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A bronze hoard from Pusztasárkánytő (Mosdós-Sárkánytő puszta) and a grave assemblage from Ráksi (County Somogy) in the Piarist Museum in Budapest

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ABSTRACT

In 1917, the Piarist gymnasium in Budapest (currently the Piarist Museum) acquired two important Middle Bronze Age assemblages: a hoard of the Transdanubian Encrusted Pottery culture from Pusztasárkánytő (Mosdós-Sárkánytő-puszta) (RB A2b-c) and what was probably a grave assemblage of the Koszider period from Ráksi (RB B1). Neither of these two finds has yet been fully published; J. Hampel only presented a typological selection of the finds. Archaeological scholarship lost sight of these two important assemblages after World War 2, which finally resurfaced in the exhibition organised by the Budapest History Museum in 2017. The typochronological assessment and archaeometallurgical examination of the two assemblages shed fresh light on the differences between the metalwork of the Transdanubian Encrusted Pottery culture and that of the later Koszider period.

KEYWORDS

Middle Bronze Age, Transdanubian Encrusted Pottery culture, hoard, grave assemblage, Koszider horizon

INTRODUCTION

A Middle Bronze Age hoard (19th–18th centuries BC) made up of various bronze artefacts, mainly jewellery, of the Transdanubian Encrusted Pottery culture came to light in 1893 in an area known as Melegárok at Pusztasárkánytő (Mosdós-Sárkánytő-puszta, County Somogy) (Fig. 1). The hoard was first published by Gyula Melhárd in 1895,¹ and later described by József Hampel in 1896, although without a description of all the hoard's articles.² The assemblage first became part of the collection of Alajos Bertalan, a former Piarist student, who later worked as an estate steward in Mernye, and thence made its way into the Historical Collection of the Piarist Museum.³ Although believed to have been lost for a long time, the hoard was nevertheless regularly cited in Hungarian and international archaeological literature.⁴ The Piarist Collection was kept intact and saved during World War 2 and the ensuing communist period, and after the political transition in 1989, the collection was re-organised. In 2017, the two Bronze Age assemblages were displayed in the Budapest History Museum as part of the exhibition showcasing the collection of the Piarist Museum.⁵

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¹MELHÁRD 1895, 247–248, 442–444.

²HAMPEL 1896, Taf. CCXXII.

³Accessions register of the Piarist Museum, 58–60 (PM inv. no. B.IV.28–47).

⁴MOZSOLICS 1967, 155; HÄNSEL 1968, Taf. 2; BÓNA 1975, 215, 219; KISS 2012, 91, 289/214; JANKOVITS 2017a, 49, Nr. 439–450, 847–849, 879–881, 981, 1055, 1056.

⁵JANKOVITS 2017b, 315–317.

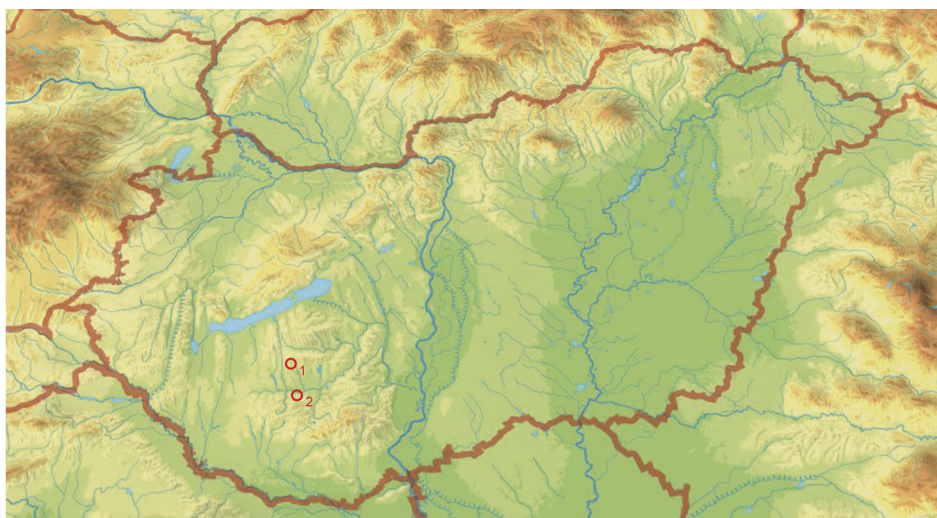


Fig. 1. 1. Ráksi; 2. Pusztasárkánytő (Mosdós-Sárkánytő-pusztá), County Somogy

THE BRONZE HOARD FROM PUSZTASÁRKÁNYTŐ (MOSDÓS-SÁRKÁNYTŐ- PUSZTA)

The hoard contains 126 artefacts, and the weight of the hoard is *ca.* 987 g. The hoard is made up of intact and fragmented swallowtail pendants (originally 33 pieces), ten disc pendants, two cast heart-shaped pendants, a comb-shaped pendant, 72 spirally wound wire tube beads, four tube beads rolled from sheet metal, a neckring, a disc-headed pin, a spiral bracelet and a triangular dagger (Fig. 2). The artefacts are covered with green patina: they did not undergo any conservation treatment.

Description of the finds

Pendants

Cast swallowtail pendants (*Schwalbenschwanzförmige* or *Ankerförmige Anhänger*)

The pendants have a rounded upper part and two arms with recurved terminals; they were suspended by means of a round, oval or irregular perforation through the upper part. Different moulds were used for their casting; after casting, the edges were filed smooth and the pendant was polished. The hoard contains both intact and fragmented pieces. There were originally 33 pendants, of which 31 survive (PM inv. no. 2013.11.15).

1. Swallowtail pendant, cast. L.: 10.1 cm, H.: 6.5 cm, Wt.: 17.6 g (Fig. 3.1).
2. Swallowtail pendant, cast. L.: 9.9 cm, H.: 5.1 cm, Wt.: 16.40 g (Fig. 3.2).
3. Swallowtail pendant, cast, fragmented. L.: 4.5 cm, H.: 3.4 cm, Wt.: 2.90 g (Fig. 3.3).
4. Swallowtail pendant, cast, fragmented. L.: 5.8 cm, H.: 3.2 cm, Wt.: 6.45 g (Fig. 3.4).
5. Swallowtail pendant, cast, fragmented. L.: 9.9 cm, H.: 5.1 cm, Wt.: 16.40 g (Fig. 3.5).

6. Swallowtail pendant, cast, fragmented. L.: 8.0 cm, H.: 5.0 cm, Wt.: 13.40 g (Fig. 3.6).
7. Swallowtail pendant, cast, fragmented. L.: 7.0 cm, H.: 3.7 cm, Wt.: 7.45 g (Fig. 3.7).
8. Swallowtail pendant, cast, fragmented. L.: 8.4 cm, H.: 4.9 cm, Wt.: 15.05 g (Fig. 3.8).
9. Swallowtail pendant, cast. L.: 10.2 cm, H.: 5.4 cm, Wt.: 17.50 g (Fig. 3.9).
10. Swallowtail pendant, cast, fragmented. L.: 5.9 cm, H.: 3.2 cm, Wt.: 6.50 g (Fig. 3.10).
11. Swallowtail pendant, cast, fragmented. L.: 7.9 cm, H.: 5.5 cm, Wt.: 15.50 g (Fig. 3.11).
12. Swallowtail pendant, cast. L.: 8.3 cm, H.: 3.8 cm, Wt.: 8.90 g (Fig. 3.12).
13. Swallowtail pendant, cast. L.: 6.4 cm, H.: 3.7 cm, Wt.: 6.40 g (Fig. 3.13).
14. Swallowtail pendant, cast, fragmented. L.: 8.1 cm, H.: 4.2 cm, Wt.: 7.05 g (Fig. 3.14).
15. Swallowtail pendant, cast, fragmented. L.: 6.4 cm, H.: 4.8 cm, Wt.: 12.45 g (Fig. 3.15).
16. Swallowtail pendant, cast. L.: 8.1 cm, H.: 3.5 cm, Wt.: 12.90 g (Fig. 3.16).
17. Swallowtail pendant, cast. L.: 8.0 cm, H.: 3.5 cm, Wt.: 5.95 g (Fig. 3.17).
18. Swallowtail pendant, cast, fragmented. L.: 8.0 cm, H.: 4.1 cm, Wt.: 10.95 g (Fig. 3.18).
19. Swallowtail pendant, cast, fragmented. L.: 8.2 cm, H.: 5.4 cm, Wt.: 11.5 g (Fig. 3.19).
20. Swallowtail pendant, cast, fragmented. L.: 5.6 cm, H.: 4.3 cm, Wt.: 7.35 g (Fig. 3.20).
21. Swallowtail pendant, cast. L.: 5.8 cm, H.: 2.7 cm, Wt.: 6.80 g (Fig. 4.4).
22. Swallowtail pendant, cast. L.: 5.8 cm, H.: 3.2 cm, Wt.: 6.55 g (Fig. 4.5).
23. Swallowtail pendant, cast, fragmented. L.: 4.6 cm, H.: 3.1 cm, Wt.: 5.95 g (Fig. 4.6).
24. Swallowtail pendant, cast. L.: 6.7 cm, H.: 3.5 cm, Wt.: 8.10 g (Fig. 4.7).



Fig. 2. Pusztasárkánytó (Mosdós-Sárkánytó-pusztá): selection of the hoard's finds

25. Swallowtail pendant, cast. L.: 6.5 cm, H.: 3.1 cm, Wt.: 7.40 g (Fig. 4.8).
 26. Swallowtail pendant, cast. L.: 7.9 cm, H.: 3.7 cm, Wt.: 10.50 g (Fig. 4.11).
 27. Swallowtail pendant, cast, fragmented. L.: 6.2 cm, H.: 3.0 cm, Wt.: 7.25 g (Fig. 4.12).
 28. Swallowtail pendant, cast. L.: 6.1 cm, H.: 3.0 cm, Wt.: 6.80 g (Fig. 4.13).
 29. Swallowtail pendant, cast. L.: 6.4 cm, H.: 3.2 cm, Wt.: 7.10 g (Fig. 4.14).
 30. Swallowtail pendant, cast. L.: 6.2 cm, H.: 3.1 cm, Wt.: 7.40 g (Fig. 4.15).
 31. Swallowtail pendant, cast, fragmented. L.: 5.4 cm, H.: 3.7 cm, W.: 5.80 g (Fig. 4.16).

Cast disc pendants (*Scheibenförmige Anhänger*)

A. Cast disc pendant with a central boss and two raised crossing ribs, a raised rib around the edge and a perforation for suspension. Some have casting flaws. Five larger and two

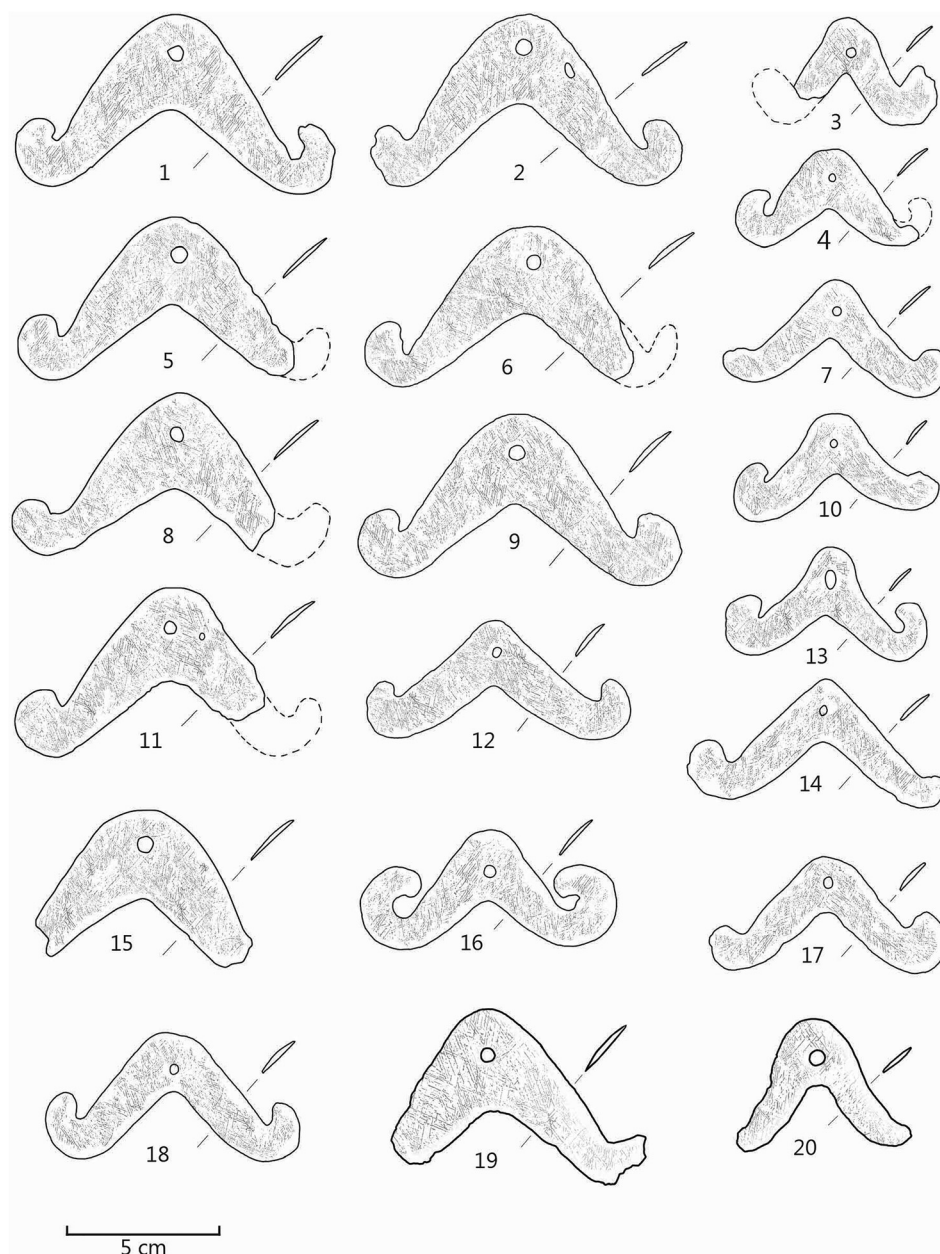


Fig. 3. Pustasárkánytó (Mosdós-Sárkánytó-pusztá): pendants

smaller exemplars, cast using different moulds (PM inv. no. 2013.11.9., 10.).

1. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is a round perforation for suspension and an irregular casting flaw in the disc's middle part. Diam.: 5.8 cm, Wt.: 36.70 g (Fig. 5.8).
2. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is a round perforation for suspension and an irregular casting flaw in the disc's middle part. Diam.: 5.2 cm, Wt.: 39.00 g (Fig. 5.9).
3. Cast, strongly fragmented disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is an irregular perforation for suspension and an

irregular casting flaw on one side. Diam.: 5.6 cm, Wt.: 26.00 g (Fig. 5.10).

4. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is an irregular perforation for suspension, alongside various casting flaws. Diam.: 5.8 cm, Wt.: 30.60 g (Fig. 5.11).
5. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is a round perforation for suspension and an irregular casting flaw in the disc's middle part. Diam.: 5.5 cm, Wt.: 31.20 g (Fig. 5.12).
6. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is a round perforation for suspension and an irregular casting flaw along the disc's edge. Diam.: 3.2 cm, Wt.: 7.70 g (Fig. 5.4).

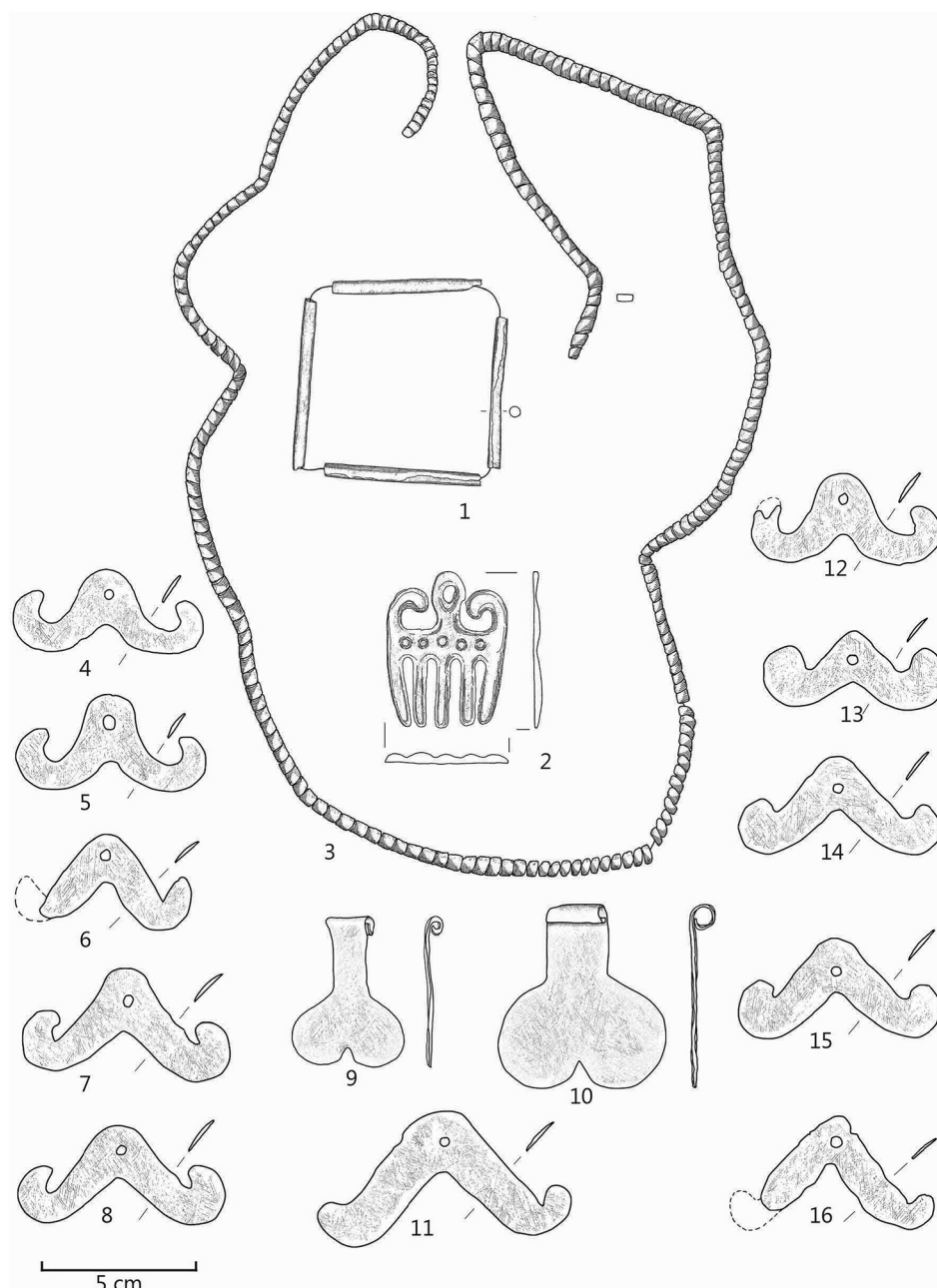


Fig. 4. Pustasárkánytő (Mosdós-Sárkánytő-pusztá): pendants and beads

7. Cast disc pendant with a central boss, two crossing ribs and a raised rib around the edge. There is an irregular perforation for suspension. The disc's edge is irregular, probably owing to miscasting. Diam.: 3.2 cm, Wt.: 8.50 g (Fig. 5.5).

B. Cast disc pendant with a central boss, a raised rib around the edge and a perforation for suspension. Three pieces (one larger and two smaller), cast using different moulds (PM. no. 2013.11.11, 12).

1. Cast disc pendant with a central boss, a raised rib around the edge and a perforation for suspension. Diam.: 5.0 cm, Wt.: 19.80 g (Fig. 5.1).

2. Cast disc pendant with a central boss, a raised rib around the damaged edge and a perforation for suspension. Diam.: 2.6 cm, Wt.: 4.60 g (Fig. 5.2).

3. Cast disc pendant with a central boss, a raised rib around the damaged edge and a perforation for suspension. Diam.: 2.7 cm, Wt.: 4.30 g (Fig. 5.3).

Cast inverted heart-shaped pendant. (herzförmige Blechanhänger) with the upper end rolled back to form a suspension loop. Two pieces (PM inv. no. 2013.11. 6–7).

1. Cast inverted heart-shaped pendant with the upper end rolled back to form a suspension loop. H.: 5.7 cm, W.: 5.2 cm Wt.: 12.30 g (Fig. 4.10).

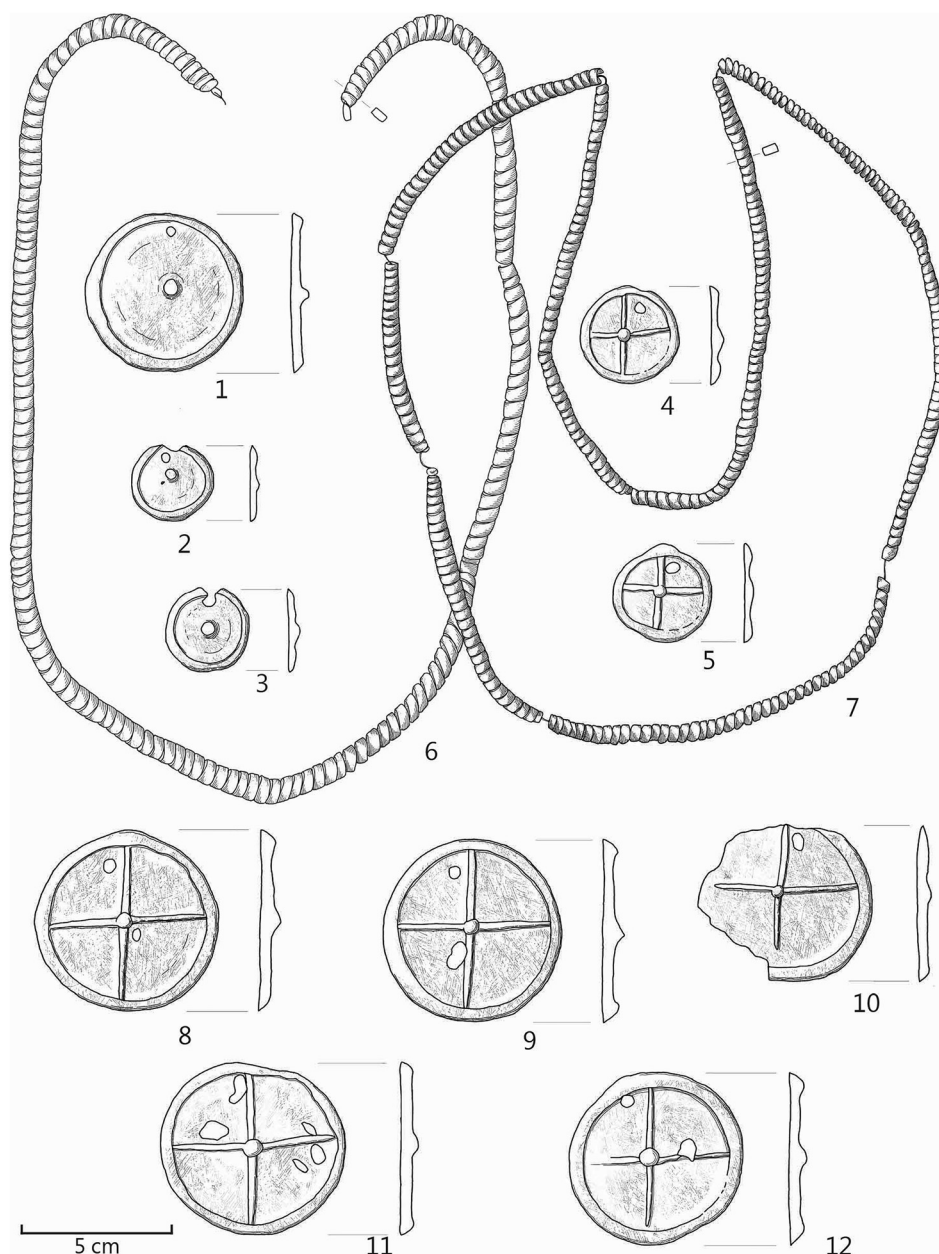


Fig. 5. Pusztasárkánytó (Mosdós-Sárkánytó-pusztá): penants and beads

2. Cast inverted heart-shaped pendant with the upper end rolled back to form a suspension loop. H.: 4.6 cm, Wt.: 3.5 cm Wt.: 7.00 g (Fig. 4.9).

Comb-shaped pendant (*Kammanhänger*)

Cast pendant in the form of a five-toothed comb with an oval suspension loop flanked by an incurving arm on each side, decorated with five bosses in a row. The back is flat. H.: 4.9 cm, Wt.: 3.5 cm, Wt.: 11.40 g (PM inv. no. 2013.11.14.) (Fig. 4.2).

A. Spirally wound wire tube beads (*Spiralröhrenperle*), currently strung on a cord (PM inv. no. 2013. 11.1–4.).

1. Spirally wound tube bead. Original L.: ca. 56 cm, Wt.: 71.75 g (Fig. 5.6).
2. Spirally wound tube bead. Original L.: ca. 58 cm, Wt.: 41.80 g (Fig. 4.3).

3. Spirally wound tube bead. Original L.: ca. 72 cm, Wt.: 34.90 g (Fig. 5.7).

4. Spirally wound tube bead. Original L.: ca. 110 cm, Wt.: 45.10 g (Fig. 6.3).

B. Cylindrical beads of rolled sheet metal (*Blechröhrenperle*), four pieces, currently strung on a cord (PM inv. no. 2013.11.5.).

1–4. Cylindrical beads of rolled sheet metal. L. 5.1 cm, 4.9 cm, 4.8 cm, 5.5 cm (Fig. 4.1).

Neckring

Cast neckring with one terminal rolled, the other drawn out and broken (*Ösenhalsring*). Oval cross-section. Diam.: 16.1 cm, Wt.: 216.20 g (PM inv. no. 2013.11.13.) (Fig. 6.5).

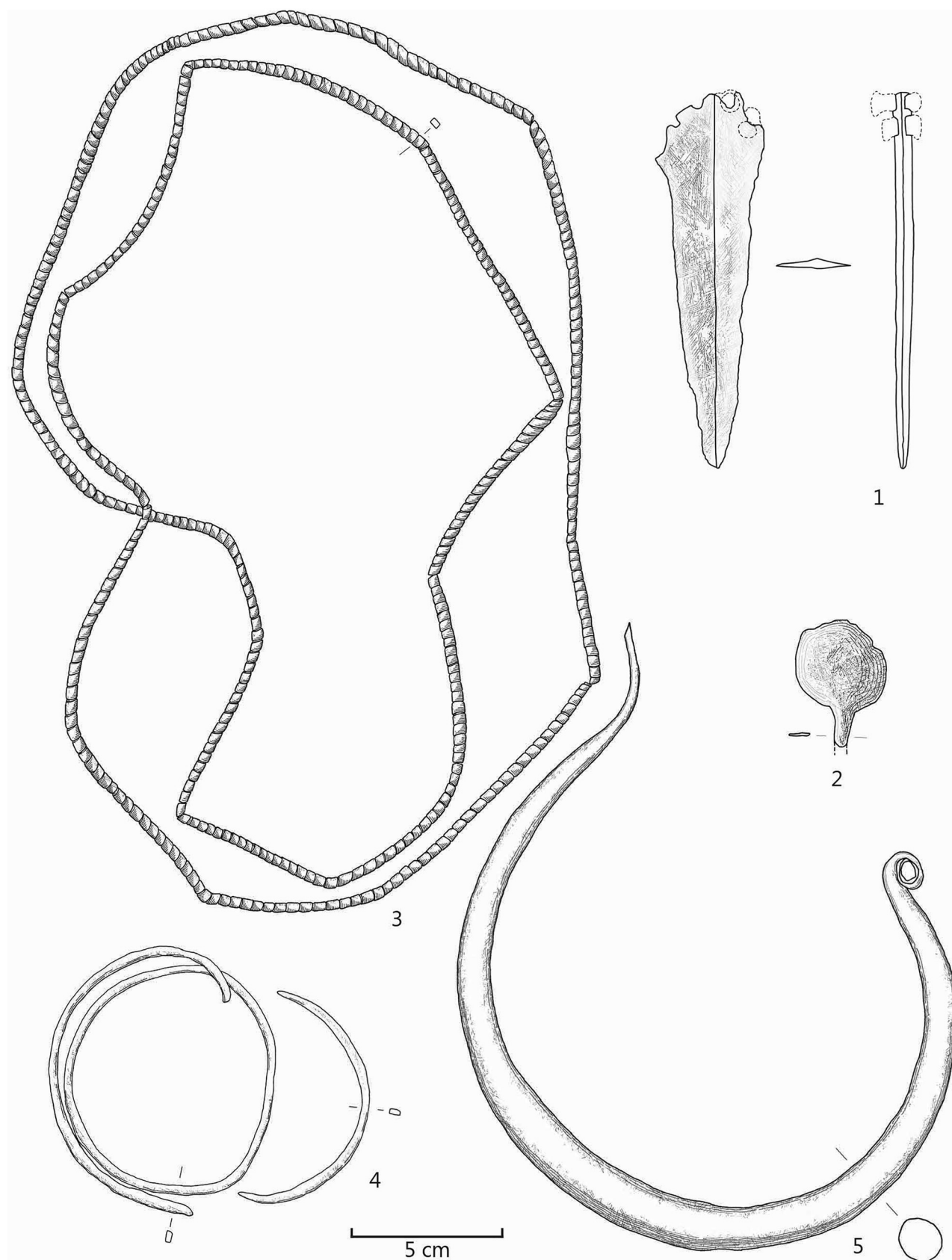


Fig. 6. Pustasárkánytő (Mosdós-Sárkánytő-puszta): dagger, pin, beads, bracelet and neckring

Disc-headed pin (*Griffköpfnadel mit Blechscheiben-kopf*)

Cast disc-headed pin lacking its shank. The undecorated head is fragmented. Diam.: 4.1 cm, Wt.: 5.60 g (PM inv. no. 2013.11.8.) (Fig. 6.2).

Spiral bracelet

Spiral bracelet with oval cross-section, two fragments. Diam.: 8.0 cm, Wt.: 23.70 g; Diam.: 6.6 cm, Wt.: 3.60 g (PM inv. no. 2013.11.17–18.) (Fig. 6.4).

Triangular dagger

Triangular dagger with rounded hilt plate lacking the original four rivets, a central midrib and the sides tapering to a point. Lozenge-shaped cross-section, fragmented. H. 12.0 cm, W. 3.3 cm, Wt.: 30.70 g (PM inv. no. 2013.11.16) (Fig. 6.1).

Assessment of the hoard's artefacts

Pendants

Swallowtail pendants (Figs 3.1–20 and 4.4–8, 11–16)

Swallowtail pendants (*Schwalbenschwanzförmige* or *Ankenförmige Anhänger*) are distinctive types of the metalwork of the Encrusted Pottery culture in Transdanubia, which also appear among the finds of the neighbouring Vátya, Hatvan and Gáta-Wieselburg cultures.⁶ They are designated variously in the archaeological literature,⁷ as has been recently reviewed by E. Ruttkay.⁸ Swallowtail pendants are generally derived from similar pieces carved from bone.⁹ A. Mozsolics distinguished two main types in terms of typology and chronology: earlier pieces are generally larger and made of thicker sheets, while later ones were most often made by casting and their stems are rolled back more tightly.¹⁰ B. Hänsel proposed a similar chronological distinction.¹¹ The swallowtail pendants from Pusztasádkánytő can be assigned to Mozsolics's earlier group,¹² to Type 1a as defined by Sz. Honti and V. Kiss,¹³ and to the *Ankerförmige Anhänger aus Bronze, Variante A* as defined by the present author.¹⁴ This pendant type is principally attested in the assemblages dating from the early and middle phase of the Encrusted Pottery culture. I. Bóna regarded the type as one of

the hallmarks of Tolnanémedi-type hoards;¹⁵ it also occurs in the Zalasabbar hoard (RB A2b-c, Middle Bronze Age 2–3).¹⁶ Swallowtail pendants were worn not only as jewellery, but probably also as amulets;¹⁷ they were made in different sizes as shown by the pieces deposited in hoards and burials,¹⁸ with the larger ones (Type B: 11–15 cm) probably functioning as currency, as a measure of value, rather than as dress ornaments, while the smaller and medium-sized pieces were costume adornments. Given that most of these pendants have been recovered from cremation burials and hoards,¹⁹ it remains unknown how exactly they had been worn. Although one pendant was found in an inhumation burial at Galgamácsa,²⁰ it lay in a secondary position; nevertheless, it seems likely that it had been strung into a necklace with dentalium beads and spirally wound beads. The associated finds from the urn burials would suggest that these pendants had adorned the neck, the chest or the back of the head,²¹ as confirmed also by the depictions on the vessels of the Encrusted Pottery culture²² and the clay figurines from the Lower Danube region.²³

Cast disc pendant with a central boss and two crossing ribs (Fig. 5.4–5, 8–12)

Disc pendants with two crossing ribs represent a distinctive type in the metalwork of the Transdanubian Encrusted Pottery culture.²⁴ They occur in two sizes in the hoard. The disc pendants can be assigned to I. Bóna's Type b,²⁵ V. Furmánek's Type I/2a,²⁶ Sz. Honti and V. Kiss's Type 3/a,²⁷ and my Variant C1.²⁸ Disc pendants with raised crossing ribs occur most often in the Encrusted Pottery distribution, but they are also known from the Vátya and Aunjetitz-Madarovce territory.²⁹ These pendants were used over a longer period of time, as shown by their presence in

¹⁵BÓNA 1958, 222–225, Abb. 6; BÓNA 1975, 215.

¹⁶KISS 2012, 91. 312/397; HONTI–KISS 2013, 739.

¹⁷BÓNA 1975, 215; RUTTKAY 1983, 1; HONTI–KISS 2000, 82–83; *ead.* 2013, 743–745; JANKOVITS 2017a, 52.

¹⁸HONTI–KISS 2000, 82–84; KISS 2012, 101–103; HONTI–KISS 2013, 743–745; JANKOVITS 2017a, 52–53.

¹⁹HONTI–KISS 2000, 82–84; KISS 2012, 101–103; JANKOVITS 2017a, 52–53.

²⁰KALICZ 1968, 124, 163, Taf. 119.3; JANKOVITS 2017a, 46, Nr. 358.

²¹SCHUMACHER–MATTHÄUS 1985, 70; CSEH 1997, 99; JANKOVITS 2017a, 52.

²²WOSINSKY 1904, Taf. 74, 3; BÓNA 1975, Taf. 205, 6; HONTI–KISS 2000, 86, Abb. 5, 1. 3. 5; JANKOVITS 2017a, 52.

²³KOVÁCS 1972, 47–51; LETICA 1973; SCHUMACHER–MATTHÄUS 1985, 24, 72; KOVÁCS 1986a, 99–115; JANKOVITS 2017a, 52–53.

²⁴BÓNA 1958, 222; *id.* 1975, 56, 215; MOZSOLICS 1967, 91; FURMÁNEK 1980, 12; HONTI–KISS 2000, 79; KISS 2012, 97–101; JANKOVITS 2017a, 62, 69–71.

²⁵BÓNA 1975, 215.

²⁶FURMÁNEK 1997, 316–317.

²⁷HONTI–KISS 2000, 78–82; KISS 2012, 97–101.

²⁸JANKOVITS 2017a, 62–66.

²⁹KŐSZEGI 1981, 87–89, Taf. 1.1–2; HONTI–KISS 2000, 78–82; JANKOVITS 2017a, 62, Nr. 870–871; Budaörs; BÓNA 1975, 56, 219; JANKOVITS 2003, 274, Abb. 2.5; VICZE 2011, 221, Taf. 144.2; Dunaújváros, Grave 1028.

⁶BÓNA 1958, 215; BÓNA 1975, 215–216; MOZSOLICS 1967, 90; HÄNSEL 1968, 121, Beilage 4; RUTTKAY 1983, 1–2; SCHUMACHER–MATTHÄUS 1985, 68–74, Anm. 224; KOVÁCS 1994a, 160; HONTI–KISS 2000, 82–84; KISS 2012, 101; HONTI–KISS 2013, 743–745.

⁷HAMPEL 1896, Taf. CCXXII, 14–26; FOLTINY 1955, 16; MOZSOLICS 1967, 90; BÓNA 1975, 216; KOVÁCS 1968, 205–210; FURMÁNEK 1980, 11.

⁸RUTTKAY 1983, 2.

⁹MOZSOLICS 1967, 90; RAGETH 1974, 107–108, Karte 8; BÓNA 1975, 216; SCHUMACHER–MATTHÄUS 1985, Anm. 224; KOVÁCS 1994a, 160; SZATHMÁRI 2000, 37–38; HONTI–KISS 2000, 82.

¹⁰MOZSOLICS 1967, 90.

¹¹HÄNSEL 1968, 121.

¹²MOZSOLICS 1967, 90.

¹³HONTI–KISS 2000, 82–83; KISS 2012, 101.

¹⁴JANKOVITS 2017a, 45–54.

Tolnanémedi-type hoards,³⁰ including the one from Zalasabar.³¹ A similar pendant from the Ócsa hoard, which can be assigned to Koszider-type hoards, represents a variant with a separate suspension loop.³²

Disc pendants with a central boss are another hallmark of the metalwork of the Transdanubian Encrusted Pottery culture (Fig. 5.1–3). They occur in two sizes in the hoard (a larger and two smaller exemplars), and represent I. Bóna's Type a,³³ V. Furmánek's Type I/1a,³⁴ Sz. Honti and V. Kiss's Type 1a,³⁵ and my Variant A 1.³⁶ Three pieces are known from the Tata-Nagy S. utca hoard,³⁷ one was deposited in the Tolnanémedi hoard.³⁸ One pendant of this type was found in the Budaörs hoard in the Vátya distribution area.³⁹ The hoards from Bölske⁴⁰ and Dunaújváros-Kosziderpadlás I,⁴¹ both representing the Koszider hoard horizon, yielded a variant made from sheet bronze. Disc pendants were also infused with a symbolic meaning. These pendants are generally recovered from hoards and Vátya cremation burials,⁴² and thus there is little evidence on how they were worn. One piece was found on the chest in a child's inhumation burial at Abraham in Slovakia, in which there was a neckring (*Halsring*) around the neck,⁴³ suggesting that the pendant was either worn around the neck or sewn onto the dress. Four disc pendants and two pins came to light from a disturbed inhumation burial uncovered at Zbehy-Oderov dvor (Üzbég, Slovakia);⁴⁴ regrettably, their original position in the grave could not be observed. G. Schumacher-Matthäus suggested that they had adorned

the back of the head,⁴⁵ while J. Cseh believed that they were belt ornaments.⁴⁶

The metallographic studies on the cast disc pendants with a central boss, and two crossing ribs of the Transdanubian Encrusted Pottery culture revealed that they had a similar composition: Pusztasárákánytő (Mosdós-Sárákánytő-pusztá): Cu 86%, Ag 1.02%, Sn 10.3%, Sb 1.2 %, As 1.1%; Tata-Nagy Sándor utca: Cu 82.9%, 77.7%; Ag 3.3%, 3.0%; Sn 4.1, 14.2%; Sb 1.1%, 1.6%; As 6.1%, 3.6%.⁴⁷

Inverted heart-shaped pendants (*unverzierte herzförmige Blechanhänger*) (Fig. 4.9–10)

Inverted heart-shaped pendants are designated variously in the archaeological literature: Mozsolics called them *umgekehrt herzförmige Anhänger*,⁴⁸ I. Bóna described them as *herzförmige Blechanhänger*,⁴⁹ while V. Furmánek⁵⁰ and the present author⁵¹ classified them as *unverzierte herzförmige Blechanhänger*. The pendant type was widely worn from the Early Bronze Age (RB A1–A2) onward: the early pieces were made of sheet metal and decorated, while their later variants also included cast specimens. Heart-shaped pendants appear in the archaeological record of the Kisapostag, the Vátya and the Transdanubian Encrusted Pottery cultures,⁵² and they were apparently in use for a long period of time, as shown by their presence in the Pákozd-Várhegy hoard dated to the Koszider horizon⁵³ and the hoard from Barca (Slovakia).⁵⁴ The two pendants of the Pusztasárákánytő hoard were cast and are both undecorated.⁵⁵ The pendant's cast variety is known from the Tolnanémedi⁵⁶ and Zalasabar⁵⁷ hoards, suggesting that they were the products of local metallurgy, in which cast varieties were also made alongside the sheet metal version. Heart-shaped pendants were worn as parts of elaborate necklaces on the testimony of Grave 105 of the

³⁰BÓNA 1958, 211; BÓNA 1975, 215, Taf. 267.6–13; MOZSOLICS 1967, 91, 170–171, Taf. 24.4–16; HÄNSEL 1968, 226, Liste 131, Taf. 1.7–10; HONTI–KISS 2000, 78–81, Abb. 4; KISS 2012, 97–101; JANKOVITS 2017a, 70–71.

³¹HONTI–KISS 2013, 740–741, Fig. 2.4–7; KISS 2012, 97–101, Pl. 60.4–7; JANKOVITS 2017a, 63, 70, Nr. 915–918.

³²TOPÁL 1973, 3, Abb. 7.2, 3; BÓNA 1992a, 32–33, Abb. 16; JANKOVITS 2017a, 64, Nr. 919–920.

³³BÓNA 1975, 215.

³⁴FURMÁNEK 1997, 316–317.

³⁵HONTI–KISS 2000, 78–82; KISS 2012, 97–101.

³⁶JANKOVITS 2017a, 59–60.

³⁷CSEH 1997, 93–128, Taf. 2.4–6; HONTI–KISS 2000, 78–82, Abb. 4; KISS 2012, 97–101; JANKOVITS 2017a, 60, Nr. 850–852.

³⁸MOZSOLICS 1967, 91, 170–171, Taf. 24.3; HÄNSEL 1968, 226, Liste 131, Taf. 1.6; BÓNA 1975, 215, Taf. 267.6; HONTI–KISS 2000, 78–82, Abb. 4; KISS 2012, 97–101; JANKOVITS 2017a, 60, Nr. 853.

³⁹KÖSZEGI 1981, 87–89, Taf. 1.4; HONTI–KISS 2000, 78–82, Abb. 4; JANKOVITS 2017a, 59, Nr. 845.

⁴⁰WOSINSKY 1896, 395–396; MOZSOLICS 1967, 131, Taf. 34.3; JANKOVITS 2017a, 59, Nr. 844.

⁴¹MOZSOLICS 1957, 122–123, Taf. 19.10; HÄNSEL 1968, Taf. 16.9; BÓNA 1992b, 58, Abb. 27; JANKOVITS 2017a, 60, Nr. 846.

⁴²BÓNA 1975, 56, 215.

⁴³NOVOTNÁ 1984, 20, 25.

⁴⁴FURMÁNEK 1980, 12, Nr. 85–88.

⁴⁵SCHUMACHER-MATTHÄUS 1985, 71–72.

⁴⁶CSEH 1997, 98.

⁴⁷CSEH 1997, 111, Chart 1.

⁴⁸MOZSOLICS 1967, 86.

⁴⁹BÓNA 1975, 49, 54, 216.

⁵⁰FURMÁNEK 1980, 15–16.

⁵¹JANKOVITS 2017a, 87.

⁵²MOZSOLICS 1967, 86; HÄNSEL 1968, 120–121; BÓNA 1975, 284; FURMÁNEK 1980, 23; NOVOTNÁ 1998, 350–351; HONTI–KISS 2000, 88–89; VICZE 2011, 80, 108, 118, 124; HONTI–KISS 2013, 749; KISS 2012, 108–109; JANKOVITS 2017a, 95–96.

⁵³MAROSI 1930, 65, Abb. 65; MOZSOLICS 1967, 86; HÄNSEL 1968, 120–121; BÓNA 1975, 215, 219, 284; JANKOVITS 2017a, 90, Nr. 1085–1089.

⁵⁴FURMÁNEK 1980, 15–16, Taf. 37.A; KOVÁCS 1994b, 160; KISS 2012, 108.

⁵⁵HONTI–KISS 2000, 88: It is erroneously asserted that both the cast and the sheet metal variants of the pendant occur in the Pusztasárákánytő (Mosdós-Sárákánytő-pusztá) hoard.

⁵⁶BÓNA 1975, Taf. 267.3–5; MOZSOLICS 1967, Taf. 24.17–19; JANKOVITS 2017a, 91, Nr. 1123–1125.

⁵⁷HONTI–KISS 2013, 745–747, 749, Fig. 4.3–14.

Battonya cemetery and Grave 162 of the Szőreg C burial ground.⁵⁸ The spirally wound tube beads and the sheet metal tube beads in the Pusztasárákánytő hoard also underscore this. The metallographic studies on the heart-shaped pendants of the Transdanubian Encrusted Pottery culture revealed that they had a similar composition: Pusztasárákánytő: Cu 92%, Ag 1.00%, Sn 4.5%, Sb 1.7%, As 0.6%; Tata-Nagy Sándor utca: Cu 77.8, 77.6%; Ag 1.4, 1.1%; Sn 15.8, 21.3%; Sb 2.5, 0.0%; As 2.5, 0.0%.⁵⁹

Comb-shaped pendant (*Kammanhänger*) (Fig. 4.2)

I. Bóna distinguished three main types⁶⁰ and a similar classification was proposed by V. Kiss and Sz. Honti,⁶¹ as well as by the present author, who assigned the pendant to Variant B.⁶² These pendants are typical products of the metallurgy of the Transdanubian Encrusted Pottery culture. A mould for pendants of this type was brought to light on the culture's settlement at Lengyel,⁶³ and cast pendants are known from various hoards such as Kölesd-Nagyhangos B,⁶⁴ Pusztasárákánytő,⁶⁵ Tolnanémedi⁶⁶ and Zalaszabar.⁶⁷ I. Bóna argued that these pendants were symbolic anthropomorphic or zoomorphic depictions and that they had functioned as amulets.⁶⁸ The depictions on the culture's pottery in Transdanubia⁶⁹ and the clay figurines from the Lower Danube region⁷⁰ reveal how these pendants were worn: they either adorned the neck or the chest region, or were suspended from hair braids and belts. The pendant's metal composition is as follows: Cu 92.93%; Sn 5.4, 5.2%; Sb 1.0, 0.5%; As 0.25, 0.32%; Ag 0.76, 0.81%.

Cylindrical bead of rolled sheet metal (Fig. 4.1)

In terms of their function, these beads were either decorative headdress or cap elements or served for threading one or more pendants worn around the neck. It was a popular jewellery type, attested from the close of the Early Bronze Age to the close of the Middle Bronze Age, until the

Koszider period.⁷¹ In Transdanubia, beads of this type have been recovered from Kisapostag and Vátya burials (RB A1b),⁷² as well as from the graves of the later Transdanubian Encrusted Pottery culture (RB A2b–c), for example at Királyszentistván and Mosonszentmiklós,⁷³ and they can also be found in the Zalaszabar hoard.⁷⁴

Spirally wound wire tube beads (Figs 4.3, 5.6–7 and 6.3)

Their function was identical to the beads of rolled sheet metal: they either adorned headdresses or caps (e.g. Kápolnásnyék, Grave 43, found *in situ*), or were used for threading various pendants onto necklaces.⁷⁵ The hoard contained a remarkably high number of these spirally wound tube beads (72 pieces in all), used for suspending various pendant types. Spirally wound tube beads were used over a long period of time: they are continuously attested from the Early Bronze Age (RB A1b), through the Middle Bronze Age (RB A2b–c) and the Koszider period (RB B) to the Tumulus period (RB C–D).⁷⁶

Disc-headed pin (Fig. 6.2)

J. Hampel described the pin as a spoon-shaped artefact,⁷⁷ while I. Bóna suggested that it perhaps represented a locally made cast version of the disc-headed pins made of sheet metal (*Griffösnadel mit Blechscheibenkopf*),⁷⁸ a supposition that was later confirmed by the pin's personal examination. The cast, broken pin (Fig. 6.2) represents the variety with plain head, the local version of the type in the metalwork of the Transdanubian Encrusted Pottery culture. The use of disc-headed pins began with the Kisapostag culture in Transdanubia;⁷⁹ they have been recovered from burials of the Kisapostag-Vátya culture and the Encrusted Pottery culture (RB A2 b–c; Gyirmót-Kölesdomb, Szekszárd-Vígh telek) as well as from hoards (Esztergom-Ispitahegy, Ipoly valley, Simontornya, Zalaszabar).⁸⁰ Most scholars agree that

⁵⁸SZABÓ 1999, 47, Abb. 38.6, 9; FOLTINY 1941, 59, Taf. 21.64; FISCHL 2000, 109, Abb. 7, Abb. 12; JANKOVITS 2017a, 92, 95, Nr. 1150–1151, 1152.

⁵⁹CSEH 1997, 111, Chart 1.

⁶⁰BÓNA 1975, 215–216.

⁶¹HONTI–KISS 2000, 84–87; KISS 2012, 103–106.

⁶²JANKOVITS 2017a, 75–76, Nr. 981.

⁶³WOSINSKY 1896, Taf. 72.13; BÓNA 1975, 215; KOVÁCS 1986a, 102, Abb. 2; HONTI–KISS 2000, 84; KISS 2012, 103–106; JANKOVITS 2017a, 76, Nr. 980.

⁶⁴BÓNA 1975, 215, Taf. 270.2; KOVÁCS 1986a, 100, Abb. 1.5; HONTI–KISS 2000, 84; JANKOVITS 2017a, Nr. 979.

⁶⁵MELHÁRD 1895, 442–443, Abb. 1.12; HAMPEL 1896, Taf. CCXXII.12; KOVÁCS 1986a, 101, Abb. 1.4; JANKOVITS 2017a, 76, Nr. 981.

⁶⁶MOZSOLICS 1967, 91, 170–171, Taf. 24.2; HÄNSEL 1968, 226, Taf. 1.2; BÓNA 1975, 215, Taf. 267.2; KOVÁCS 1986a, 101, Abb. 1.4; JANKOVITS 2017a, 76, Nr. 982.

⁶⁷HONTI–KISS 2013, 745, Abb. 4.1; KISS 2012, 103, Taf. 62.1.

⁶⁸BÓNA 1975, 215–216.

⁶⁹HONTI–KISS 2000, 85, Abb. 5.1–5.

⁷⁰SCHUMACHER-MATTHÄUS 1985, 24, 72; KOVÁCS 1986a, 99–115; HONTI–KISS 2000, 84–85; JANKOVITS 2017a, 77–78.

⁷¹BÓNA 1960, Pl. VII.14, 20; BÓNA 1975, 49, 54, 217, Anm. 110, Abb. 22.43; SZATHMÁRI 1983, 21; SZATHMÁRI 1996, 75, Fig. 5.52–63.

⁷²MOZSOLICS 1942, Taf. I.22–32, 31–41; HONTI–KISS 1996, 24; VICZE 2011, Pl. 19.4.

⁷³UZZSOKI 1963, T. 4.11, 17–19; BÓNA 1975, Taf. 264.4–5, 11–12, 14.

⁷⁴HONTI–KISS 2013, 749, Fig. 5.1–11.

⁷⁵F. PETRES 1992, 244; JANKOVITS 2017a, 452, Taf. 116.

⁷⁶VICZE 2011, Pl. 16.5; Pl. 17.5 Dunaújváros (Kisapostag burials); Pl. 39.10, Pl. 55.1: Vátya burials; MOZSOLICS 1967, Taf. 29.19–23: Zmajevac hoard (Encrusted Pottery culture); HONTI–KISS 2013, 749, Fig. 5.12–14: Zalaszabar hoard (Encrusted Pottery culture); MOZSOLICS 1967, Taf. 59.21–25: Rákospalota hoard (Koszider); JANKOVITS 1992, 272, Abb. 11.9: Bakonyjákó (Tumulus culture, Bz D).

⁷⁷HAMPEL 1896, Taf. CCXX.11.

⁷⁸BÓNA 1975, 219.

⁷⁹MOZSOLICS 1942, Taf. V.15.

⁸⁰MOZSOLICS 1967, Taf. 28.32; BÓNA 1975, 218–219, 288–289, Abb. 22.27–28; Taf. 265.1, 15, Taf. 269.5; NOVOTNÁ 1980, 20–24; SZATHMÁRI 1983, Abb. 56; SZATHMÁRI 1988, 74–75; HONTI–KISS 2013, 748–749, Fig. 5.17–19; KISS 2012, 123.

the type evolved in the westerly regions of Central Europe (in southern Germany and Switzerland). I. Bóna believed that the pin from the Ipoly valley was an import, while the other pieces were locally made imitations.⁸¹

Neckring with rolled terminal (Fig. 6.5)

Archaeological scholarship regards these neckrings as ring ingots.⁸² According to I. Bóna, the Transdanubian neckrings can be derived from the neckrings of the Alpine region and the adjacent territories.⁸³ On the testimony of metallographic studies, the neckrings in various hoards of the Aunjetitz and the Unterwölbling culture⁸⁴ were made from copper originating from the Alpine region.⁸⁵ In Transdanubia, neckrings of this type are attested in the burials of the Tokod group (RB A2 a), in the burials of the earlier and later Encrusted Pottery culture as well as in Tolnanémedi-type hoards (RB A2 b-c).⁸⁶ The metallographic studies on the neckrings of the Transdanubian Encrusted Pottery culture revealed that they had a similar composition: Pusztasárkánytő: Cu 88%, Ag 0.094%, Sn 11.4%; Gyirmót: Cu 92%, Sn 8%;⁸⁷ Tata-Nagy Sándor utca: Cu 84.3%, Ag 1.9%, Sn 13.7%.⁸⁸

Spiral bracelet of multiple coils (Fig. 6.4)

Spiral bracelets (*Armspiralen*) appeared in the Carpathian Basin during the Early Bronze Age 2–3 and became widespread by the onset of the Middle Bronze Age. They are attested in the Gáta-Wieselburg, Vátya and Maros/Perjámos cultures.⁸⁹ In Transdanubia, bracelets of this type are often encountered in the burials of the Kisapostag (RB A1b), the late Kisapostag-early Encrusted Pottery (RB A2a) and the Tokod group (RB A2a) as well as in the burials of the Encrusted Pottery culture (Gyirmót-Kölesdomb, Szekszárd-Vígh telek, Tata area, Rábacsécsény, Veszprém-Papvásártér, Siklós-Téglagyár) and the culture's hoards, as shown by the assemblages from Kórós, Pusztasárkánytő (Mosdós-Sárkánytő-pusztá) and Zalasabár (RB A2b-c).⁹⁰

Dagger (Fig. 6.1)

The dagger represents the triangular type with four rivets on the hilt plate (now missing). Their use spanned a fairly long period, from the close of the Early Bronze Age to the onset of the Middle Bronze Age, before the Koszider period. Daggers

of this type are known from hoards and burials, and also as stray finds.⁹¹ Two daggers were deposited as part of the hoard (RB A2b-c) of the Transdanubian Encrusted Pottery culture found at Szomód,⁹² one with four rivets, the other with three rivets on the hilt plate. The number of rivets varies on these daggers, as shown by the exemplars from the burials uncovered at Nyergesújfalu (Tokod group), Patince, Grave 4 (Slovakia), Balatonakali and Veszprém-Bajcsy-Zsilinszky St., and the specimens representing stray finds (Győr-Likócspuszta, Bonyhád, Csopak-Lőczedomb, Győrszemere).⁹³

Interpretation and date of the hoard

The hoard can be assigned to the Tolnanémedi-type hoards of the Transdanubian Encrusted Pottery culture and resembles the hoards from Tata-Nagy Sándor utca⁹⁴ and Zalasabár⁹⁵ in terms of its composition. It can be dated to the RB A2b-c period, before the Koszider horizon. The hoard is made up of the typical products of the local metalwork of the Transdanubian Encrusted Pottery culture such as swallowtail, disc-shaped, comb-shaped and heart-shaped pendants. One interesting feature of the hoard is that it contains the cast variant of jewellery generally made of sheet metal such as swallowtail pendants (Figs 3.1–20 and 4.4–8, 11–16), heart-shaped pendants (Fig. 4.9–10) and disc-headed pins (Fig. 6.2). Earlier scholarship assumed that Tolnanémedi-type hoards had been concealed in times of war and turmoil;⁹⁶ the general consensus now is that they had been deposited as part of a ritual.⁹⁷

THE BRONZE ASSEMBLAGE FROM RÁKSI (COUNTY SOMOGY)

The finds came to light in the garden of József Vinczeller, a resident of Ráksi, while digging a pit. The finds were first published by Gyula Melhárd in 1895, although he did not present all the finds. Judging from his description, the finds represent a grave assemblage.⁹⁸ The finds were later also published by József Hampel.⁹⁹ The assemblage first became part of Alajos Bertalan's collection, whence they made their way to the Piarist Museum.¹⁰⁰ It was believed for a long time that the assemblage had been lost. It is often cited in the international archaeological literature, too: in fact, one

⁸¹BÓNA 1975, 218–219.

⁸²LENERZ-DE WILDE 1995, 229–327; BUTLER 2002.

⁸³BÓNA 1975, 218.

⁸⁴MOZSOLICS 1967, 70–71; BÓNA 1975, 218, 282–283, Abb. 22.31; LENERZ-DE WILDE 1995; NEUGERBAUER *et al.* 1999, 5–45.

⁸⁵KRAUSE 2003, 160–166; JUNK–KRAUSE–PERNICKA 2001, 353–366.

⁸⁶MOZSOLICS 1967, 69–72; BÓNA 1975, 218, 283, 242–243–244, Taf. 271.4, Verbreitungskarte Taf. VII; CSEH 1997, Taf. 1; HONTI–KISS 2000, 93; HONTI–KISS 2013, 749–750; KISS 2012, 119–120.

⁸⁷JUNGHANS–SANGMEISTER–SCHRÖDER 1974, Nr. 13818; KRAUSE 2003, Cl. 34/5.

⁸⁸CSEH 1997, Chart 1; KRAUSE 2003, Cl. 34/2.

⁸⁹BÓNA 1975, 55, 243–244; V. SZABÓ 1997, 64–65; HONTI–KISS 2013, 750.

⁹⁰BÓNA 1975, 217, Abb. 22, 37; HONTI–KISS 2013, 750; KISS 2012, 121–122.

⁹¹BÓNA 1975, 217–218; BÓNA 1992b, 52; KEMENCZEI 1988, 9–14; KISS 2012, 127.

⁹²MOZSOLICS 1967, Taf. 34.2, 3; BÓNA 1975, 217.

⁹³KISS 2012, 127.

⁹⁴CSEH 1997, 93–128.

⁹⁵HONTI–KISS 2013, 739–755.

⁹⁶MOZSOLICS 1967, 9; BÓNA 1975, 219–220; BÓNA 1992a, 32.

⁹⁷KOVÁCS 1994a, 121; HANSEN 2005, 211–230; KISS 2009, 328–335.

⁹⁸MELHÁRD 1895, 247–248, 442 with Fig.

⁹⁹HAMPEL 1896, Taf. CCXXI.

¹⁰⁰PM accessions register, inv. no. 58, B.IV.21–27.; JANKOVITS 2017c, 317–319.



Fig. 7. Ráksi, County Somogy: finds of the grave assemblage

particular pendant was named the Ráksi type on the basis of its presence in this assemblage.¹⁰¹ The find contains 22 artefacts and the weight of the assemblage is *ca.* 211.6 g. The

artefacts are covered with green patina: they did not undergo any conservation treatment (Fig. 7).

Description of the finds

Pendants

Ten cast disc pendants of the Ráksi type, decorated with a central knob enclosed within two concentric ribs. The back

¹⁰¹MOZSOLICS 1967, 157–158; HÄNSEL 1968, 225, Taf. 18,5; WELS-WEYRAUCH 1978, 34–59; WELS-WEYRAUCH 1991, 15–32; SCHUMACHER-MATTHÄUS 1985, 100–105; KOVÁCS 1986b, 38; DAVID 2002, 466/H, 45, Taf. 181, 3–6.

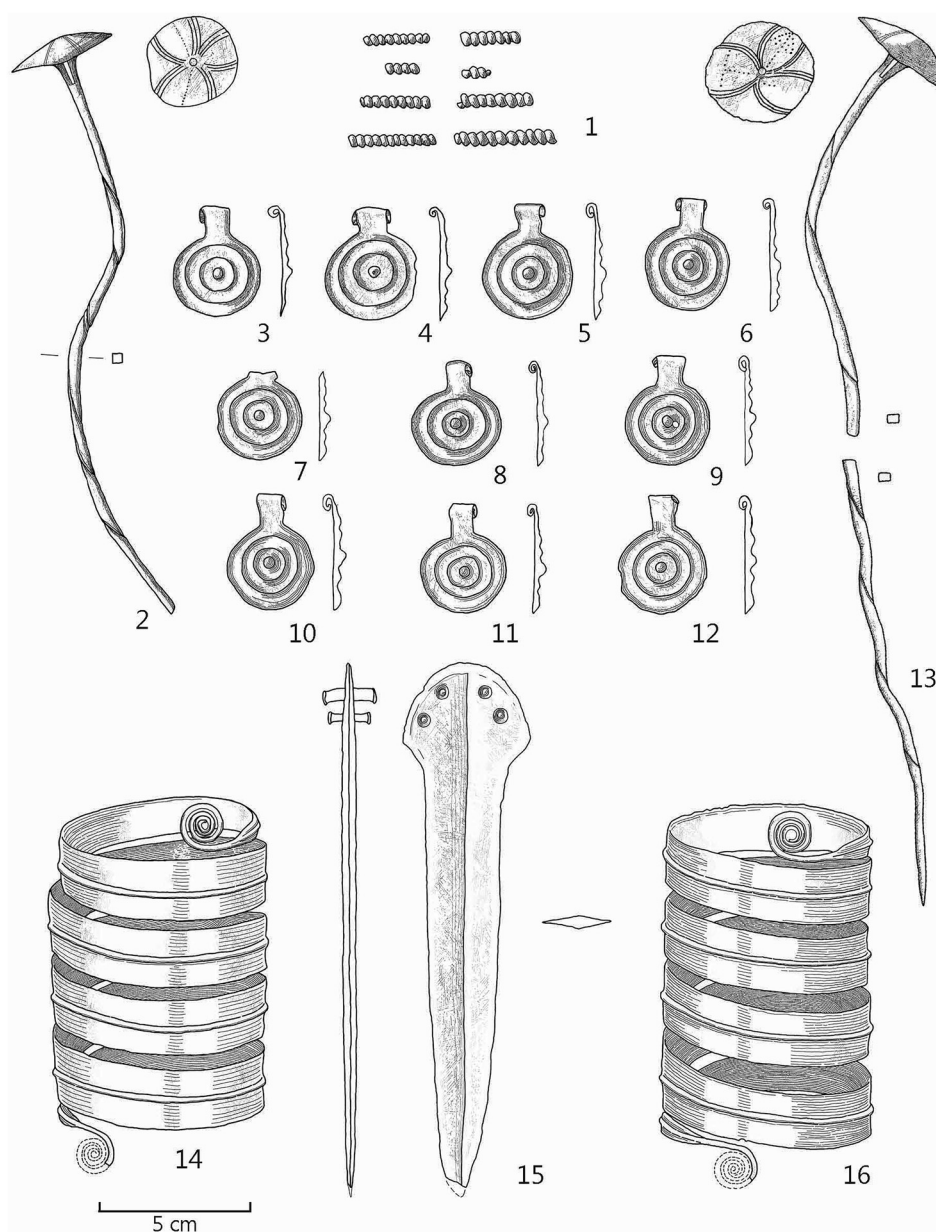


Fig. 8. Ráksi, County Somogy: finds of the grave assemblage

is flat. The stem of the pendant is rolled back, enabling suspension from the necklace strung of spirally wound tube beads (PM inv. no. 2013.10.1.).

1. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 5.25 g (Figs 7 and 8.3).
2. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 5.10 g (Figs 7 and 8.4).
3. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 5.10 g (Figs 7 and 8.5).
4. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 5.80 g (Figs 7 and 8.6).
5. Disc pendant, Ráksi type. Diam.: 2.6 cm, Wt.: 4.35 g (Figs 7 and 8.7).
6. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 4.00 g (Figs 7 and 8.8).

7. Disc pendant, Ráksi type. Diam.: 2.7 cm, Wt.: 5.90 g (Figs 7 and 8.9).
8. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 3.45 g (Figs 7 and 8.10).
9. Disc pendant, Ráksi type. Diam.: 2.8 cm, Wt.: 5.05 g (Figs 7 and 8.11).
10. Disc pendant, Ráksi type. Diam.: 2.6 cm, Wt.: 4.35 g (Figs 7 and 8.12).

Spirally wound wire tube beads

Eight spirally wound tube beads of rectangular-sectioned wire (*Spiralröhrenperle*). L.: 0.8–2.8 cm (PM inv. no. 2013.10.2.; Figs 7 and 8.1).

Pins

Two sickle pins with conical head decorated with incised bundles of lines and punctates, and a curved, twisted shank.

The rectangular-sectioned shank of both pins is perforated under the head; both shanks are broken; one pin lacks the shank's terminal section, the shank of the other pin is broken in two. L.: 18.3 cm, Wt.: 21.80 g; L.: 13.2 cm, Wt.: 10.15 g, L. of broken shank: 14.4 cm, Wt.: 7.55 g (PM inv. no. 2013.10.6–7.; Figs 7 and 8.2, 13).

Ribbon arm-bands

Two cylindrical arm-bands with four coils of sheet bronze, each with a central rib running in the centre of the ribbon; the terminals are drawn out into spirals, one of which broke off on both arm-bands. L.: 12.4 cm, Diam.: 6.0 cm, Wt.: 106.45 g; L.: 12.4 cm, Diam.: 6.2 cm, Wt.: 107.40 g (PM inv. no. 2013.10.4–5.; (Figs 7 and 8.14, 16).

Dagger

Dagger with rounded hilt plate retaining four rivets, a central midrib and a lozenge-sectioned blade whose sides taper to a point. L.: 16.1 cm, Diam. of hilt plate: 4.0 cm, Diam. in the centre of the blade: 2.5 cm, Wt.: 58.55 g (PM inv. no. 2013.10.3.; (Figs 7 and 8.15).

Assessment of the finds

Ráksi-type disc pendant (Figs 7 and 8.3–12). This pendant type is called variously in the archaeological literature; it is most often designated as *Stachelscheibenanhänger*.¹⁰² A. Mozsolics distinguished two varieties: the first has a central boss and two or more concentric ribs, the other has a larger and more pointed central boss enclosed within two or more concentric ribs.¹⁰³ Other scholars proposed a more or less similar classification.¹⁰⁴ The two variants were used simultaneously, without any major chronological differences. These pendants are typical adornments of the Koszider period (RB B1): A. Mozsolics assigned them to Horizon B IIIb,¹⁰⁵ B. Hänsel to Horizon MD I–II.¹⁰⁶ I introduced a third variant in the classification of these pendants, which I labelled Variant C, characterised by closely-set concentric ribs enclosing a long, pointed central boss, which is a later type that is solely attested in the material record of the Tumulus period (RB B2–C) (Hajdúbajos, Oszlár, Tápé, Esztergom area).¹⁰⁷ B. Hänsel suggested that Ráksi-type pendants evolved from the disc pendants with crossing ribs of the Transdanubian Encrusted Pottery culture;¹⁰⁸ however, there

is nothing to support this contention. Ráksi-type pendants are believed to have evolved in the eastern Carpathian Basin,¹⁰⁹ although it is also possible that they had first appeared farther to the west, in the distribution territory of the Gáta-Wieselburg¹¹⁰ or Aunjetitz culture.¹¹¹ The pendants from the Wien-Sulzengasse hoard (RB B1),¹¹² as well as pendants from the Pitten cemetery (Graves 2, 57, 98)¹¹³ and the Dolný Peter burial ground (Graves 20, 24, 35)¹¹⁴ certainly point in this direction. Ráksi-type pendants have been reported from burials and hoards, and they have also been discovered as stray finds.¹¹⁵ The inhumation burials of the Tumulus culture uncovered at Győr-Ménfőcsanak (Graves 855, 919, 1060) dating from the RB B1 period provide information on how they had been worn.¹¹⁶ In Grave 855, the burial of a 12–20-year-old juvenile, the disc pendant was found suspended from a spirally wound tube bead; Grave 919, the burial of a 12–14-year-old child, yielded three pendants, two bracelets and two sickle pins, while Grave 1060, a richly furnished burial, had been provided with a necklace strung of twelve pendants and spirally wound tube beads (Fig. 9.1–3). Two sickle pins lay on the shoulders. The inhumation burial excavated at Tápióbicske had eight pendants on the chest and two sickle pins on the shoulders.¹¹⁷ The pendant lay behind the head in Grave 19 and in the abdominal region in Grave 452 of the Tápé cemetery.¹¹⁸ In her study on pendants, U. Wels-Weyrauch noted that pendants were found in similar positions in the inhumation burials of southern Germany.¹¹⁹ In Grave 57 of the Pitten cemetery,¹²⁰ the pendants and spirally wound tube beads lay on the chest,¹²¹ similarly as in Grave 24 of the Dolný Peter cemetery in Slovakia.¹²² An idea of how these pendants were worn can be gleaned from the clay figurines of the Lower Danube region, on which they are shown around the neck, on the chest and the back, or

¹⁰⁹BÓNA 1992b, 58–64; MOZSOLICS 1967, 92–93; HÄNSEL 1968, 161, Fig. 4; WELS-WEYRAUCH 1978, 34–59; WELS-WEYRAUCH 1991, 15–32; FURMÁNEK 1980, 31–32; SCHUMACHER-MATTHÄUS 1985, 100–105.

¹¹⁰KOVÁCS 1986b, 37.

¹¹¹BARTEILHEIM 1998, 68–69.

¹¹²DAVID-ELBIALI-DAVID 2009, 328, Fig. 5.K.

¹¹³HAMPL *et al.* 1978–1981, 17–18, Taf. 197.1–10, 46–47, 60–61, 125, Taf. 209.12, Taf. 213.16–22; SØRENSEN-REBAY 2005, Tab. 6; WELS-WEYRAUCH 2011, 261.

¹¹⁴DUŠEK 1969, 61–63, 65, 71, Abb. 10.1, Abb. 11.5–6, Abb. 12.1–10, Abb. 14.6.

¹¹⁵JANKOVITS 2017a, 167–177.

¹¹⁶EGRY 2004, 124, Abb. 2.4; Abb. 3.5–7; 130, Abb. 6.2; JANKOVITS 2017a, 174–175, Taf. 132.C–D, Taf. 133.A.

¹¹⁷BÓNA 1958, 214, Anm. 15, 232; TROGMAYER 1968, 26–27, Anm. 61, Abb. 6.1–2; JANKOVITS 2017a, 170, Nr. 2359–2366.

¹¹⁸TROGMAYER 1975, 13, Taf. 2.19/1; 100, Taf. 40.452/2; JANKOVITS 2017a, 174.

¹¹⁹WELS-WEYRAUCH 1991, 16, Anm. 6.

¹²⁰HAMPL *et al.* 1978–81, Taf. 209/Gr. 57.

¹²¹HAMPL *et al.* 1978–81, Taf. 125; Taf. 209/Gr. 57.

¹²²DUŠEK 1969, 65, Abb. 11; Abb. 12.1–10; FURMÁNEK 1980, Taf. 36.B.

¹⁰²BÓNA 1958, 216; MOZSOLICS 1967, 92–93; HÄNSEL 1968, 225–226; TROGMAYER 1968, 15; WELS-WEYRAUCH 1978, 34–59; WELS-WEYRAUCH 1991, 15–32; WELS-WEYRAUCH 2008, 287–288; FURMÁNEK 1980, 31–32; SCHUMACHER-MATTHÄUS 1985, 100–101; KOVÁCS 1984, 384–385; *id.* 1986b, 38; BÓNA 1992a, 62; LICHARDUS-VLADÁR 1996, 29, 31; JANKOVITS 2017a, 167–177.

¹⁰³MOZSOLICS 1967, 92.

¹⁰⁴HÄNSEL 1968, 225–226; WELS-WEYRAUCH 1978, 34–59; WELS-WEYRAUCH 1991, 15–32; FURMÁNEK 1980, 31–32.

¹⁰⁵MOZSOLICS 1967, 92.

¹⁰⁶HÄNSEL 1968, 234, Taf. 1.6–10, Taf. 2.11–22.

¹⁰⁷JANKOVITS 2017a, 173–174, 176.

¹⁰⁸HÄNSEL 1968, 234, Taf. 1.6–10; Taf. 2.17–22.



suspended from a belt.¹²³ According to the physical anthropological assessment of the graves, Grave 1060 of the Győr-Ménfőcsanak cemetery¹²⁴ and Grave 19 of the Tápé cemetery were female burials,¹²⁵ as was Grave 24 of the Dolný Peter cemetery¹²⁶ and the grave uncovered at Niederlauterbach in southern Germany.¹²⁷ In the light of the above, these pendants were mainly worn by women.

Spirally wound tube beads (Figs 7 and 8.1). Beads of this type were popular during a longer period of time, from the Early Bronze Age to the Late Bronze Age, and they are also attested in the burials (Győr-Ménfőcsanak)¹²⁸ and hoards (Budapest-Rákospalota, Alsónémedi)¹²⁹ of the Koszider period. They are generally found together with Ráksti-type disc pendants, strung into a necklace.

Sickle pins (Figs 7 and 8.2, 13). The sickle pins (*Sichelnadeln*) can be assigned to the variant with decorated head and twisted shank (Regelsbrunn type).¹³⁰ Their use began in the Middle Bronze Age Tumulus culture (RB B1) and they were often deposited in the burials and hoards of the Koszider period.¹³¹ The heads of the pins from the Simontornya hoard,¹³² from Grave 854b of the Dunaújváros cemetery¹³³ and Grave 1060 of the Győr-Ménfőcsanak burial ground¹³⁴ bear a similar ornamentation as the pieces from Ráksti. Sickle pins are generally found in pairs in burials and they are considered to be jewellery pieces that were worn by women and children,¹³⁵ which is also borne out by the physical anthropological assessment of the burials (Győr-Ménfőcsanak).¹³⁶ In meticulously excavated inhumation burials, the pins were found to have the tip of their shank pointing towards the feet.¹³⁷ Given their size, it seems

unlikely that they were part of ordinary costume; it seems more likely that they were either adornments worn during ceremonies or part of the funerary costume.¹³⁸ Their points were fitted with point protectors of organic material. It is also possible that these large pins had been used for fastening the funerary shroud.

Ribbon arm-bands (Figs 7 and 8.14, 16). Sheet metal ribbon arm-bands of several coils with a central rib down their length were distinctive products of Koszider-type metalwork that principally occur in hoards.¹³⁹ Together with the Ráksti-type disc pendants and sickle pins, they were part of the costume worn by high-status females.

Dagger with rounded hilt plate (Figs 7 and 8.15). Daggers with rounded or trapezoidal hilt plate can be dated to the Koszider period.¹⁴⁰ Daggers similar to those of the Koszider period are also attested in southern Transdanubia.¹⁴¹ In the neighbouring regions, they first appeared in the early Tumulus period (RB B1), which corresponds to the Dolný Peter/Lochham period in Slovakia,¹⁴² the earlier Tumulus period in Bohemia¹⁴³ and the pre-Lausitz period in Poland.¹⁴⁴

Interpretation and chronology of the assemblage

The finds suggest that the assemblage originated from a lavishly furnished female burial dating from the Koszider period (RB B1, ca. 17th–16th century BC), whose high status is indicated by the jewellery set. Comparable jewellery is known from the hoards of the Koszider period found at Szentendre¹⁴⁵ and Zimány/Rácegres,¹⁴⁶ from the Tápióbicske burial¹⁴⁷ and from the Várpalota burials (Fig. 9.4)¹⁴⁸ as well as the professionally excavated burials of the Győr-Ménfőcsanak cemetery (Fig. 9.1–3).¹⁴⁹

One important issue in Bronze Age studies is the relationship between Tolnanémedi-type hoards and the

¹²³SCHUMACHER-MATTHÄUS 1985, Taf. 4.1a–c: Klenovnik; Taf. 4.2a–b: Vršač; Taf. 5.3b: Kličevac; Taf. 6.1a–1b: Dupljaja; Taf. 14.1a: Korbovo Glamija; Taf. 15.1a–b: Odžaci.

¹²⁴EGRY 2004, 130.

¹²⁵FARKAS-LIPTÁK 1975, 13, 242.

¹²⁶DUŠEK 1969, 65.

¹²⁷WELS-WEYRAUCH 1991, 15.

¹²⁸EGRY 2004, 125, Abb. 2.4 (Grave 855); 130, Taf. 6.2 (Grave 1060).

¹²⁹MOZSOLICS 1967, Taf. 59.21–25, 33–35; Taf. 60.21–24, 25–28.

¹³⁰ŘÍHOVSKÝ 1979, 18–20, Taf. 1–10; ŘÍHOVSKÝ 1983, 3–5; NOVOTNÁ 1980, 60–67.

¹³¹BÓNA 1958, 211; MOZSOLICS 1967, 83–84; HÄNSEL 1968, 77–78, Taf. 18.3–4, Taf. 26.2; KOVÁCS 1977, 44; KOVÁCS 1997, 297–298, Fig. 1–2; DAVID 1998, 288–289, 336, Fig. 3–4; DAVID 2002, 444–445, Fig. 5; EGRY 2004, 130, Taf. 6; T. NÉMETH 2008, 73–81, Fig. 6.8–9, Fig. 7.7, Fig. 8, 4–5; VICZE 2011, Pl. 171.4, 10; Pl. 216.3; FISCHL et al. 2013, 355–371, Fig. 5.1, 6.

¹³²MOZSOLICS 1967, Taf. 53.2b.

¹³³VICZE 2011, Pl. 216.3.

¹³⁴EGRY 2004, Taf. 6.

¹³⁵HAMPL et al. 1985, 26–29; BENKOVSKY-PIVOVAROVÁ 2006, 162–163; INNERHOFER 2000, 232–239.

¹³⁶EGRY 2004, 125–130.

¹³⁷DUŠEK 1969, 65, Abb. 11.3–4: Dolný Peter, Grave 24; HAMPL et al. 1978–81, 31, Taf. 201. Grave 24, 14–15: Pitten; EGRY 2004, 125–130: Győr-Ménfőcsanak, Grave 919, 1060; T. NÉMETH 2008, 79 Fig. 5: Lébény.

¹³⁸JANKOVITS 2010–2013, 24.

¹³⁹BÓNA 1958, Taf. 1; MOZSOLICS 1967, Taf. 51.1–2; BÓNA 1992a, Abb. 107; FISCHL et al. 2013, Fig. 5.8: Dunaújváros-Kosziderpadlás, Hoard III; BÓNA 1958, 218, Taf. VI: Zalaszentiván-Kisfaludi-hegy; HAMPEL 1886, Taf. LXXXI.4; HÄNSEL 1968, Taf. 14.24: Lovas; MOZSOLICS 1967, Taf. 62. 2, 4–5: Pusztaszentkirály-Áporka; HÄNSEL 1968, Taf. 22.35–36: Szigliget; HÄNSEL 1968, Taf. 26.28–29: Rácegres.

¹⁴⁰MOZSOLICS 1967, 56, Taf. 50.4–5: Dunaújváros-Kosziderpadlás, Hoard II; KEMENCZEI 1988, 18, Anm. 7.

¹⁴¹KISS 1999, Taf. 2.1–5; KISS 2012, 128, Pl. 68.1–6.

¹⁴²VLADÁR 1974, 43, Nr. 108.

¹⁴³NOVÁK 2011, 85–86, Nr. 343–345.

¹⁴⁴GEDL 1980, 56–57.

¹⁴⁵HAMPEL 1892, 142; BÓNA 1958, 218; MOZSOLICS 1967, 166, Taf. 44.7–8.

¹⁴⁶HAMPEL 1892, Taf. CLXI.1–6; BÓNA 1958, 229, Taf. 3; MOZSOLICS 1967, 156–157; HÄNSEL 1968, 226, Taf. 26. 22–29.

¹⁴⁷BÓNA 1958, 214; TROGMAYER 1968, 26–27, Abb. 6.2; DINNYÉS 1973, 40, Taf. 4.3–10; DAVID 2002, 473/H, 152, Taf. 309. 4–11.

¹⁴⁸KOVÁCS 1977, 44, Abb. 1.2–5: grave 4; 45, Abb. 1.7–11: grave 7.

¹⁴⁹EGRY 2004, 121–137.

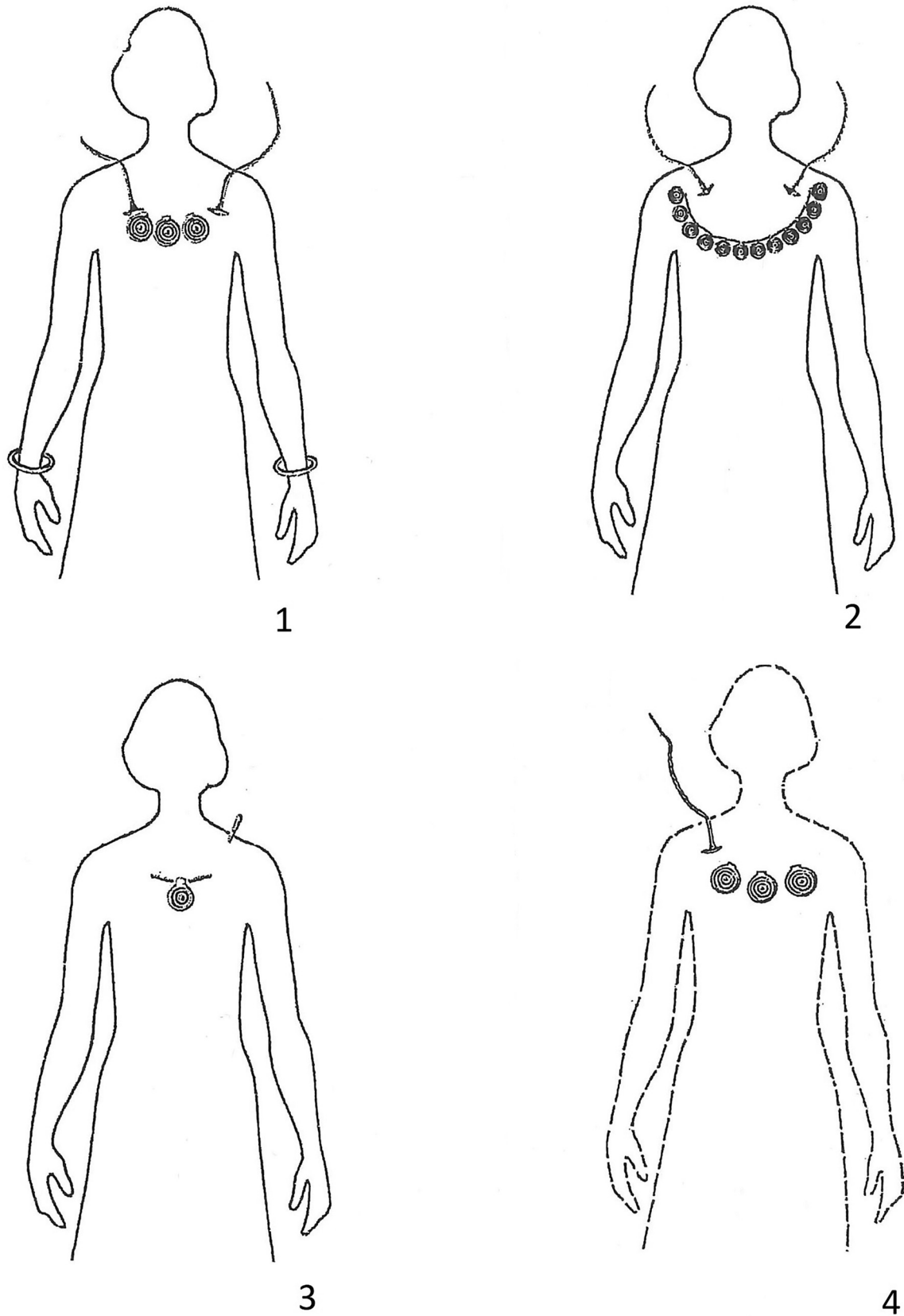


Fig. 9. Reconstruction of the costume. 1–3: Győr-Ménfőcsanak (County Győr-Moson-Sopron): Graves 919, 1060, 855; 4: Várpalota (County Veszprém): Grave 4

Koszider horizon. A. Mozsolics did not draw a chronological distinction between the Tolnanémedi and Koszider horizons.¹⁵⁰ While I. Bóna regarded them as two separate horizons,¹⁵¹ as did T. Kovács, who in his earlier studies highlighted the differences between the two,¹⁵² although he later noted that several elements of the Tolnanémedi-type hoards can be traced to the Koszider horizon.¹⁵³ S. Hansen pointed out that disc and swallowtail pendants occur in both hoard types and that certain types of the Koszider period make their first appearance in Tolnanémedi-type hoards.¹⁵⁴ Sz. Honti and V. Kiss have convincingly demonstrated that the two hoard types had been deposited in two different periods,¹⁵⁵ confirmed also by the different composition of the hoard types and the metallographic analysis of their finds. Tolnanémedi-type hoards are dominated by high impurity copper (so-called *Ösenring*), while Koszider-type hoards by high arsenic and nickel content (so-called eastern Alpine copper or *Einheitskupfer*).¹⁵⁶

The suggestion that the two assemblages came from the same hoard was based on the finds from Kölesd-Nagyhangos, whose items are housed in two museums. Both contain Tolnanémedi- and Koszider-type artefacts: A. Mozsolics published the pieces in the Hungarian National Museum,¹⁵⁷ while I. Bóna the artefacts in the Szekszárd Museum,¹⁵⁸ the latter later sometimes described as unprovenanced finds.¹⁵⁹ It is quite possible that the finds housed in the two museums had been part of the same hoard that had been accumulated over a longer period of time, although it is equally possible that the finds had somehow become mixed up.¹⁶⁰ Another hoard whose artefacts can be found in two museums (the Hungarian National Museum and the Szekszárd Museum) is the Late Bronze Age hoard from Kurd.¹⁶¹

In sum, the Pusztasárkánytó (Mosdós-Sárkánytópuszta) assemblage can be assigned to the Tolnanémedi-type hoards of the later Encrusted Pottery period, whose artefacts fall into the RB A2 b-c phase (ca. 19th–18th centuries BC), while the finds from Ráksi represent the ensuing period, the RB B1 phase (ca. 17th–16th centuries BC), and probably originate from an inhumation

burial of the early Tumulus culture (Dolný Peter type) that was sparsely distributed in Transdanubia (e.g. Várpalota, Ménfőcsanak).

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- ¹⁵⁰MOZSOLICS 1957, Mozsolics 5; MOZSOLICS 1967, 24.
- ¹⁵¹BÓNA 1958, 224; BÓNA 1975, 228–229; BÓNA 1992a, 41–42.
- ¹⁵²KOVÁCS 1968, 208–209; KOVÁCS 1984, 377.
- ¹⁵³KOVÁCS 1994a; KOVÁCS 1994b, 159.
- ¹⁵⁴HANSEN 2005, 218–219, Abb. 3–4.
- ¹⁵⁵HONTI–KISS 2013, 739–756; KISS 2012, 148–150.
- ¹⁵⁶SCHUBERT–SCHUBERT 1967, Abb. 37–40; KRAUSE 2003, Cl.34/4; RADI–VOJEVIĆ *et al.* 2019, 131–185.
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- ¹⁶⁰JANKOVITS 2017a, 47–48: Kölesd-Nagyhangos A: Hungarian National Museum, Kölesd-Nagyhangos B: Szekszárd museum. The accessions register of the Szekszárd museum specifies Kölesd-Nagyhangos as the find-spot (inv. no. 59.664.1.).
- ¹⁶¹MOZSOLICS 1985, 140.

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