ones. The rows of millet beads at the neck, together with the polyhedral beads, likely formed 1 or more necklaces (Fig. 5/1: 1). Small groups of large and medium-sized beads, most made of amber and glass, often decorated, were used as hanging pendants. One pendant on the chest, formed of 1 medium-sized decorated glass bead (Fig. 3/7) and 1 large amber bead (Fig. 2/1: type II.03), possibly hanging by the fibula, or by fastening cords of the clothing (Fig. 5/1: 2). At the waist, 2 large beads, 1 of green glass (Fig. 2/1: type V.04) and 1 of amber (Fig. 2/2: Group XLVIII Type 442), combined with 1 medium amber one (Fig. 2/2: Group XLIV Type 435) form another small group above the belt buckle, unclear if used as a pendant for a fastening element that left no other mark or if it was hung like those from the chest (Fig. 5/1: 3). In the area of the left forearm, 1 small millefiori decorated glass bead (Fig. 3/13) and 2 medium amber ones (Fig. 2/1: types II.02 and II.03) were used as decorative but also likely part of the closing mechanism of what could be a bag (Fig. 5/1: 4). Lastly, 2 decorated glass pieces (Fig. 3/8 and Fig. 3/9), 1 medium and 1 large, were likely used as either a single pendant displaced partially during decomposition or 2 separate pendants hanging from the belt (Fig. 5/1: 5-6). This is one of the most complete sets of bead elements found in the Tisza Basin, dating to the D2/D3-D3 period. For comparison, the grave that follows in number of elements is G.2-Mezőkővesd-Mocsoliás, which contains 1 chest fibula hanging pendant, 1 belt pendant, and, depending on our interpretation of the millet beads, either a necklace or beads sewn onto fabric (Fig. 5/2: 1-3). Besides the grave at Mezőkővesd, we also find this combination for G.81-Szentes-Kökényzug, but typically even richly furnished graves use only 1 type of pendant, either at the chest or, as is the case for the grave from Turda, attached at the belt, combined with the rows of beads at the neck (Fig. 5/4: 1-2).¹⁴¹

For the other discussed contexts where a position in the grave is known for beads, if we are to assume that the placement was well marked and mostly in the original position, then the other known possible uses are also attested; however, the condition of the graves precludes definitive conclusions. In the grave at Tiszaölök, we have an example for a complex necklace formed of various shapes sizes and materials (Fig. 5/3: 1) and for what could be a larger belt hanging pendant with the composition of a complex necklace however the fact that the beads were only present in the area of the lower leg raises questions, as such, it could also be a deposited necklace or, given

¹³³ Protase 1972, 167, 169, Fig. 5.

¹³⁴ Dobos and Bereki 2023, 31, 78; Bărbulescu 2008, 60.

¹³⁵ Dobos and Bereki 2023, 18, 34-35, 78.

¹³⁶ Ibidem, 78.

¹³⁷ Horedt 1979.

¹³⁸ Dobos and Bereki 2023, 17-18, 21-22, 24-26, 69-70, 78.

¹³⁹ Ibidem, 69-70.

¹⁴⁰ Preda 2024.

¹⁴¹ Csallány 1961, 37-38.

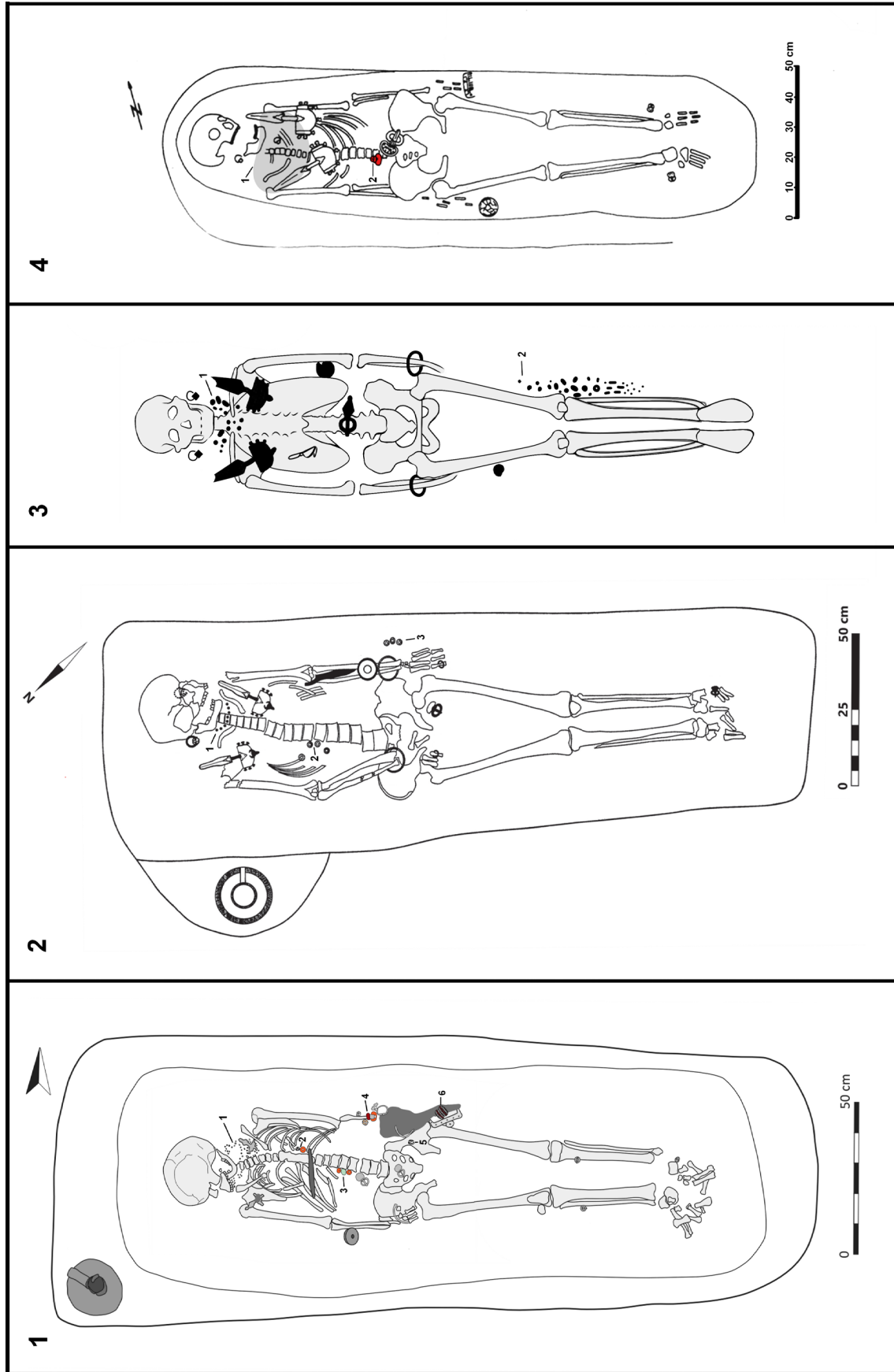


Fig. 5 Graves representative for the uses of beads: 1. G.43-Ernei (adapted after Dobos and Bereki, 2023), 2. G.2-Mezőkövesd-Mocsolós (after Rácz 2016); 3. G. Tiszalök-Arpád utca (adapted after Kovrig 1951); 4. G.-Turda-Baths of the Roman Castrum (adapted after Bărbulescu 2008).¹⁴²

¹⁴² The millet beads were not marked in the published plan so we marked the area of discovery with gray.

the mentioned Sarmatian connections, the beads could have been sewn onto fabric (Fig. 5/3: 2). In the grave at Valea lui Mihai we find, represented by a large amber bead (Fig. 2/1: type I.03), a concrete example of a sword knot bead, used to secure the grip onto the weapon.¹⁴³ There are also the already discussed horse bridle decorative beads from Apahida 1968, together with the spherical beads, which could be part of belt ornamentation or a heavily displaced necklace.

Instead of conclusions, we are closing the text with a few remarks. The material discussed here is best understood as part of a broader and dynamic fashion horizon, in which the bead assemblages of the Tisza Basin reflect both shared traditions and regional particularities. While most bead types belong to widely distributed forms with limited chronological precision, certain categories, especially those distinguished by material, decoration, or technological complexity, can offer valuable insights into connections, influences, and access to resources and how these aspects continue and evolve. At the same time, local preferences in the elements of compositions, such as the limestone beads, suggest that these elements were not passively adopted but actively integrated into regionally meaningful expressions of identity. Within this framework, the bead assemblages considered here underline both the participation of local elites in a wider cultural network and the subtle variations through which this shared language of adornment was articulated during the early Gepid period.

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¹⁴³ Roska 1931, 71; Stanciu 2011, 367-368, 622, 793, Pl. 13/6, Pl. 182/2; Preda 2024, 251-252.

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