

Szilvia Guba–Vajk Szeverényi

BRONZE AGE BIRD REPRESENTATIONS FROM THE CARPATHIAN BASIN

Introduction

Animal representations form a special group of objects of the Bronze Age material of Hungary. Bird representations have been known ever since the beginnings of research on the Bronze Age in Hungary. The earliest ones come from Nógrád County, e.g. from Kisterenye–Hársas (KUBINYI 1861, 16. t. 108, List 1.11a), Piliny–Várhegy (HAMPEL 1876, 120–121, Fig. 84; 1886, LXXI. t. 1; List 1.19) and Szécsény–Kerekdomb (NYÁRY 1907, 227–228, 229 4a–c kép; BÓNA 1975, 155, Taf. 262.5; List 1.23), the area where the rattles published here were found as well. In their syntheses written about the Early and Middle Bronze Ages of Hungary, both István Bóna and Nándor Kalicz reviewed bird representations and rattles known up until that time (KALICZ 1968, 154; BÓNA 1975, 69, 98, 155, 212–214). The first detailed study on them was written by Tibor Kovács. In his work he differentiated between bird-shaped askoi, rattles, vessels and figurines (KOVÁCS 1972). In his later studies he examined further bird-shaped vessels and clay objects (KOVÁCS–STANCZIK 1980; KOVÁCS 1989–1990; *ibid.* 1990). Viktória Kiss collected all the known Middle Bronze Age exemplars from Transdanubia in her doctoral thesis (KISS 2001, 166–167).¹ The most recent review of Bronze Age bird-shaped askoi from the Carpathian Basin was given by Ildikó Szathmári (SZATHMÁRI 2003),² while Christine Reich studied bird representations from the southern part of the Carpathian Basin (REICH 2005; *ibid.* 2007, 96–98). Finally, R. and V. Vasić wrote a number of studies on bird representations from the Bronze and Iron Ages of the Balkans (VASIĆ–VASIĆ 2000; 2003; 2003–2004).

In this article we would like to contribute to the study of this group of objects in two ways. First, we would like to enlarge the corpus of bird representations by publishing, describing and analyzing five, so far unknown bird representations, and by reviewing all the known bird representations from the

Early and Middle Bronze Ages of the Carpathian Basin. Second, we will try to determine their role in Bronze Age religion.

Description of the finds

Bird-shaped rattle, Zagyvapálfalva, Nógrád County (Fig. 1; List 1.30)

The bird-shaped rattle has an ovoid, carinated shape. It stands on four beaded feet, its tail and the two vertically perforated wings are pulled out of its body. Its head ends in a duck's beak and stands on a strongly upwards curving neck. An incised, interrupted line runs along the mid-line of the back with cross-incisions at the neck. There are three-three incised lines ending in spirals on both sides of the mid-line of the back. The line between the spirals has cross-incisions. The third spiral motif at the tail is smaller, and on one side of the spirals could not be completed due to lack of space or continued on the missing part. The whole composition on the back is not aligned to the axis of the rattle and is slightly asymmetrical. Its clay is tempered with fine sand. It is well-fired and has light grey colour. Damaged. L: 12 cm, H: 5.5 cm, W: 7.3 cm

Stray find. It was delivered to the archaeological collection of the Kubinyi Ferenc Museum, Szécsény, from László Holub's private collection. Uninventorized.

Bird-shaped rattle, Buják–Tarisznyapart, Nógrád County (Fig. 2; List 1.2)

The rattle has a biconical body. Its base is cut off straight and is slightly omphalic. A ridge runs along the middle of its back. There is an incised cross-shaped motif under its neck with three impressed dots at the end of the arms of the cross. Two-two incised parallel lines run on the back on both sides along the ridge, and they all end in impressed dots. Three small lugs are abstract representations of the wings and the tail. The left wing is damaged. There is a small hole under the tail. There is a row of short incisions along the side-line. There is probably a clay ball inside the body. Its clay is tempered with fine sand, its colour is greyish brown. The polishing on its surface is preserved only in traces. Its surface shows modern damage in a number of places. L: 6.4 cm, H: 4 cm, W: 4.8 cm

It was allegedly found during Judit Tárnoki's excavation at the site. Presently it is in Tamás Lukáts' private collection.

Bird-shaped rattle, Kisterenye–Hársas (or Kisterenye–Aranyhegy), Nógrád County (Fig. 3; List 1.11b)

The rattle has a triangular cross-section with a strong back ridge. Its base is flat. Two semi-circular lugs on the side represent the wings, curved incised lines on them the feathers. Its neck is damaged and is decorated by an incised line with a row of dots on both sides. The decoration on the wings and the neck has white incrustation. Its clay is tempered with small pebbles and sand. Its surface is polished, in certain places burnished. It is damaged, its hind part – with the tail – is missing. L: 6 cm, H: 3.3 cm, W: 3.7 cm

It was found during János Csuhay's illegal excavation, according to his relation on the plateau. It cannot be connected to an archaeological feature. Kubinyi Ferenc Múzeum, Szécsény, inv. nr. 92.62.51.

Bird-shaped rattle,³ Kazár, Nógrád County (Fig. 4)

The rattle is rather stylized. It stands on a low, cylindrical stand. Its body is shaped like a boat and has a strong ridge. There is a small hole in the centre of the back, through which the clay ball or pebble was inserted. Its head and tail and part of the body are missing. It has a dark grey colour and the clay is tempered with sand. L: 5.7 cm, H: 3.5 cm, W: 2.6 cm

It was found during Andrea Vaday's rescue excavation in 2002. It was uncovered in the northeastern part of the trench, in the area of a Late Bronze Age settlement, from the second spade spit. It cannot be connected to an archaeological feature. Kubinyi Ferenc Múzeum, Szécsény, inv. nr. 2002.18.7064.

Fragment of a bowl with a bird head, Pákozd–Várhegy, Felső County⁴ (Fig. 5; List 3C.21)

The rim is thickened on the inside. The bird-shaped "protome" starts immediately from the rim. One side of the head is damaged. The eyes are indicated by an incised circle and a dot. The rim and the back of the bird head is decorated by short incisions. There are three incised concentric semi-circles under the bird's head. Under these there are three composite incised motifs, each made up of a vertical line, two "W" shaped and a "comb" shaped motif. Only a part of a rectangular motif with two lines is preserved on the edge of the fragment. The inner side of the rim is decorated by a row of intertwined "Y" motifs. The fragment is black, has a polished surface, while the incised motifs are incrustated. W: 7.5 cm, H: 5.2 cm

The fragment was found in 1980 on the western side of the Upper Fort of the Middle Bronze Age fortified settlement during a rescue excavation. Szent István Király Múzeum, Székesfehérvár, inv. nr. 80.1.9.

The date of the finds

From the above objects only the exemplar from Kazár was found during an authentic excavation, but even this one cannot be connected to a feature. It was found in the area of a Late Bronze Age settlement (VADAY 2003–2004; 2004). The other exemplars are stray finds, they cannot be connected to any specific archaeological feature, and thus their date can be es-

tablished only with indirect methods. However, all the sites have already been excavated, which narrows down somewhat the possibilities. At Buják–Tarisznyapart Judit Tárnoki carried out excavations in 1982 and 1984. The site is a settlement with Late Hatvan style pottery⁵ datable to the Koszider Period (KALICZ 1968, 121, Nr. 71; TÁRNOKI 1984). Kisterenye–Hársas was excavated a number of times, unfortunately without proper documentation. The settlement yielded Classical and perhaps Late Hatvan style pottery (KUBINYI 1861; KALICZ 1968, 121, Nr. 73), and was probably occupied from the end of the Early Bronze Age until the end of the Middle Bronze Age. However, a Late Bronze Age settlement and cemetery with Piliny style pottery, and a number of Late Bronze Age metal artefacts are also known from here (KEMENCZEI 1984, 101, Nr. 35a, 118, Nr. 22a). At Pákozd–Várhegy Arnold Marosi carried out excavations in the 1920s (MAROSI 1930). According to the data known so far, the settlement was inhabited from the end of the Early Bronze Age until the end of the Middle Bronze Age.⁶ The rattle from Zagyvapálfalva is more problematic in this respect, since its exact find spot is unknown. The most famous site in the vicinity is the Late Bronze Age cemetery excavated by J. Hillebrand (KEMENCZEI 1984, 107, Nr. 57d; 134–135, Nr. 45), but the rattle almost certainly did not come from there. There are a few other sites that can be taken into consideration. Early or Middle Bronze Age Hatvan style sherds came to light at Zagyvapálfalva–Temető (KALICZ 1968, 121, Nr. 76). Furthermore, there are a few Late Hatvan/Füzesabony style sherds dated to the Koszider Period in the collection of the Kubinyi Ferenc Múzeum from the site of Zagyvapálfalva–Homokbánya. The finds were collected by Gyula Fekete.⁷ We can only assume that the rattle came from this latter site.

The rattle of Zagyvapálfalva (Fig. 1) has no exact analogues. Two bird-shaped rattles from Füzesabony–Öregdomb (List 1.6a–b; KOVÁCS 1989–1990, 50, Abb. 4.1.3) also stand on four legs, although those seem to be human feet, not beaded feet. They can be dated to the second half of the Middle Bronze Age (KOVÁCS 1989–1990, 31; SZATHMÁRI 1992). A rattle from Jászdózsa–Kápolnahalom is also supported by four beaded feet. It was found in Layer VII of the settlement, associated with Füzesabony style pottery (List 1.8a; CSÁNYI–TÁRNOKI 1992, 206, Nr. 437).

The closest formal analogues of the rattle from Buják (Fig. 2) are known from Szécsény–Kerekdomb, Piliny, "Harc" (List 1.7; BÓNA 1975, Taf. 261.7), Veszprém (List 1.29a; BÓNA 1975, Taf. 261.6), Bia (List 1.1; STEIN 1936, 345, 9. kép), Malé Kosihtörök domb (List 1.15; KALICZ 1968, Taf. 115.2),

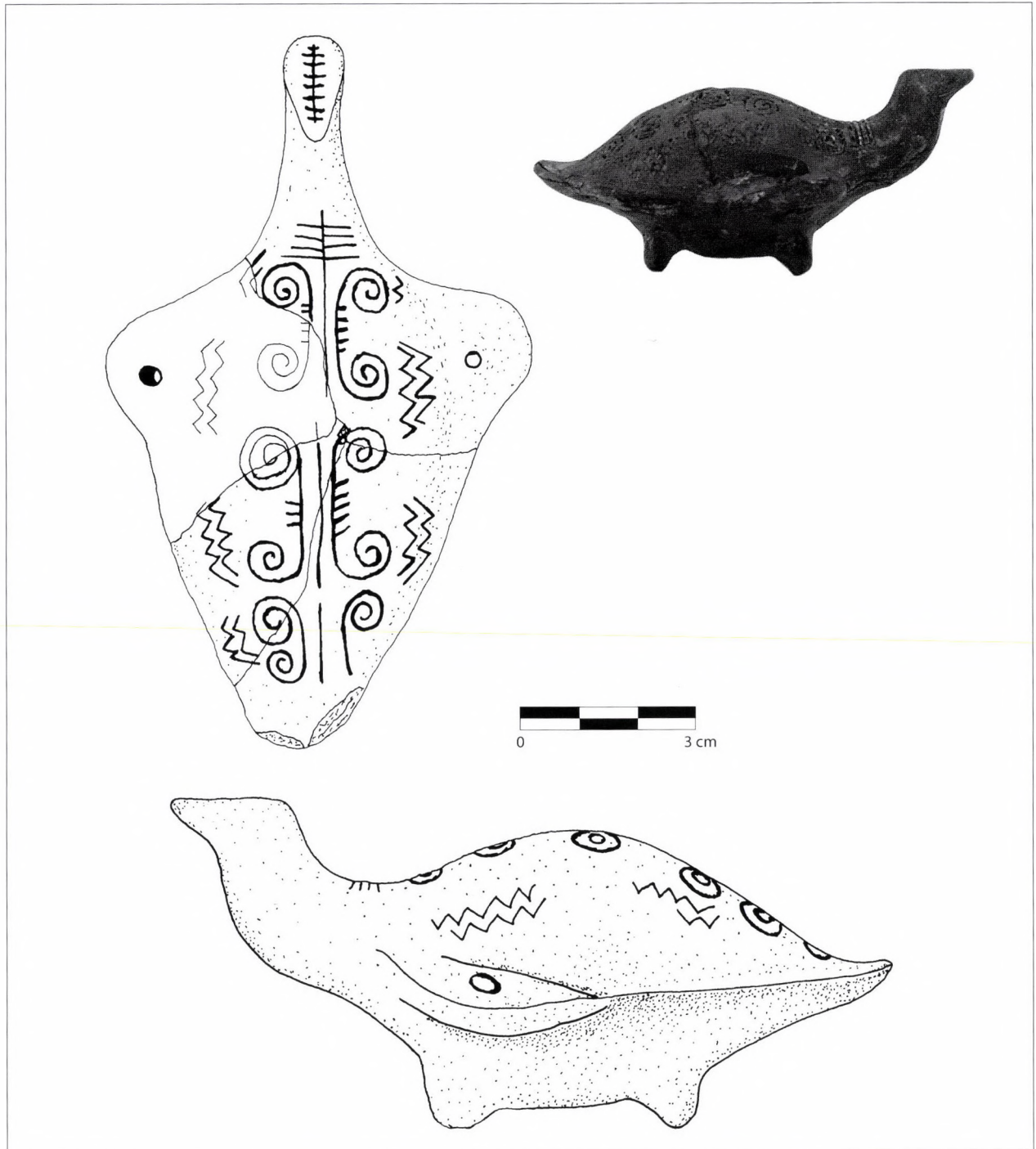


Fig. 1. Zagyvapálfalva, bird-shaped rattle

Mad'arovce (List 1.13b; VISEGRÁDI 1911, 38, 7.3–4. tábla)⁸ and Százhalombatta–Földvár (List 1.23; FEKETE 2005, 47, Pl. 2.3a–b). Unfortunately, most of them are stray finds as well without a known context. The settlement of Szécsény–Kerekdomb yielded Late Hatvan/Füzesabony style pottery that can be

dated to the second half of the Middle Bronze Age, perhaps already the Koszider Period (BÓNA 1975, 146; KOVÁCS 1989). The find spot of the rattle from “Harc” is unknown.⁹ If it is indeed Harc, then a possible site is Várhegy in the vicinity of the modern village, a fortified Middle Bronze Age settle-

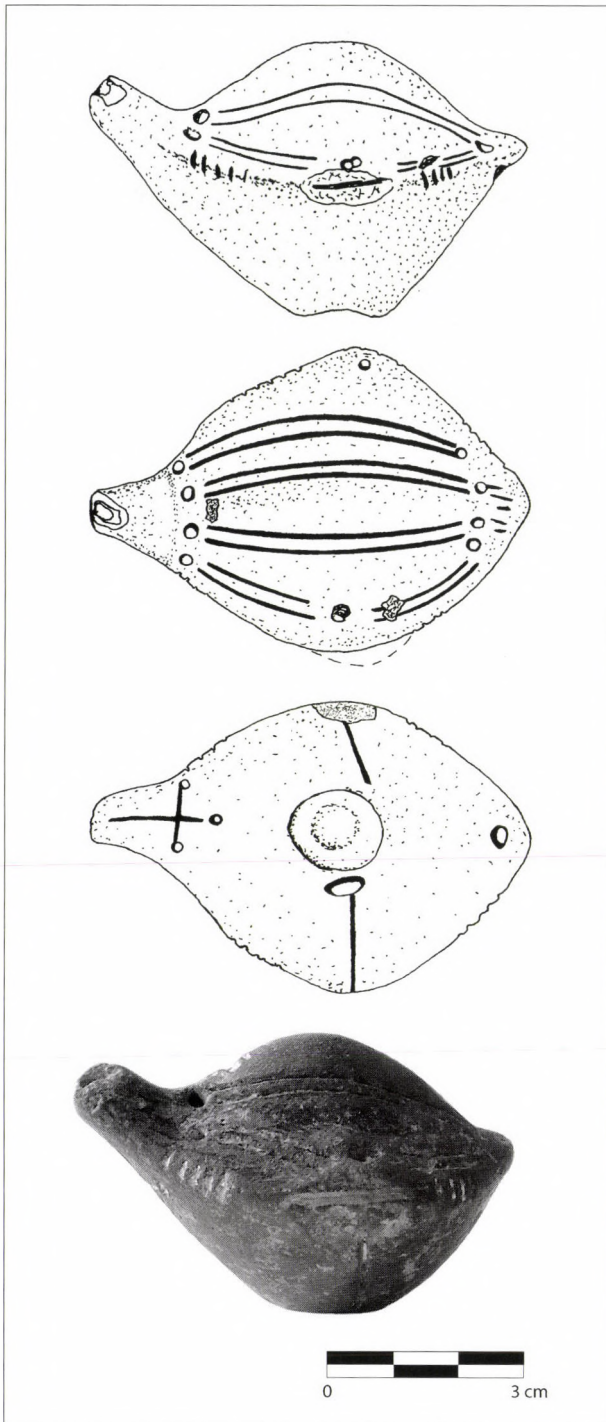


Fig. 2. Buják–Tarisznyapart, bird-shaped rattle

ment with Transdanubian Incrusted Ware (BÓNA 1975, 198), datable to Young and Late phases, that is to the second half of the Middle Bronze Age (KISS 2001, 45). Gerjen type finds are known from Harc–Nyanyapuszta (BÓNA 1975, 113). This pottery style has recently been identified as a mixed style and re-

dated into the Koszider Period by K. P. Fischl (FISCHL 2000). The rattle from Veszprém comes most probably from a grave, but its exact context is unknown. The graves from Veszprém can be dated to the Young Phase of the North Transdanubian Incrusted Ware (KISS 2001, 63–65). The context of the piece from Százhalombatta is also unknown. The tell settlement was inhabited from the third phase of the Early Bronze Age until the end of the Middle Bronze Age (see e.g. KOVÁCS 1969; POROSZLAI 2000; GUBA 2005). The publisher of the rattle dated it to the classical phase of the Transdanubian Incrusted

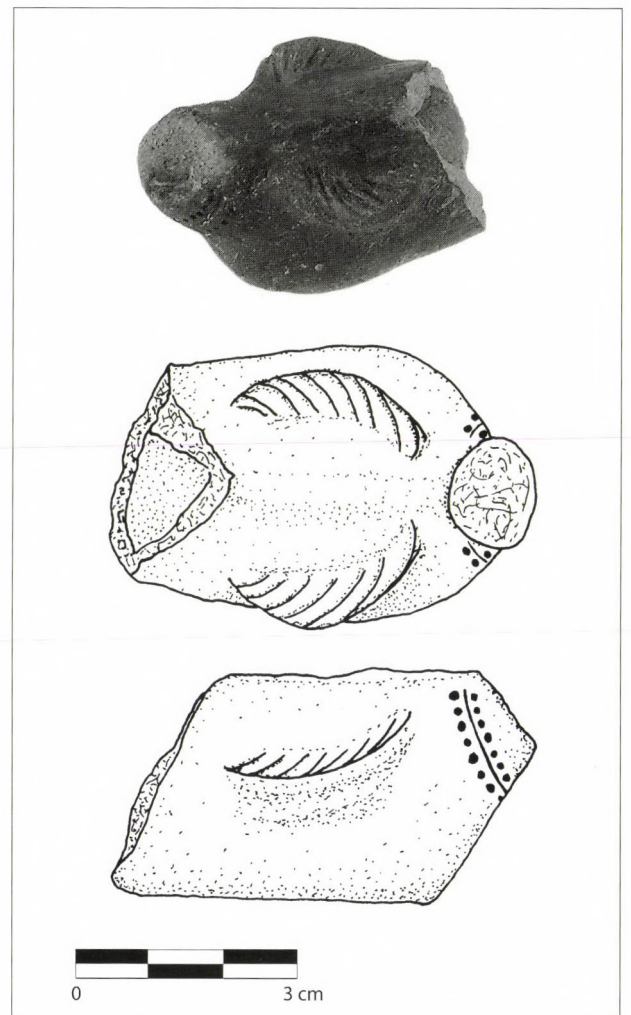


Fig. 3. Kisterenye–Hársas, bird-shaped rattle

Ware (FEKETE 2005, 49). The exact context of the rattle from Mad'arovec is also unknown, but the settlement yielded Classical and Late Mad'arovec style pottery (FURMÁNEK–VELIAČIK–VLADÁR 1999, 47–49), datable to the second half of the Middle Bronze Age.

The rattle from Kisterenye (Fig. 3) is also a unique exemplar. Its proportions and shape are close to those of a piece from Tószeg (List 1.26a; BÓNA 1975, Taf. 262.6), but the latter has small, perforated wings for suspension, while the wings of the one from Kisterenye are not perforated and the feathers of its wings are indicated by slightly curving incised lines. The exemplar from Tószeg comes from Layer X–XI A–B, which yielded Hatvan style pottery (BÓNA 1992d, 110). The feathers of the wing are indicated by incised lines on a rattle from Füzesabony as well (List 1.6b; KOVÁCS 1989–1990, 50, Abb. 4.3), just like on the bird-shaped askos from Nagyrév (List 2.11; KOVÁCS–STANCZIK 1980, 47, 3. kép). The former is dated to the second half of the Middle Bronze Age, the latter probably to the end of the Early Bronze Age or the beginning of the Middle Bronze Age (KOVÁCS–STANCZIK 1980, 49–51). Plastically modeled wings can also be seen on the bird-shaped vessel from Bökény Mindszent (List 3A.1; KALICZ 1968, Taf. 114.1) and on the bird-shaped rattles from Királyszentistván (List 1.10b; BÓNA 1975, Taf. 262.2) and Dunaalmás (List 1.4; BÓNA 1975, Taf. 262.7).

No exact analogues of the rattle from Kazár (Fig. 4) are known in the Late Bronze Age material. A bird-shaped vessel and a rattle from Mala Vrba (List 1.14a, List 3A.4; VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.7–8) also stand on a low cylindrical pedestal, just like the rattles from Tiszaug (List 1.25; BÓNA 1975, Taf. 259.4), Nitriansky Hrádok (List 1.16a; TOČÍK 1978, Taf. 50.5) and an unknown site (List 1.32; KALICZ 1968, Taf. 115.3). The exemplar from Tiszaug is from the Middle Bronze Age, while the ones from Mala Vrba can already be dated to the Late Bronze Age, probably the classical phase of the Lower Danube Incrusted Ware (VUKMANOVIĆ–POPOVIĆ 1996; SHALGANOVA 1995). The dating of the piece with unknown find spot is uncertain, but the lattice pattern on its back can be found on a Hatvan style vessel from the vicinity of Vác (KALICZ 1968, Taf. 98.11). Unfortunately it cannot be dated more precisely than the end of the Early Bronze Age and the Middle Bronze Age.

Although the piece from Pákozd (Fig. 5) is fragmentary and its original shape cannot be reconstructed any more, it is probably the member of a fairly characteristic group of vessels. Its closest analogue is a bowl from Feudvar that has a stylized bird head as the tip of the lobe on the rim (List 3B.22a; REICH 2005, 232, Abb. 1.1), and two stray bowls with bird head protomes from Szeremle (List 3B.19a–b; WOSINSKY 1904, 69.5–6. t.). A bowl with lobular rim from Szeremle (List 3C.22a; REICH 2005, 232, Abb. 1.2) is also close, although the bird's head is much more stylized. These can be dated to the Koszider Period. A similar bird head sprouting from a vessel's rim can be seen on an Incrusted Ware style bowl – showing the influence of the Vatin style – from grave "B" of the site Balatonfüzfő–Jánoshegyi utca (List 3B.13; REGENYE 1996, Taf. 3.4), which can be dated to the end of the Young phase of the North Transdanubian Incrusted Ware, that is immediately before the Koszider Period (KISS 2001, 61, 75). Deep bowls with bird head protomes are known from the southern part of the Carpathian Basin, from Szeremle and Lower Danube Incrusted Ware (or Dubovac–Žuto Brdo or Cârna–Gârla Mare) type assemblages. The vessels from Cârna (List 3B.14a–b; DUMITRESCU 1961, Pl. 80.271, Pl. 57.114), Korbovo (List 3B.15a–b; GARASANIN 1958, 84, Taf. 17.5; CERMANOVIĆ–KUZMANOVIĆ 1960, 187, Sl. 7) and Orsoya (List 3B.17a–g; VASIĆ–VASIĆ 2003, Abb. 3–8; REICH 2005, 233, Abb. 2.7), however, are less similar to the fragment from Pákozd, since their bird head starts from the side of the vessels.

Further help in dating can be provided by the analysis of the decoration of the here published objects. We

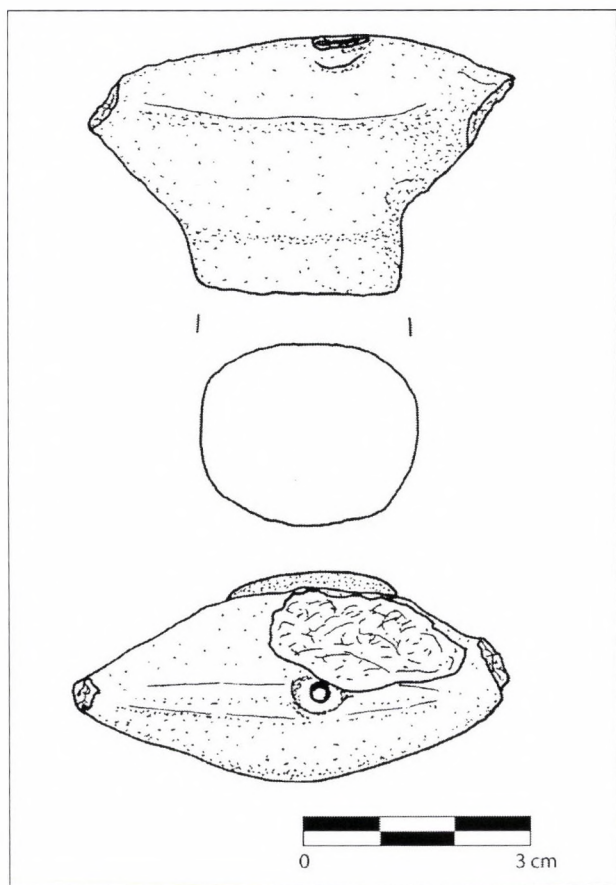


Fig. 4. Kazár, bird-shaped rattle

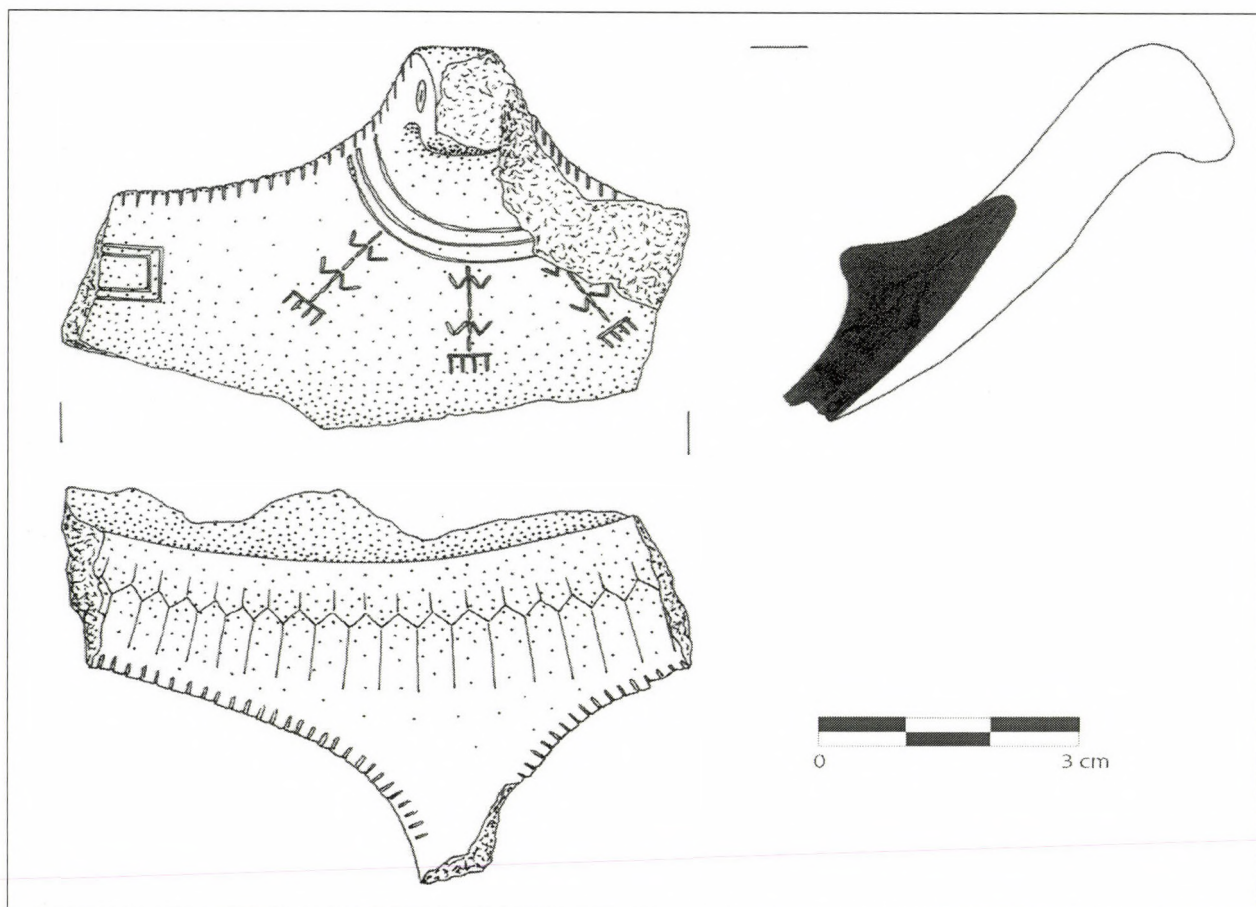


Fig. 5. Pákozd–Várhegy, rim fragment of a bird-headed bowl

could not find exact analogues of the motifs ending in spirals on the back of the rattle from Zagyvapálfalva. A similar decoration – without, however, the short incisions – can be seen on the blades of a number of Middle Bronze Age disc-butted bronze axes, e.g. on Type A exemplars from Hajdúsámson, Gaura, Szeghalom, Someşeni, Păuliş, etc. (MOZSOLICS 1967, 35, Abb. 7, Taf. 3.1, Taf. 9.1, Taf. 12.1–2, Taf. 13.3, Taf. 16.1, Taf. 18.1; MÁTHÉ 1996, 127–128, Fig. 1–2), and on Type B pieces from Téglás (MÁTHÉ 1969–1970, 1. kép), Szeghalom, Friedenau, Áporka, etc. (MOZSOLICS 1967, 42, Abb. 15, Taf. 12.3, Taf. 61.3). Type A axes can be dated to the classical phase of the Middle Bronze Age (BzA2) and to its end (BzA3), while Type B axes belong to the Koszider Period (BzB) (MOZSOLICS 1967, 33–45, 49). The motif appears in a similar arrangement on a few vessels from the cemetery of Cârna (DUMITRESCU 1961, Pl. 117.123, Pl. 117.472, Pl. 118.331, Pl. 122.331, Pl. 132.6, Pl. 132.102) and on the figurine with bell shaped skirt from grave 10 (DUMITRESCU 1961, Pl. 60.S1, Pl. 152a, Pl. 159.S1). These graves

belong already to the Late Bronze Age according to Hungarian terminology, i.e. to BzC1-2 (REICH 2002). The headband from Ócsa has a motif distantly similar to this, there, however, the lines end in a circle instead of spirals and have a dot in their centre (TOPÁL 1973a, 5. kép 1; BÓNA 1992b, 61, Abb. 28). The bronze hoard of Ócsa can be dated to the Koszider Period (TOPÁL 1973a; 1973b).

The double zigzag line on the side of the rattle of Zagyvapálfalva is a wide-spread motif both in space and time. Its variant running completely around vessels can be found in practically all pottery styles of the Early and Middle Bronze Ages in the Carpathian Basin.

A decoration similar to that on the head of the bird can be found on the birds drawing and sitting on the clay chariot model of Dupljaja (KOSSACK 1954, Taf. 3.1b; GARAŠANIN 1958, 86, Taf. 18.1). The heads of the bird-shaped rattles from Királyszentistván are also decorated in this place, although differently, with an incrustated triangle (List 1.10a–c; BÓNA 1975, Taf. 262.1–3).

The motif on the back of the rattle from Buják – two parallel lines ending on both ends in two impressed dots – are fairly frequent in various versions (with 1 to 4 lines and dots) on Transdanubian Incrusted Ware (e.g. Kiskunmajsa–Kőkút: BÁNDI 1968, 66, 6. t. 4; Esztergom–Várhegy: TORMA 1976, Taf. 12.1; Szőny–Nagymagtár: BÓNA 1975, Taf. 207.1; Királyszentistván: BÓNA 1975, Taf. 215.13,18–19; etc.). It also appears in Late Vatyá and Vatyá-Koszider style assemblages, mainly on the side and bottom of bowls (Újhartyán–Vatyá: BÓNA 1975, Taf. 30.8; Pereg: BÓNA 1975, Taf. 45.9; Lovasberény, Grave “e”: BÓNA 1975, Taf. 49.10; Kelebia, Grave 30: BÓNA 1975, Taf. 66.5; Kelebia, Grave 41: BÓNA 1975, Taf. 65.11; Izsák II: BÓNA 1975, Taf. 77.1; Cegléd–Öreghegy: TARI 1992, 21.9. tábla; etc.). A similar decoration can be seen on some of the rattles of the same type as that from Buják with minor changes (e.g. “Harc”, Malé Kosihy, Szécsény). The series of short vertical incisions on the side of the rattle from Buják is also characteristic for this type; similar decoration can be seen e.g. on the pieces from Malé Kosihy and Szécsény.

The feathers on the plastically modelled wings of the rattle from Kisterenye are indicated by parallel, slightly curving incised lines. The analogues have already been cited above. A perfect match of the decoration on the neck of the bird can be found on the bird-shaped vessel from Mala Vrbica (List 3A.4).

The – perhaps pendant-shaped – motif hanging from the “necklace” of the bird head of the fragment from Pákozd was known already in the Early Bronze Age: it is found on two Late Nagyrév style jars from Tószeg (KOVÁCS 1977, 70, 31. kép; KALICZ-SCHREIBER 1984, 158, Taf. 47.5; *ibid.* 1990, 66, 73, Fig. 6.1,4a–b). A similar motif resembling a comb-shaped pendant can be seen on the side of the bird-shaped rattle from Szécsény, on the bottom of a – perhaps Late – Hatvan style hanging bowl from Tiszatardos (KALICZ 1968, Taf. 60.1b), and on an Early Vatyá style bowl from the cemetery of Kulcs (BÓNA 1975, Taf. 10.8). It appears frequently on North Transdanubian Incrusted Ware (Nagylók: WOSINSKY 1904, 42, 19. t. 4; HONTI–KISS 1999–2000, 86, Abb. 5.1; Szőny–Koponyás: BÓNA 1975, Taf. 205.6; HONTI–KISS 1999–2000, 86, Abb. 5.2; Siófok–Balatonszéplak–Vadkacsás: HONTI–KISS 1999–2000, 86, Abb. 5.3; Veszprém–Rákóczi tér: KISS 2001, 167, 73. kép 22, 101. kép 1–3,5), but can be found in the South Transdanubian material as well (Siklós: KISS 2001, 167, 43. kép 1). It can be seen combined with the “W” motif on the vessels from Szőny, Siófok and Mosonszentjános, and on a vessel from Veszprém–Tiszti lakások (KISS 1997, 44, 45 5.3. kép). More

complex versions appear on Lower Danube Incrusted Ware from the earliest – Koszider – phase (SHAL-GANOVA 1995, 294, 296, Fig. 3.30, 27–55).

The decoration made up of “Y” motifs running around the inner side of the rim fragment is also frequent on Middle Bronze Age pottery, although usually in a slightly different version without the upper vertical lines. It can be found on the walls of the urns of late Transdanubian Incrusted Ware (e.g. Esztergom: TORMA 1976, Taf. 9.3, Taf. 10.1,3) and late Vatyá style urns and storage vessels (e.g. Lovasberény–Jánoshegy: BÓNA 1975, Taf. 49.4, Taf. 50.1, Taf. 51.4–5; Cegléd–Öreghegy: BÓNA 1975, Taf. 40.1; Százhalombatta–Földvár: POROSZLAI 2000, Pl. 6.1; Alcsutdoboz–Csaplári-erdő: VÁCZI 2002, 68, 72 5.2. kép; etc.).

The exemplar from Kazár is undecorated.

Based on the above we can date the bird representations from Buják and Pákozd to the Middle Bronze Age, probably to its end, the Koszider Period. The rattles from Zagyvapálfalva and Kisterenye can also be placed in the Middle Bronze Age with some certainty, mostly due to their general characteristics. The Late Bronze Age date of the exemplar from Kazár is given as the result of the excavation, despite the lack of comparable pieces.

Formal-typological groups of Bronze Age bird representations

Although bird representations show great formal variability, a few typological groups can be differentiated without difficulties. Many of the bird-shaped rattles are unique and do not have closer analogues (Füzesabony: List 1.6a–b; Jászdózsa–Kápolnahalom: List 1.8b; CSÁNYI–TÁRNOKI 1992, 206, Nr. 436; Nitriansky Hrádok: List 1.16a–b; TOČÍK 1978, Taf. 50.5, Taf. 55.9; Tószeg: List 1.26a; Tiszaug; Mala Vrbica: List 1.14a; Ostrovul Mare: List 1.17; DUMITRESCU 1974, 354, Fig. 400; Korbovo: List 1.12; VASIĆ–VASIĆ 2000, 135, 136 Fig. 12; unknown site in Hungary: List 1.32). The exemplar from Buják is a representative of a distinctive group of bird-shaped rattles (List 1, Fig. 6). The group is characterized by strong stylization: their body is made up of two spherical segments with a strong side edge and a rib running along the middle of the back. Their head, wings and tail are indicated only by small knobs. They usually bear incised decoration filled with white incrustation. The rattles from Biatorbágy, “Harc”, Maďarovce, Malé Kosihy, Piliny, Százhalombatta, Szécsény and Veszprém (List 1.29a) belong here. Perhaps one of the rattles from Jászdózsa–Kápolnahalom (List 1.8a) can be listed here as well, although it stands of four beaded



Fig. 6. Distribution of Bronze Age bird-shaped rattles (see List 1)

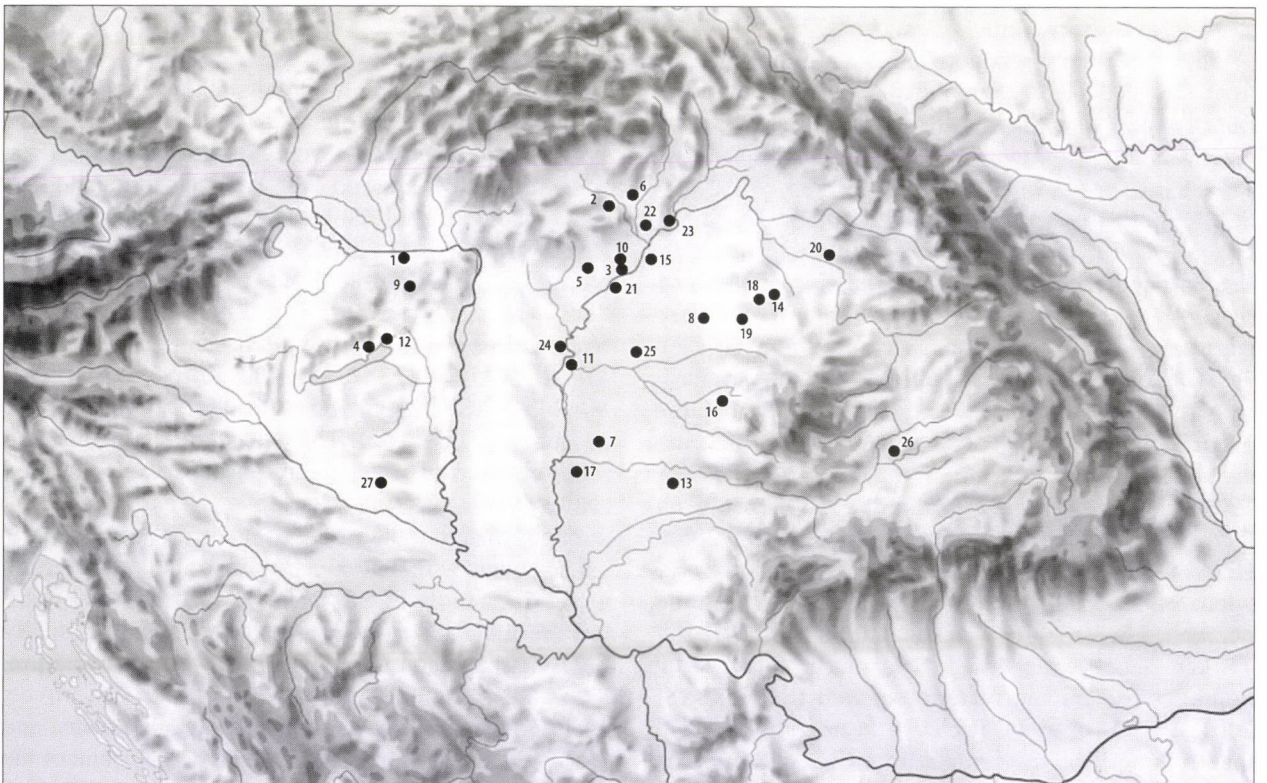


Fig. 7. Distribution of Bronze Age bird-shaped askoi (see List 2)

legs. The members of this group can be dated to the second half of the Middle Bronze Age, probably to the Koszider Period.

Another typological group is formed by a number of less stylized bird-shaped rattles with two human legs, an oval body and highly raised heads on longer necks. The two exemplars from Kaposvár (List 1.9a–b; KISS 2001, 121. kép 1–2) and three others from Királyszentistván certainly belong to this group. The damaged ones from Zamárdi (List 1.31; KISS 2001, 121.kép 6a–c) and Sárísáp (List 1.20; BÓNA 1975, Taf. 209.4) are also close: they stand on two human feet, but their bodies are more globular. The exemplar from Papkeszi (List 1. 18; KISS 2001, 121. kép 5a–b) is also damaged: its head and two legs are missing. The rattle from Dunaalmás with its disproportionately small head and short neck is already slightly different. According to V. Kiss and T. Kovács the unpublished rattle from Siófok–Széplak (List 1.21) is close to the one from Dunaalmás (KOVÁCS–STANCZIK 1980, 49, note 16; KOVÁCS 1989–1990, 38, note 42; KISS 2001, 166, note 1132). Head fragments from Füzesabony (List 1.6c; TOMPA 1934–1935, Taf. 41.26), Nitriansky Hrádok (List 1.16c; TOČÍK 1978, Taf. 126.20) and Veselé–Hradisko¹⁰ (List 1.28; TOČÍK 1964, 88, Tab. 42.18) may have belonged to such bird-shaped rattles as well. These rattles can be dated to the classical phase of the Middle Bronze Age. One of the rattles from Kisterenye (List 1.11a) and the one from Zagyvapálfalva published here are only distantly similar: the bottom of the Kisterenye rattle is flat, while the one from Zagyvapálfalva stands on four beaded feet.

A closed, but small group comprise a few, already Late Bronze Age objects. The rattles from Grave 32 of the cemetery of Cruceni (List 1.3; VASIĆ–VASIĆ 2003, 167, Abb. 11) and from Mala Vrbica (List 1.14c; VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.10) are practically identical both in form and decoration. In both cases the upper part of the body is globular, while the lower part has a truncated cone shape. Their heads are raised up high, while their backs display incised spiral decoration. Another fragmentary piece from Mala Vrbica (List 1.14b; VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.9) was probably of the same type. This group is later than the Koszider Period, they are dated already to the Late Bronze Age.

The classification of Bronze Age bird-shaped askoi (List 2, Fig. 7) into typological groups was carried out by T. Kovács (KOVÁCS 1972, 11; 1989–1990, 37–38). Most recently I. Szathmári collected all the known exemplars (SZATHMÁRI 2003), since then new pieces have been published only from Ároktő–Dongóhalom (List 2.3a–d; FISCHL 2006, 34–35, Nr.

61; 98, Nr. 359; 101–102, Nr. 376; 135, Nr. 513). The earliest ones can be dated to the beginning of the Hungarian Early Bronze Age (Zók: List 2.27; TOMPA 1934–1935, Taf. 20.6; Rabe: List 2.17; BANNER 1939, 80, 4. kép 5a–b). The exemplar from “Hosszúpályi” (List 2.8; KALICZ 1968, Taf. 11.1a–c), from Szabolcs-Szatmár-Bereg County (List 2.28; KALICZ 1968, Taf. 16.1a–b) and Ponorul de la Călățe (List 2.16; ROMAN–NÉMETHI 1986, 224, Fig. 14.6) are dated to the second half of the Early Bronze Age. Although according to Kovács, the Early Bronze Age askoi are unique and show very little similarity with each other and the other askoi, a few important common traits are recognizable: their neck is usually short and vertical and the bird’s “chest” is usually plump. These features can also be observed on a few Middle Bronze Age exemplars, e.g. from Túrkeve (List 2.25; SZATHMÁRI 2003, 515, Abb. 2.3), Tiszalúc–Dankadomb (List 2.22; KALICZ 1968, Taf. 52.10), Kecskéd (List 2.9; DUŠEK 1960b, Taf. 4.3), Wietenberg (List 2.26; POPESCU 1944, 102, Abb. 45.4) and Tiszafüred (List 2.21; KOVÁCS 1990, Abb. 1–5), and perhaps on the fragmentary askos from Felsőörs (List 2.4; ÉRI–KELEMEN–NÉMETH–TORMA 1969, 91, 14. kép).

Regarding the rest of the askoi we accept T. Kovács’ classifications and the additions by K. Fischl (FISCHL 2006). One of the askoi from Füzesabony (List 2.5d; KOVÁCS 1989–1990, 47, Abb. 1.2) and one from Periam (List 2.13; ROSKA 1942, 224, 270. kép) are rather close to each other: they have a short body, short, protruding neck and straight, cut-off rim. They are similar to the askos from Öcsöd (BANNER 1960, 4–7. kép), which, however, is probably earlier.¹¹ The other, mostly Middle Bronze Age, exemplars were divided into two groups by T. Kovács according to the position of their handle. In one group, the handle is placed on the back of the bird, e.g. on the askoi from Füzesabony (List 2.5c, 5e; KALICZ 1968, Taf. 115.7; KOVÁCS 1989–1990, 48, Abb. 2.7), Mezőcsát (List 2.10; KALICZ 1968, Taf. 69.1, Taf. 115.9), Tiszatardos (List 2.23; KALICZ 1968, Taf. 60.3, Taf. 115.6) and Sálacea (List 2.18; BADER 1978, Pl. 19.9). In the other group, the handle arches over the neck and there is often a decoration of short incisions on the back. The exemplars from Pir (List 2.14; BADER 1978, Pl. 29.8), Ároktő (List 2.3d), Alsóvadász (List 2.2; SZATHMÁRI 2003, 520, Abb. 4–5), Tószeg (List 2.24; KOVÁCS 1972, 9, Fig. 1.4) and Füzesabony (List 2.5a, 5f, 5i–l, 5n–o; KOVÁCS–STANCZIK 1980, 48, 4. kép; KOVÁCS 1989, 48, Abb. 2.1, 49, Abb. 3.1–4.6–7) belong here. Another piece from Ároktő (List 2.3b) is a transitional form between T. Kovács’ Types 2 and 3 (FISCHL 2006, 159).¹²

Bird-shaped vessels (List 2, Fig. 8) can be divided into three larger groups. The first group includes vessels whose body is also more or less bird shaped (List 3A). These vessels are rather varied and unique. The “Vučedol Dove” (List 3A.12; SCHMIDT 1945, Taf. 50.1), dated to the Vučedol B1 phase – preceding immediately the beginning of the Bronze Age in Hun-

stand on a low pedestal or ring, their strongly stylized head rises hardly from the rim, and their wings and tails are plastically modelled.

The next group comprises deep bowls with bird head protomes sprouting from their side or rim (List 3B). This group can be divided into two types, only one of which is uniform and easily delineable. The al-



Fig. 8. Distribution of Bronze Age bird-shaped vessels (see List 3)

gary – has no exact analogues. The Middle Bronze Age vessels from Dunaújváros (List 3A.3; KOVÁCS 1972, 17, Fig. 3), Törtel (List 3A.10; KOVÁCS 1972, 19, Fig. 4), Vatin (List 3A.11; KOVÁCS 1972, 9, Fig. 1.7), Pecica (List 3A.6; DUMITRESCU 1974, 358, Fig. 403) and Starčevo (List 3A.7; GARAŠANIN 1952, 64, Fig. 1–1a) are unique as well. The decoration of the fragment from Szentes–Tés (List 3A.8; KALICZ 1968, Taf. 114.2a–c) – short incisions between two parallel incised lines – connects it with the vessel from Bökénymindszent. Both are from the Middle Bronze Age. A smaller group is formed by the vessels from Mala Vrbica (List 3A.4; VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.8), Ostrovul Corbului (List 3A.5; REICH 2005, 233, Abb. 2.3) and Cârna (List 3A.2; DUMITRESCU 1961, Pl. 103.540): they

ready Late Bronze Age (BzC) exemplars from Cârna, Korbovo and Orsoya are all very close to each other; they differ basically only in their decoration and their lid. Their body is pressed globular, they usually stand on a ring, and the bird head springs from their side wall. The vessel from Ostrovul Mare (List 3B.18; DUMITRESCU 1974, 355, Fig. 401) has an identical shape, but the position of the bird head is different: it sprouts from the rim, immediately above the handle. One of the vessels from Szeremle (List 3B.19b) can be regarded a transitional type between vessels with a bird-shaped body and vessels with bird head protomes. Another vessel from Szeremle (List 3B.19a) – although its shape connects it to this group – represents a transitional form towards bowls with lobular rim due to its stylized bird head, just like the vessel

from Balatonfüzfő. The shape of the vessel from Kunszentmárton (List 3B.16; BÓNA 1975, Taf. 190.5) differs from that of the others, and it also stands on two human feet, but its bird head starts from the rim and is positioned right above the handle, just like on the vessel from Ostrovul Mare. These exemplars can be dated to the Koszider Period, while the piece from Balatonfüzfő should be dated immediately before it.

The third group is composed of bowls with rounded shoulder, pressed biconical body and lobular rim, on which the tip of the lobes forms a stylized bird – or sometimes human? – head (List 3C). Most are identical (Mošorin–Feudvar: List 3C.20a; HÄNSEL–MEDOVIĆ 1994, 199, Abb. 9.3; Szeremle: List 3C.22a–b; REICH 2005, 232, Abb. 1.2–3; Vršac–At: List 3C.23; MAJNARIĆ–PANDŽIĆ 1985, T. 4.3) and can be dated to the Koszider Period, together with the fragment from Pákozd. The bird (?) head of one fragment from Mošorin (List 3C.20b; REICH 2005, 232, Abb. 1.5), however, starts from the side of the vessel, and can perhaps be dated after the Koszider Period.

In the Late Bronze Age clay bird representations become rarer, and their place is taken over by objects made of bronze (figurines, pendants, fittings, etc.). Pieces comparable to the rattle from Kazár are not known yet. A bird-shaped rattle standing on a conical pedestal from Lengyel (WOSINSKY 1890, 113–114, Nr. 116; 1896, 338, 95. t. 1) might date from the Late Bronze Age,¹³ just like a fragment of probably a similar piece (WOSINSKY 1904, 30. t. 3).¹⁴ A bird-shaped vessel on a pedestal with a lid decorated by bird heads was found near Mohács and can be dated to HaA-B (KOVÁCS 1977, 58. t.). A fragmentary and unpublished bird-shaped vessel standing on four feet is known from the vicinity of Székesfehérvár (KOVÁCS 1972, 17). The date of a bird-shaped vessel from Maďarovce – mistakenly identified by Bóna as an askos (BÓNA 1975, 214) – is uncertain (VISEGRÁDI 1911, 38, 7. t. 13). Although it was found at the Middle Bronze Age settlement, its shape, especially its high, funnel-like mouth on the back of the bird shows great similarity with Late Bronze Age Lusatian style vessels (e.g. HRALOVÁ 1962, Taf. 23.6; Taf. 27.8; GEDIGA 1979, 328, Ryc. 209.1). A number of bird-shaped askoi were found in the Urnfield Period (HaA-B3) cemetery of Budapest–Békásmegyer (KALICZ-SCHREIBER 1991, 175, 177, Abb. 10.1, 187, Abb. 20.6a–c). Two bird-shaped bronze vessels from Čičerovce and an unknown find spot in Hungary (HAMPEL 1886, LXI. t.3, LXVIII. t. 5; KOVÁCS 1977, 69–70. t.) can be dated to the Late Bronze Age as well. A few ornitomorphic clay figurines are known from Final Bronze Age and Early Iron Age contexts from

Croatia (e.g. Sotin, Batina, Dalj: ILKIĆ 2006, 54, 57–58, T. 4.5,7–8, T. 5.3,6, with further literature) and Transylvania (Teleac: VASILIEV 1985–1986, 79–80, 82, Fig. 2.1). Beyond the Carpathians, a large number of bird-shaped vessels and rattles are known from Lusatian and Wysocko style assemblages (see e.g. GARDAWSKI 1979; GEDIGA 1979; NOWIŃSKI 2000; WĘGRZYNOWICZ 2000).

The role of bird representations in Bronze Age religion

Researchers generally identify Early and Middle Bronze Age bird representations as aquatic birds, and connect them to cultic life and religion. But what does indicate such a function? The first step in such an investigation should be a contextual analysis of these finds. Unfortunately, this is impossible in most cases, since many of them are either stray finds or were found at old, badly documented excavations.

The analysis of the wider context of askoi was carried out by I. Szathmári (SZATHMÁRI 2003, 516–517), but due to the lack of more exact information she could not achieve substantial results. The majority of the askoi was found in settlements, mostly in Middle Bronze Age layers of tell settlements. Unfortunately, the more exact find spot and context of askoi found during early excavations can be determined very rarely. In these cases the askoi were discovered in houses, in house debris, less frequently in the “streets” between the houses, where they probably got secondarily, after the collapse of the house, and never in pits (SZATHMÁRI 2003, 521). The only askos found in a grave comes from Kecskéd, but even in this case the exact assemblage cannot be identified due to insufficient documentation (DUŠEK 1960b, 8). I. Szathmári mentioned the askos of Tiszafüred as coming from a grave as well. In fact, it was found only in the area of the Middle Bronze Age cemetery in the plough-soil, probably in a secondary position (KOVÁCS 1990, 9); still, it is associated with the cemetery. The askos of Felsőörs was definitely found in a special context, since it contained a Tolnanémedi type bronze hoard. It is remarkable that all Middle Bronze Age askoi from the eastern Carpathian Basin were discovered at settlements, while the ones from Transdanubia from a bronze hoard and a grave.

Most bird-shaped rattles were discovered in settlements (Biatorbágy, Buják, Dunaújváros, Füzesabony, Jászdózsa, Kisterenye, Magyarád, Mala Vrbica, Malé Kosiň, Nitriansky Hrádok, Piliny, Százhalombatta, Szécsény, Tiszafüred, Tiszaug, Tószeg, Vattina, Vesele), only a few come from graves (e.g. Cruceni, Kaposvár, Királyszentistván, Siófok, Veszprém). Grave

12 from Királyszentistván is certainly special (BÓNA 1975, 201, Plan 1.9, Taf. 220.1,9–15, Taf. 221–222, Taf. 223.1–6). It contained 34 objects, among them the three bird-shaped rattles, an altar and many clay vessels. It is again remarkable that bird-shaped rattles are discovered exclusively in settlements in the eastern and northern part of the Carpathian Basin, and in graves in the western part.

Among bird-shaped vessels the “Vučedol Dove” comes from a special, certainly ritual context, as demonstrated by M. Bradač recently (BRADAČ 2002, 71, 74, 97). The pit, in which it was found, yielded a great amount of ash and 44 pottery fragments. In the immediate vicinity of the feature two other pits were discovered as well: one contained the skeleton of a sacrificed deer, the other two human skeletons. All three pits were located near the so-called Megaron 1, in which remains of metallurgical activities were found.

The bird-shaped vessels of Vatin, Starčevo, Ostrovl Corbului and Mala Vrbica were also found in settlements, but we have no further knowledge on their context. The exemplars from Szihalom and Pecica probably also come from settlements, but the circumstances of the recovery remain unknown (or unpublished). The vessel of Dunaújváros was discovered in Grave 779 of the cemetery of Duna-dűlő, and allegedly the exemplar from Törtel was discovered in a grave as well (KOVÁCS 1972, 27–28). The vessel from Cârna is a stray find from the area of the cemetery.

Most of the bowls with bird head protomes come from graves. As C. Reich has recently demonstrated (REICH 2005, 236), many of them were unearthed in special or especially rich graves. Grave 71 in Cârna contained a double child burial, while Grave 114 belonged to an adult. The grave of Balatonfüzfő contained more than 100 vessels. A number of vessels and a figurine were found in the grave of Cârna–Ostrovogania. The exemplars from Orsoya were also found in graves, although the cemetery has not yet been fully published and the association of the grave-goods is not always certain (REICH 2005, 236, note 45 with further literature). Although two of the three bird-shaped vessels from Szeremle are stray finds, we can almost be certain that they were also grave-goods.

Some of the bowls with lobular rim come from settlements (Mošorin–Feudvar, Pákozd), but the exemplars from Szeremle were found in especially rich graves (REICH 2005, 231, notes 6–7). The bowl from Vršac was also discovered in a grave.

One of the Late Bronze Age bird-shaped rattles from Lengyel is also worth mentioning. According to Wosinsky's description (WOSINSKY 1890, 64–66), Feature 58 was a round pit with many pottery frag-

ments, cinder covers, animal bones and a piece of a human skull in its upper layers. On the bottom of the pit there was a 160 cm thick layer of ash with many finds in it, including the fragment of the rattle. The feature was most probably a sacrificial pit.

Certain formal characteristics of these bird representations may also suggest a ritual function. Some display anthropomorphic traits, which also indicates that we are not dealing with profane representations. This anthropomorphism is obvious in the case of the bird-shaped askos of Tiszafüred, which has a human face. On one of the askoi from Füzesabony–Öregdomb (List 2.5b) two knobs on the front of the body represent female breasts. Very often bird representations stand on human feet. The bird-shaped rattles from Királyszentistván stand on two human feet, just like the ones from Dunaalmás, Kaposvár, Zamárdi and Sárísáp. The vessel with bird head protome from Kunszentmárton also has two human feet. Although the bird-shaped vessels from Vatin and Starčevo are fragmentary and their legs are missing, presumably they were supported by human feet as well. Two bird-shaped rattles from Füzesabony (List 1.6a–b) have four feet, but only in the case of one it is possible to assume that these are human feet (in the other case they are more crudely shaped).

The bird-shaped vessel of Dunaújváros has a pedestal imitating four human feet, two of which look forward, two backward. According to I. Bóna, the bird is in fact sitting on an altar with human feet (BÓNA 1961, 14). Similar small, flat altars are known from a number of Bronze Age sites.¹⁵ They were probably ritual paraphernalia, consequently the representation of the bird on an altar certainly removes them from the profane world.

It can be observed on some pieces that the neck of the birds is decorated by a necklace-like motif. The neck of the new rattle from Kisterenye–Hársas has an incised line with a row of impressed dots on both sides. The same motif can be seen on the neck of the vessel from Mala Vrbica. Two parallel lines run around the neck of the rattle from Tószeg. Below the neck of the bird head protome of the fragment from Pákozd there are three semicircles, from which comb-shaped pendant-like motifs are hanging. The same kind of pendant appears on the neck of one of the rattles from Veszprém (List 1.19a).¹⁶ On the bird-shaped vessel of Bökény Mindszent two parallel incised lines connected by dense incisions imitate a necklace.¹⁷ The neck of the somewhat earlier “Vučedol Dove” is decorated by a necklace made up of a row of carved triangles with a double-axe motif above it. On the bowl from Feudvar triangles are hanging from the incised semicircle under the bird head, while

on the bowl from Vršac a series of dots are impressed in an arc under the bird head. On the fragment from Mošorin again dots impressed in an arc under the bird head represent a necklace, from which hook-like ornaments are hanging, with a motif in the middle that can be identified as an imitation of a heart-shaped bronze pendant. Similar motifs can be seen on the neck of the vessel from Ostrovul Corbului and the bowls with bird head protomes from Szeremle, Cârna and Orsoya as well. On these latter vessels the decoration under the bird head practically forms a complex decorative “collar” (REICH 2005, 232, 234). Perhaps it is worth mentioning that the neck of the two birds drawing the clay chariot model of Dupljaja is also decorated with three incised lines (KOSSAK 1954, Taf. 1).¹⁸ On the leg of one of the rattles from Királyszentistván (List 1.10c) an incised line ending in a spiral can be seen. This motif probably represents a bronze leg spiral, a human bronze jewellery.¹⁹

It has been suggested in connection with bowls with bird head protomes and bowls with lobular rim that they are representations of human-bird creatures or of human heads wearing bird masks (REICH 2005, 234–235). The vessel from Törtel is also more than a simple bird representation. According to T. Kovács (KOVÁCS 1981, 70), the holes above the small knobs indicating the bird’s eyes served as the sockets of horns made of organic material. If this is correct, this would be the earliest exemplar in a series of Bronze Age horned bird representations. The bowls with bird head protomes from Cârna–Ostrovogania and Orsoya (List 3B.17g) also have horns. These elements also suggest that we are dealing with mythical creatures.

Finally, one of the most important evidence that bird representations played an important role in rituals and cultic life was provided by the recent examination of the askos from Alsóvadász–Várdomb. The chemical study of the organic residue on the internal wall of the vessel demonstrated the presence of animal proteins and high iron content suggestive of blood (SZATHMÁRI 2003, 519–520).

Based on the above we may agree that these special objects play an important role in religious life. The question, however, remains, what role was that? Are there any remains of Bronze Age religious life on the basis of which the role of these bird representations could be reconstructed? Research so far has been concerned with the determination of their chronological and “cultural” place, and – due to the lack of data and the obvious difficulties of interpretation – rarely went further than establishing the fact that these bird figures had some kind of religious function, and probably contained sacrificial liquids.

We can approach this issue from a number of directions. First of all we have to ask if the bird representations of various categories – askoi, vessels and rattles – were connected to the same religious notions, or they should be handled separately. Based on their contexts, there are no significant differences between the askoi and the rattles: most of them come from settlements and the same territorial differences can be observed in both cases. At the same time, an obvious difference is provided by their different functions: one served as a container of liquids, the other as an instrument for making noise (or music and rhythm). Vessels with bird-shaped bodies are also mostly found in settlements, but in the case of bowls with bird head protomes and lobular rim an association with burial is dominant. Although their function could have been closer to that of the askoi, the two latter groups are separated from the rest in both space and time: they appear mainly in the southern part of the Carpathian Basin and can be dated to the end of the Middle Bronze Age (BzB) and the beginning of the Late Bronze Age (BzC). Despite these differences we think that the religious concepts behind the various bird representations were not necessarily different.

In the case of bird-shaped askoi we may assume with some certainty based on the results of the chemical analysis of the exemplar from Alsóvadász that they were the paraphernalia of rites connected with blood sacrifice, probably carried out at tell settlements, which functioned as religious centres as well.

At the same time we may suggest in the case of both the askoi and the bird-shaped vessels that they were used to contain special, valuable, ritually significant, perhaps psychoactive liquids as well.²⁰ The consumption of such substances is frequent in many religions and ritual activities, and was especially important in shamanistic religious practices. One of the most important elements of these is the “journey” or “flight” of the shaman, during which the shaman reaches a trance-like state and the spirit-world with the help of – among others – psychoactive substances. During this process animal-shaped (very often bird-shaped) protective spirits play an important role and help induce the ecstatic state of the shaman (ELIADE 2001, 92–93), consequently in many cultural traditions the costume of the shaman imitates animals (e.g. birds) (ELIADE 2001, 152–154). The shaman often uses ritual objects during the ceremony – among others bird figurines, which are symbols of rising up high (ELIADE 2001, 224) and help the shaman “fly”. Drums also play a central role in shamanistic rituals. They can have many roles: enable the “flight”, take the shaman to his/her target, lure and “capture” spirits, and enable the shaman to focus in order to connect

with the spirit world (ELIADE 2001, 163–169). In some places, however, e.g. in certain North American communities, shamans use rattles instead of drums (ELIADE 2001, 171–172).

We can thus see that psychoactive substances – probably stored in special vessels –, animal symbolism and drums or rattles played an extremely important role in shamanistic rituals. As M. Bradač pointed out during the analysis of the “Vučedol Dove” (BRADAČ 2002), Bronze Age bird representations can easily be interpreted as the paraphernalia of such rituals: bird-shaped vessels – or even askoi – could contain the various psychoactive substances, while bird-shaped rattles could function as the shaman’s rattle. Perhaps the other, simpler, widely used rattles of the Middle Bronze Age could have served a similar purpose.²¹ A connection with shamanistic rituals is also suggested by the representation of human-bird creatures, since shamans often move on their way in the spirit world either with the help of birds or in the shape of birds.

For another possible interpretation of Bronze Age bird representations we can turn to the more well-founded interpretations of Late Bronze Age religious iconography from Central and Northern Europe, and examine how far these motifs and the concepts connected to them can be traced back in space and time. Especially important are in this respect the works of F. Kaul (KAUL 1998; 2003; 2005), in which he examined the iconography of the representations of the Nordic Bronze Age from Montelius’ Period IV to VI, appearing especially on bronze razors, but also on other bronze objects and rock carvings as well (BRADLEY 2006; on decorated razors most recently see JACOB-FRIESEN 2006). The detailed analysis of these enabled him to reconstruct the cosmological mythology of the region and period. According to his results, during its celestial – and nocturnal – voyage, the Sun is transported by horse-headed ships, and is drawn from one ship to another by mythical animals – fish, horse and snake – in the morning, at noon, in the evening and at midnight (Fig. 9).

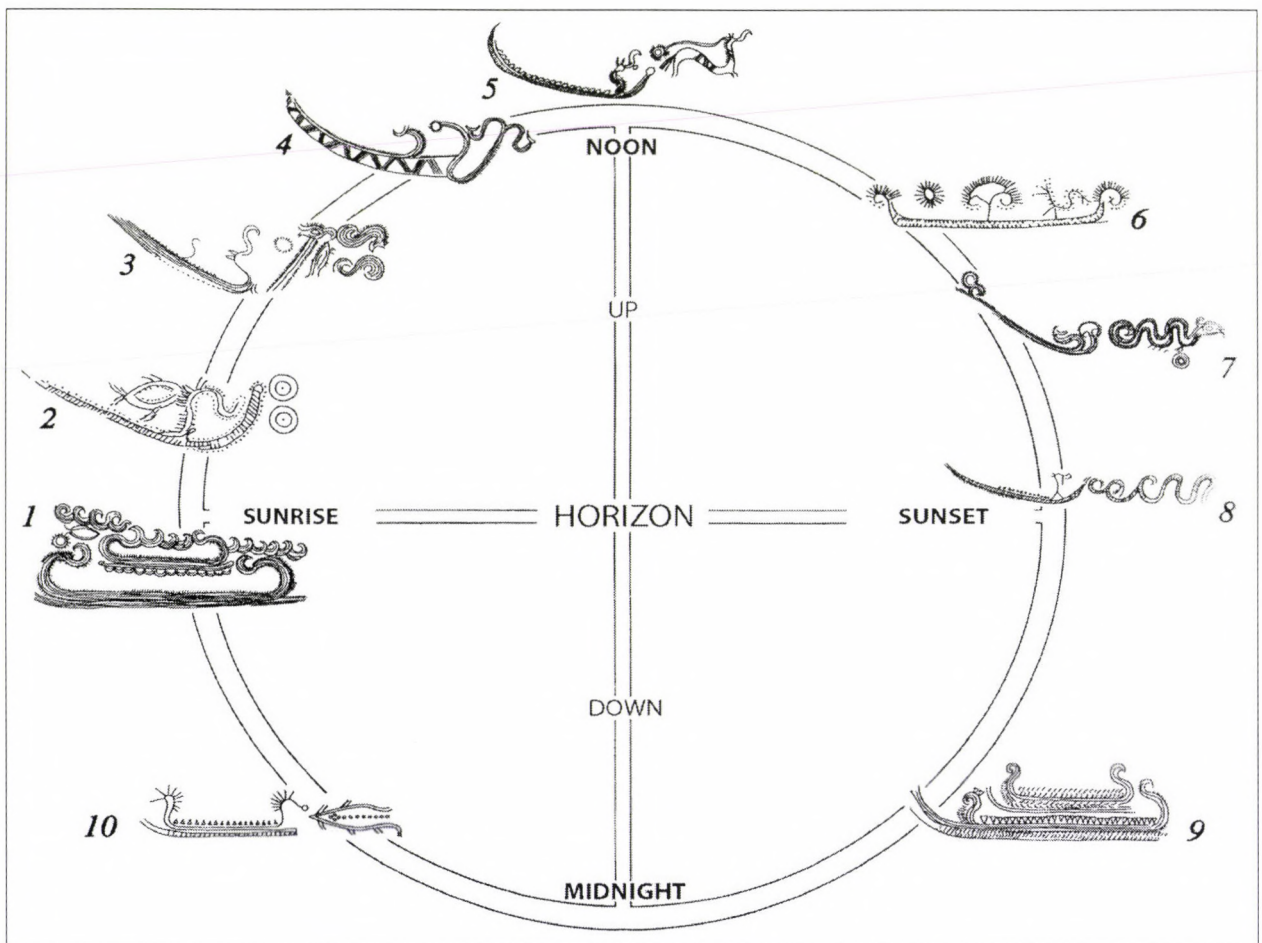


Fig. 9. The reconstruction of the voyage of the Sun based on the representations of the Nordic Late Bronze Age (after KAUL 2003)

Since most representations appear on razors, Kaul suggested that these were handed over to young men during rites of passage connected to initiation ceremonies, together with the knowledge on cosmology, which then accompanied them during the rest of their lives (KAUL 1998, 154–156). Nevertheless, their everyday use seems unlikely, since they usually do not show traces of wear or loss of material due to resharpening (JACOB-FRIESEN 2006, 70). Although these representations sometimes do depict birds as well (e.g. Emsbüren: WILBERTZ 1992, 107, Abb. 6.2; KAUL 1998, 242, Fig. 163²²), they do not seem to play an important role in the reconstructed mythology. We have to note, however, that the positioning of the bird heads on this last-mentioned exemplar is the same as on the bird-ships or Sun-boats from central Europe (see below).

Nordic ship iconography can be traced back to Montelius' Period Ia (contemporaneous with the Middle Bronze Age of the Carpathian Basin). This is the date of the two swords with curving blades (*Krummschwert*) from Rørby, one of which carries a ship representation (KAUL 1998, 73, Fig. 1, with further literature), and probably of a few rock carvings as well. Nevertheless, no Sun imagery is present on these representations yet.

The Sun representation of Trundholm has a great significance in connection with these cosmological concepts. Although it is usually referred to as the "Sun chariot of Trundholm", it is actually not a chariot, but a representation of the Sun drawn by a horse. The composition is placed on a wagon only for practical reasons: it forms a movable podium needed to carry around the scene on various occasions, like processions (KAUL 1998, 30–34; HÄNSEL 2000, 334). The composition of Trundholm can be easily connected to the mythology reconstructed on the basis of later finds, and makes it probable that it – or at least many elements of it – existed already in Montelius' Period II (Tumulus Grave Period in Central Europe).

Birds play a much more prominent role in Late Bronze Age Central European imagery. One of the most important motifs, which is most certainly connected to the Nordic religious concepts, is that of the bird-ship (*Vogelbarke*) or Sun-ship (*Vogelsonnenbarke*). On these representations the keel extensions of the ships end in an aquatic bird's head, and in most cases the ships carry the Sun. The motif has been studied extensively by a number of scholars (e.g. MERHART 1940, 33–36; 1956–1957, 98–107; 1969b, 338–357; KOSSACK 1954, 45–50; JOCKENHÖVEL 1974a; 1974b; SCHAUER 1978, 111–112; ZIPF 2004, 428–477).

Three basic types of the Late Bronze Age Sun-ship motif can be distinguished. The most characteristic and most elaborate bird- and Sun-ships can be found on the richly decorated Hajdúböszörmény type bronze buckets from the HaB1 phase (Fig. 10.1). In this "classic" version the boat encircles from below the Sun disc, which is made up of punched concentric circles and a repoussé central boss. The main distribution area of these buckets is in Northeast Hungary, in the area of the Nyírség and its immediate environment,²³ but they appear in other regions of Europe as well. Some of these can be regarded as imports from the Carpathian Basin (e.g. Unterglauheim: MÜLLER-KARPE 1959, 293, Taf. 169.3–5; Granzin: MERHART 1969b, Taf. 44.2; PATAY 1971, Abb. 198), others are probably local products (e.g. Biernacice: KOSZAŃSKA 1946–1947; MERHART 1969b, Taf. 44.1; Siem: THRANE 1965, Fig. 16–19; MERHART 1969b, Taf. 44.3). A version of this motif appears on Mariesminde type bronze amphorae (Mariesminde: THRANE 1965, Fig. 20–21; MERHART 1969b, Taf. 48.1; Bjärsjöholm: THRANE 1965, 195 Fig. 22; MERHART 1969b, Taf. 48.2), while the classical form can be seen on a few Early Iron Age – 8th century BC – Gevelingen-Veii-Seddin type bronze amphorae (Veii-Quattro Fontanii, Grave AA1: JOCKENHÖVEL 1974a, Taf. 21.1; 1974b, 22 Abb. 4; Gevelinghausen: JOCKENHÖVEL 1974b, Taf. 1–5, 18–21, Abb. 2–3) and the bucket from Rivoli (MERHART 1969b, Taf. 44.5; JANKOVITS 1996, 308, 318 Abb. 7.4).

There exists a simpler version of the Sun-ship as well, which also appears on bronze objects with punched and repoussé decoration. In this case the bird-head protomes start from a horizontal line of dots or bosses; furthermore the keel of the ships does not curve, and the Sun is represented by 1–3 repoussé bosses between the two bird-heads (Fig. 10.3). Such representations are known from Late Bronze Age and Early Iron Age metal vessels, among others on the upper part of the already-mentioned Gevelingen type amphorae. An amphora from Przesławice (JOCKENHÖVEL 1974b, Taf. 8, 25–26; GEDL 1996, 380, 393, Abb. 10) is close to these and bears only the simpler version of the Sun-ship. The motif appears on other Late Urnfield Period bronze vessels as well, e.g. on B1 type bronze cauldrons (Mezőkövesd: PATAY 1969b, Abb. 4–7, Taf. 43.1; 1990, 23, Nr. 19, Taf. 14.19; Kunisowice: MERHART 1969b, Taf. 47.4; PATAY 1969b, 187, Abb. 16, Taf. 49.2; Rossin: MERHART 1969b, Taf. 27.5) and on a conical bronze strainer from Tiszavasvári-Fácános erdő (THRANE 1965, Fig. 24a–b; PATAY 1990, 71, Nr. 120, Taf. 46.120).

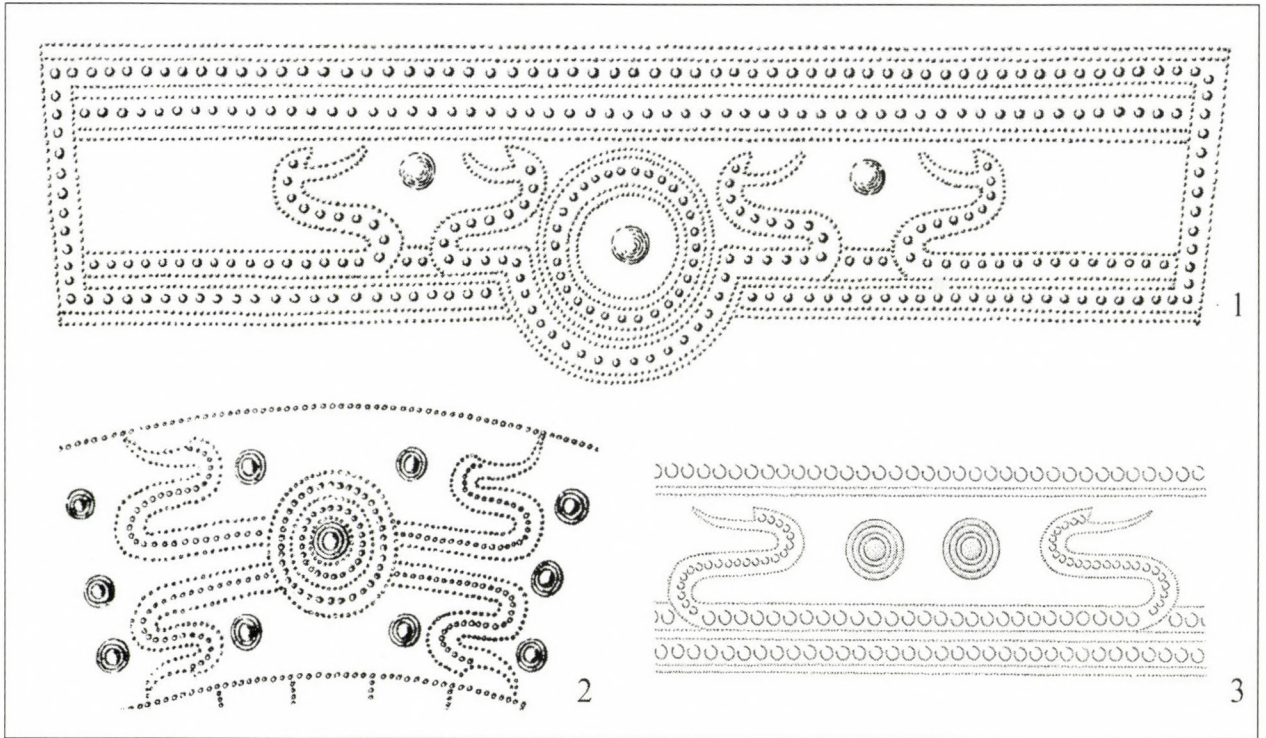


Fig. 10. Sun-ship representations on bronze vessels. 1: Hajdúböszörmény (after PATAY 1990); 2: Este (after MERHART 1969b); 3: Gevelinghausen (after JOCKENHÖVEL 1974b)

The third, rarest version is a double Sun-ship, where two ships are represented keel-to-keel and have a Sun-disc in the middle (Fig. 10.2). This motif can be seen on a shield from an unknown find spot in Denmark (MERHART 1969b, Taf. 50.30), and becomes more popular in Early Iron Age Italy: it appears on bronze vessels from Este (MERHART 1969b, Taf. 47.2) and Ricovero (JANKOVITS 1996, 318, Abb. 7.6), furthermore on elliptic bronze belt plates with punched decoration in a number of versions, associated with separate bird figures and spoked-wheel motifs (ZIPF 2004, 279–312, Taf. 44–47, Taf. 49.1–2, Taf. 50, Taf. 51.1–2).

While previously the time and place of the emergence of the “classic” form of the motif was connected to the Hajdúböszörmény type buckets (e.g. KOS-SACK 1954), it is now clear that this iconography appears roughly at the same time throughout Europe, in the Carpathian Basin, in the northern piedmonts of the Alps and in Northern Italy. In fact, it seems that the earliest ones are from Italy (JOCKENHÖVEL 1974a, 85–86). The motif appears on other object types as well, e.g. on helmets (Tarquinia, Poggio dell’Impiccato: MERHART 1940, 7 Abb. 1.11–11a,13; 21 Abb. 6.1–2; Tarquinia, Monterozzi: JOCKENHÖVEL 1974b, 45, Abb. 8.4; San Canziano: MERHART 1940, 23, Abb. 8.1–2), armours (Fillings: SCHAUER

1978, Taf. 18–23; “Naples”: MERHART 1969a, 152 Abb. 1), diadems (Szombathely: ILON 2002, 1. tábla), graves (Pergine: MERHART 1956–1957, 103, Abb. 3, Taf. 3–4; JOCKENHÖVEL 1974a, Taf. 20.4–5; Cannes-Écluse: JOCKENHÖVEL 1974a, 85, with further literature) and razors (unknown site, Protovillanova phase: JOCKENHÖVEL 1974a, Taf. 19.1; Bo-volone: JOCKENHÖVEL 1974a, Taf. 19.2). Stylized incised versions can be found on Protovillanova style pottery as well (JOCKENHÖVEL 1974a, Taf. 21.2–3,5). A Sun-ship can be seen on one of the marble stelae of Razlogen in Bulgaria (Fig. 11.1) (HÄNSEL 1969, 64, Abb. 1; 2000, 336, Abb. 4b).

The Sun-ship motif can be found on the lower part of the hilt of a large number of Late Urnfield Period solid-hilted swords (so-called bowl-pommel swords or *Schalenknaufschwert*, and swords with three bulges on the grip or *Dreiwulstschwert*). On a few exemplars it is beyond doubt that the decoration actually represents a Sun-ship with bird-head protomes (e.g. Pergine: BIANCO PERONI 1970, 104, Nr. 284, Taf. 42.284, Taf. 63.284; vicinity of Oradea: KEMENCZEI 1991, 51, Nr. 206, Taf. 45.206, Taf. 46.206; BADER 1991, 143, Nr. 339, Taf. 38.339, Taf. 39.339; Szentes: KEMENCZEI 1991, 55, Nr. 233, Taf. 54.233, Taf. 55.233; Derecske: KEMENCZEI 1991, 58, Nr. 245, Taf. 57.245, Taf. 58.245). Furthermore, the bird-head



Fig. 11. The stelae of Razlogen (after HÄNSEL 1969)

appears even on the blade of the sword from Pergine, as a continuation of the garlands accompanied by dots, while the swords from Borsodbóta and Vaja have a ship-like decoration on their blades, with a row of concentric semi-circles on them (MOZSOLICS 1985, 12, Taf. 156.1, Taf. 209.4; KEMENCZEI 1991, 38, Nr. 129.131, Taf. 30.129, Taf. 32.131). Based on these we think it is safe to assume that the other, similar, but somewhat more stylized, decoration on such swords also represent the Sun-ship (BIANCO PERONI 1970, 102–103, Nr. 281–282, Taf. 42:280–282, Taf. 63.282; KRÄMER 1985, 29–34, Nr. 89–107, Taf. 14–17, Taf. 18:107; KEMENCZEI 1991, 50–58, Taf. 44.199–201, Taf. 45–57, Taf. 58:244–45; BADER 1991, 128–139, 140–153, Taf. 32–35, Taf. 38–39, Taf. 42–49, Taf. 50:360; on these types of swords in general see most recently STOCKHAMMER 2004, 35–50, 61–68, 77–91, 104–126).

The same motif appears in the form of pendants and amulets as well (KOSSACK 1954, Taf. 11). A

crescent shaped pendant with two antithetic bird head protomes are known from Debrecen–Fancsika, hoard I (MOZSOLICS 1985, 110, Taf. 213.6). A similar piece is known from the slightly earlier find of Ópályi as well (MOZSOLICS 1973, Taf. 20.4). A small, bird-ship shaped bronze pendant was found in the river Szamos near Satu Mare (PETRESCU-DÎMBOVIȚA 1977, Pl. 182.17; MOZSOLICS 1973, Taf. 29.11). The Early Urnfield Period pendants of Marhaň (FURMÁNEK 1980, 44, Nr. 841, Taf. 31.841, Taf. 35.B3) and Nádudvar (NEPPER-MÁTHÉ 1971, 49, 11. kép 10) are especially interesting: their bodies have multiple perforations, so they probably formed part of a composite pendant ornament (PAULÍK 1999, 44, Obr. 7.2–3). A similar piece from Jernhyt, Denmark (KAUL 1998, 134, Fig. 89) is probably an import from the Carpathian Basin. Bird-ship shaped bronze pendants have also been discovered from Iron Age contexts on the Dalmatian shore and in eastern Italy (HILLER 2001). A few clay models of ships with

bird-head protomes are known from the Villanova Period in Etruria, from Tarquinia (HÖCKMANN 2001, 228, 268, Abb. 3–5, 283, TA 3, 284, TA 12.14).

Bird-ships are much less frequent in the preceding Tumulus Grave Period. The decorated bronze belt plate from Vajdácška can perhaps be dated to BzC – but not later than BzD – and has two ship-renderings lying keel-to-keel, interrupted by concentric circles that symbolize the Sun (KEMENCZEI 1981, 153, Nr. 46, 157, Abb. 1.1, Taf. 5; MOZSOLICS 1985, 59, 210–211, Taf. 207.1; KAUL 1998, 280, Fig. 177). This motif could have been the prototype of the third version of Late Urnfield Period Sun-ship representations. A plastically modelled piece of daub from Dvory nad Žitavou can be dated to the early Tumulus Grave Period, that is, the Koszider Period (PAULÍK 1962, 28–32; PAULÍK 2001, 29, Obr. 11.2). It was found in Pit 3 of the settlement, associated with Late Maďarovce pottery (NOVOTNÁ 1997, Abb. 4.1.4–5). According to M. Novotná and K. Marková, the “horned” disc-shaped pendants from the bronze hoards of Včelince and Kölesd–Nagyhangos could also be interpreted as antithetic bird-heads (MARKOVÁ 2001, 360; NOVOTNÁ 2001, 365–366), and consequently perhaps as bird-ship representations. This might be supported by the fact that the disc of the pendant from Včelince has a spoked-wheel (*Radkreuz*) shaped decoration, which can be identified as a Sun symbol (see below). If we accept this interpretation – despite the fact that the Sun is below the ship – then that would make the piece the earliest Sun-boat representation. Most recently J. Paulík suggested in connection with the reconstruction of a fragment of a clay object, that the motif of the bird-ship could have existed in the Carpathian Basin already in the Middle

Bronze Age. At the site of Dvorníky–Posádka, a Middle Bronze Age fortified settlement, a slightly curving clay object with rectangular cross-section and multiple perforations was found. According to Paulík, the object can be reconstructed as a clay pendant similar to the later bronze exemplars from Marhaň and Nádudvar (Fig. 12) (PAULÍK 1999; 2000; 2001). He also suggested that the bird-head shaped object from Veselý, which we here interpreted – following previous research – as a fragment of a bird-shaped rattle (List 1.28), should be reconstructed the same way. Although both these reconstructions seem to be venture-some, even far-fetched, it is worth mentioning that the neck of the fragment from Veselý has a narrow slot, with the help of which the object could have been suspended. The correctness of this reconstruction can only be confirmed if a similar, but undamaged exemplar is found in the future.

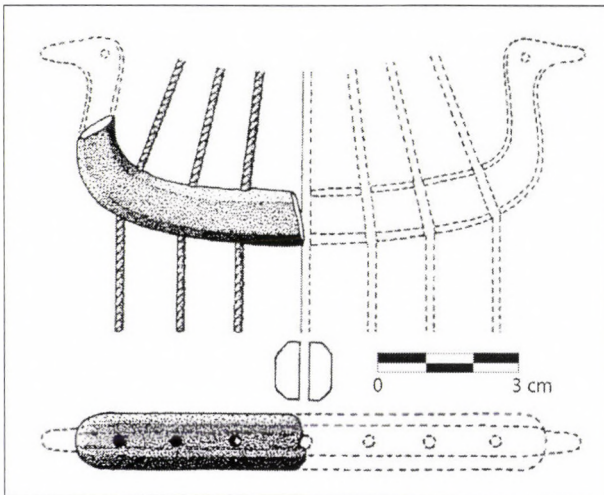


Fig. 12. Dvorníky–Posádka, reconstruction of a clay bird-ship(?) (after PAULÍK 1999)

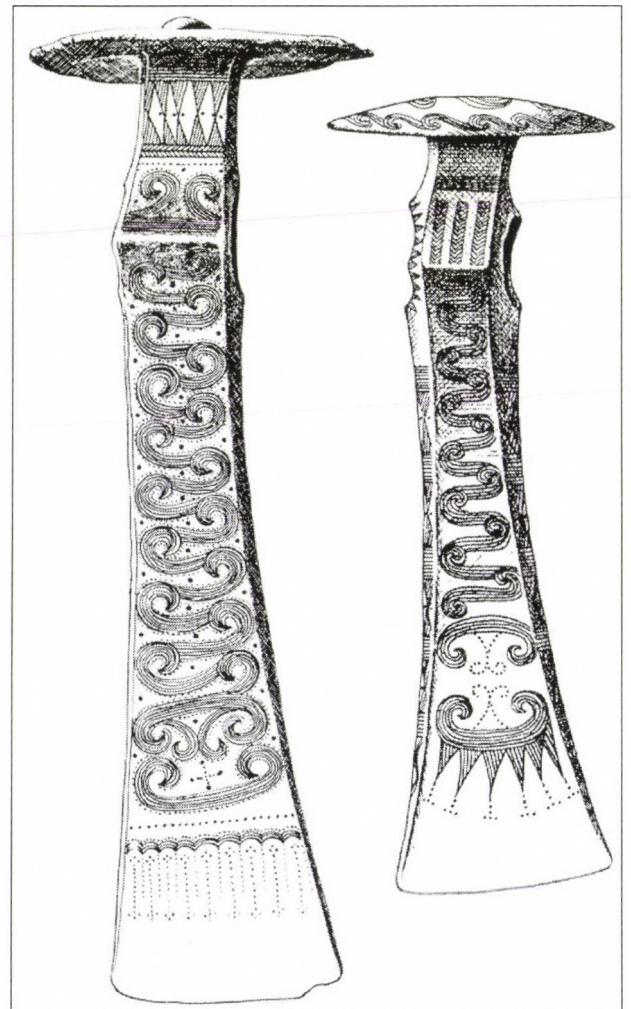


Fig. 13. Disc-butted bronze axes with ship(?) representations (after MOZSOLICS 1967)

Other representations unquestionably identifiable as ships are extremely rare in the Early and Middle Bronze Ages of the Carpathian Basin. An example is the clay boat model from Darda (BÁNDI-KOVÁCS 1969–1970, 11.6–7. tábla; KISS 2002, 64, 2. kép 1a–d), which has an exact parallel from Orsoya (SHALGANOVA 1995, 300, 301 Fig. 5.85; KISS 2002, 54, 2. kép 2a–c). Beyond this the interpretation of various models as ships becomes much less certain. It is possible that the curving line bundles on one of the bronze swords from the Zajta hoard are ships (MOZSOLICS 1967, Taf. 66.4). Perhaps the spiral motif of the rattle from Zagyvapálfalva can also be interpreted as a ship representation. This would be important from two points of view. First, it associates for the first time bird and ship imagery, to become so popular later on. Second, there are short strokes on the line connecting the two spirals, that is, on the ship, which remind us of the similar motifs on the ship representations of the Nordic Late Bronze Age, which are interpreted as the crew of the ships – perhaps the souls of the deceased driving the ship (KAUL 2005).

According to F. Kaul (KAUL 1998, 279), the slightly curving line bundles with spiralling ends closing the running spiral motifs on some of the disc-buttet axes of the Carpathian Basin (Fig. 13) can be regarded as ship representations. Such a motif can be seen on the already mentioned axes from Hajdúsámson, Apa, Gaura, Szeghalom, Someşeni, Păuliş, Téglás, Fridenau, Áporka, etc. A simpler form of the same motif appears on the bronze axe of Piliny, dated to the Middle Tumulus Grave Period (MOZSOLICS 1973, 15, Taf. 8.2a). Among these, the ones from Téglás and Hajdúsámson are especially important, since they have a triangular shaped ornament in the middle of the “ships” (KAUL 1998, 278, Fig. 175). This again reminds us of an element of the Nordic Late Bronze Age representations: the so-called “mushroom” or “fan” motif (KAUL 1998, 188–195).²⁴ The axe from Plăieşti (VULPE 1970, 68, Nr. 294, Taf. 19.294; KAUL 1998, 279, Fig. 176) also deserves attention. On this exemplar there are concentric circles similar to the later Sun representation between the two ship-like curving line bundles closing the running spirals.

We cannot agree with P. Schauer’s opinion, according to which the antithetic bird-head protomes cannot be interpreted as bird-ships, but are representations of mythical creatures – especially on defensive weapons – that have a protective function (SCHAUER 1978 [1982], 111). In the case of the bird-ship representations we would like to suggest that they reflect a cosmological mythology similar to the one in Northern Europe, where a bird-headed ship – or ships? – transport the Sun on its day-and-night, cele-

tial and underworld voyage. We may also assume – again similarly to the Nordic tradition – that a bird-ship represented with the Sun is a symbol of the journey of the Sun during the day, while bird-ships without the Sun represent the Sun’s nocturnal journey, when it cannot be seen. The motif of the bird-ship can be traced back from the 8th century BC to the Koszider Phase in central Europe, suggesting that these cosmological concepts might have existed already in the 16th century BC.

It is worth following the history of the various elements of the Sun-ship motif, since these play a significant role in themselves in Late Bronze Age symbolism. Bird representations appear as punched decoration on e.g. greaves (Rinyaszentkirály: CLAUSING 2002, 153, Abb. 2.3), on a bronze vessel (Prześlawice: JOCKENHÖVEL 1974b, Taf. 8.2; GEDL 1996, 380, 393, Abb. 10), and on the above-mentioned elliptic bronze belt plates from Northern Italy.

Late Bronze Age bronze bird-shaped figurines were first collected by G. Kossack, then analyzed by H. Matthäus (MATTHÄUS 1980; 1981). Their lists can be complemented by a few pieces published since then, e.g. from Tiszavasvári (KEMENCZEI 1984, 189, Taf. 212.9; MOZSOLICS 1985, 205, Taf. 261.22), Sározsadány (MOZSOLICS 1985, 184, Taf. 169.12), Boljanić (KÖNIG 2001, 252, Abb. 1; 2004, 87, Taf. 19.90), Brondski Varoš (CLAUSING 2003, Abb. 55.363), Guşteriţa II (PETRESCU-DÎMBOVIŢA 1977, 96, Pl. 160.1–2), Beravica, Novi Bečej, Futog, Rapoltu Mare (KÖNIG 2001 with further literature), Stockheim (MÜLLER-KARPE 1959, 288, Taf. 156.51), or Lužany (PAULÍK 1969, 24, Obr. 16.2, 28, Obr. 19.6). Most of these are so-called *Aufsteckvögel*, and they were probably fastened to some kind of – perhaps organic – background. A bronze bird-shaped pendant is known from Dedinka (FURMÁNEK 1980, 43–44, Nr. 84, Taf. 31.840, Taf. 42.B7). Bird-heads appear on the pommel of a few Late Bronze Age knives as well (MÜLLER-KARPE 1963). A clay model with birds on wheels was found in Tumulus B of Breźniak in Poland, and can be dated to Period IV (KOSSACK 1954, Taf. 4.8; GEDL 1981, 60–61, Taf. 29.D1–6). Bird figures – especially in the form of pendants, “bobbles” and appliqués – are frequent in early Greek material as well, mainly from the first half of the first millennium BC (BOUZEK 1967; 1970; KILIAN-DIRLMEIER 1979, 69, 72, 127–186).

Beside the bird and the ship, various Sun representations also play a great role in Bronze Age iconography. It can be demonstrated in the Nordic Late Bronze Age that – among others – the motif of the spoked wheel (*Radkreuz*) symbolizes the Sun (KAUL 1998, 195–199). It frequently appears both on razors

and rock carvings (e.g. Hyllingebjerg: KAUL 1998, 94, Fig. 58; Egely: KAUL 1998, 196, Fig. 128), and both on ships or standing alone.

The spoked wheel can be found in many forms in the Urnfield Period material. Especially important are the Hajdúböszörmény type bronze buckets from Biernacice and Siem, and the bronze amphorae from Mariesminde and Bjärsjöholm, on which the sun disc on the bird-ships are represented in this form. While it is debated whether the former two were made in the workshop in the northeast Carpathian Basin producing the classic Hajdúsámson type buckets or were made locally,²⁵ this does suggest that this symbol can be interpreted as the Sun in Central Europe as well.

The spoked wheel is frequent among others on a group of decorated bronze greaves (Athens: PETRES 1982, 60, 67 Abb. 6d; CLAUSING 2002, 152, Abb. 1.2–3; Boljanić: CLAUSING 2002, 152, Abb. 1.1; KÖNIG 2004, 33, 191–194 Nr. 3, Taf. 15.17; Malpensa: JANKOVITS 1997, 11, Fig. 1; Nadap: PETRES 1982, Abb. 3–5; JANKOVITS 1997, 4, Fig. 2, 5, Fig. 3.2; Nagyvejke: JANKOVITS 1997, 7, Fig. 4; Rinyaszentkirály: PETRES 1982, 59, 67, Abb. 6a; JANKOVITS 1997, 2, Fig. 1.1; Slavonski Brod: CLAUSING 2003, 63–64, Abb. 3; Stetten–Teiritzberg: PETRES 1982, 59, 67, Abb. 6c; CLAUSING 2002, 152, Abb. 1.7; Veliko Nabrđe: CLAUSING 2002, 152, Abb. 1.6). It can be observed on bronze belt plates (Uioara de Sus: PETRESCU-DÎMBOVIȚA 1977, 116, Pl. 255.1, Pl. 256.5–6; Gușterița II: PETRESCU-DÎMBOVIȚA 1977, 96, Pl. 159.1; Vajdácška: KEMENCZEI 1981, 153, Nr. 46–47, 157, Abb. 1.1–2, Taf. 5–6; Rościecino: HÄNSEL 2000, 335, Abb. 2) and on some of the Early Urnfield Period Kisterenye type bronze pendants. On two such exemplars from the composite pendant of Rimavské Sobota the mid-piece is shaped like a ribbed spoked wheel (MOZSOLICS 1973, 52–53, Taf. 21; FURMÁNEK 1980, 18, Nr. 139–40, Taf. 8.139–40, Taf. 27.787). A composite pendant from Guruslău also bears spoked wheel shaped motifs (PETRESCU-DÎMBOVIȚA 1977, Pl. 48.18).

Bronze spoked wheel shaped pendants (*Radanhänger*) are known from Denmark to Italy, from France to Bohemia, from any periods from the Middle Tumulus Grave Period until the end of the Bronze Age, in some areas even from the Iron Age (KOS-SACK 1954, 85–91, Fundliste A; WELS-WEY-RAUCH 1978, 67–77). In the Carpathian Basin the exemplars known from Slovakia can be dated to the Early and Middle Urnfield Period (Dedinka, Púchov, Dolné Janíky, etc.: FURMÁNEK 1980, 12–14, Taf. 4.89–91, 93, 96–97, Taf. 5.94, Taf. 42.B4, Taf. 43.A2). In Hungary, a similar pendant was found at Felsődob-

szá (MOZSOLICS 1973, 53, Taf. 47.32), in Romania it is known from the hoard of Mișca (PETRESCU-DÎMBOVIȚA 1977, Pl. 56.3–4), in Croatia from the bronze hoard of Brodski Varoš (CLAUSING 2003, Abb. 55.348–350), and in Bosnia from Drenov dô (KÖNIG 2004, 119, Taf. 56.21). Identical bronze pendants are known from the grave assemblage of Neck-enmarkt, which can be dated to the Koszider Period or immediately after it (MOZSOLICS 1973, 53, Taf. 3.4–6). They appear in the Middle Bronze Age material of the Carpathian Basin as well. One exemplar is known from the Middle Bronze Age fortified settlement of Nitrianskly Hrádok–Zámeček (FURMÁNEK 1980, 13, Nr. 92, Taf. 4.92). The stray exemplar from Vozokany is of similar date (FURMÁNEK 1980, 13, Nr. 95, Taf. 4.95).

Bronze pins with spoked wheel shaped head (*Radnadel*) can usually be dated to the Tumulus Grave Period, and are fairly frequent in female graves in the western part of the distribution area of Tumulus Grave type material. The main distribution area is the Upper Rhine Valley, the Rhine-Main area, eastern Hessen, south Thuringia, western Bohemia, while the easternmost exemplars were found in Poland (LAUX 1976, 15–39, Taf. 1–18; KUBACH 1977, 129–250, Taf. 8.130–142, Taf. 9–39, Taf. 40.495–501; GEDL 1983, 40–41, Taf. 5.111–114; INNERHOFER 2000, 204–212). Certain variants are still used in the Urnfield Period as well, while the earliest exemplars were discovered in the cemetery of Gemeinlebarn E, associated with Böheimkirchen type material datable to the Middle Bronze Age of the Carpathian Basin (Bz A2/A3) (NEUGEBAUER 1994, 138, Abb. 74.20, 140).

The same motif appears on a few Early and Middle Bronze Age disc-headed pins – here not in an open-work, but with punched technique – e.g. from Gáta, Grave 5 (BÓNA 1975, Taf. 275.1–2), Jelšovce, grave 329/85 (BÁTORA 2000, 168, 359–360, Taf. 31.12) from Late Nitra/Aunjetitz context, or Branč, grave 272 (PAULÍK 2001, 22, Obr. 8.3), from Late Aunjetitz context.

The disc-shaped pendants with cross-shaped ribs of the Tolnanémedi type bronze hoards of the Carpathian Basin also have a shape identical to that of the North European “*Radkreuz*”. These objects are found almost exclusively in hoards, which may suggest that – besides their role as jewellery and ornaments – they might have had further symbolic content as well (e.g. Zmajevac: BÓNA 1975, Taf. 271.1–2; Lengyeltóti–Tatárvár: BÓNA 1975, Taf. 272.5; Kölesd–Nagyhangos: BÓNA 1975, Taf. 270.9–11, 15; “Ipoly/Ipel Valley”: BÓNA 1975, Taf. 270.20–21; FURMÁNEK 1980, 12, Nr. 80–84, Taf. 4.80–84; Koroncó: BÓNA

1975, Taf. 269.13; Simontornya: BÓNA 1975, Taf. 269.8; Tolnanémedi: BÓNA 1975, Taf. 268.7–13; Abda: BÓNA 1975, Taf. 267.1–4; Abrahám: FURMÁNEK 1980, 12, Nr. 79, Taf. 4.79; Zbehy–Oberov dvor: FURMÁNEK 1980, 12, Nr. 85–88, Taf. 4.85–88; for a review of the type see HONTI–KISS 1999–2000; JANKOVITS 2003).

Other symbolic motifs can also interpreted as Sun representations, e.g. on the bronze axes from Megyaszó (MOZSOLICS 1967, Taf. 5.6) and Kelebia (MOZSOLICS 1967, Taf. 5.2), on the front side of the clay wagon from Pocsaj (MESTERHÁZY 1976; BÓNA 1992c, 73, Abb. 34; KOVÁCS 1992, 78), on the gold bracelet from Dunavecse (KOVÁCS 1977, 28. kép; 1991, Abb. 1–2; BÓNA 1992b, 55, Abb. 24), on the already mention diadem from Ócsa and Lovasberény (BÓNA 1975, Taf. 52.3), etc. We may also mention the decoration on the bottom of a few Füzesabony, Gyulavarsánd or Late Hatvan style bowls, e.g. from Törökszentmiklós–Terehalom (CSÁNYI–TÁRNOKI 1992, 177, Nr. 20).

One of the most important and most widely spread Sun symbols is the swastika. It appears in the Carpathian Basin already in the Early Bronze Age and can be found mostly on grave ceramics in the Middle Bronze Age (e.g. Újhartyán–Vatya: BÓNA 1975, Taf. 29.3; Kulcs–Császártanya, Grave I: BÓNA 1975, Taf. 1.2; Grave VII: BÓNA 1975, Taf. 2.5; Dévaványa: KALICZ 1968, Taf. 118.5a–b; Mezőberény: BÓNA 1975, Taf. 81.4; Deszk F, Grave 18: BÓNA 1975, Taf. 83.5; Szőreg, Grave 64: BÓNA 1975, Taf. 105.3; Grave 151: BÓNA 1975, Taf. 107.18a–b; Grave 194: BÓNA 1975, Taf. 106.4).

In connection with Sun symbolism we also have to mention the spiral motif so characteristic of the Bronze Age, especially the Middle Bronze Age of the Carpathian Basin. These are regarded by many as Sun symbols, but obviously their interpretation remains debated. In a recent article B. Hänsel argued convincingly that – at least in some cases – this motif is in fact a Sun representation (HÄNSEL 2000). On one of the marble stelae from Razlogen, Bulgaria, a field of running spirals is connected immediately to a disc-shaped motif made up of curving lines starting from the same centre (Fig. 10.2). Here the disc can be interpreted as a Sun, while according to Hänsel the running spirals beneath the disc seem to represent the movement of the Sun (HÄNSEL 2000, 336). This might be confirmed

by the fact that on the Late Tumulus Grave/Early Urnfield Period Kisterenye type pendants the middle part can be alternately a spoked wheel or a spiral, suggesting that these symbols might be interchangeable. It is especially interesting in this context that one of the pendants from Kisterenye has two bird-head protomes on its top (MOZSOLICS 1973, 53, Taf. 40.9).

Conclusion

As we can see from the above, in Central Europe the motifs of the bird-ship/Sun-ship, and the aquatic bird, the ship and the Sun in isolation, had existed continuously from the Middle Bronze Age of the Carpathian Basin until the end of the Urnfield Period, in some areas even further. In the Middle Bronze Age, however, we cannot be certain that these representations symbolized the same cosmology that can be reconstructed for the later periods. The elements of such a cosmology were already present, and some of these elements appear occasionally together already early on. The association of the ship and the Sun is attested on the disc-butted axes; the connection between aquatic birds and ships is demonstrated by the early renderings of antithetic bird-head representations in clay and perhaps on bronze pendants; and an association between the Sun and birds is suggested e.g. by the bird-shaped clay rattle from Tószeg (List 1.26a) that has an incised swastika on its side. While our present knowledge does not allow the reconstruction of a complex picture similar to that in the Nordic Late Bronze Age, it cannot be excluded that there could have existed a myth already in the Middle Bronze Age according to which the Sun was transported on its journey in the sky and the netherworld by a ship – or ships – drawn or guarded by aquatic birds.

At present it is impossible to demonstrate beyond doubt that the bird representations of the Middle Bronze Age – the askoi, rattles and vessels – are connected to such mythologies. Still, it would seem unlikely that they had no connections at all to an important myth about the functioning of the cosmos, in which aquatic birds seem to have played such a central role. In any case, the religious role of birds and bird representations seems to be certain and their use in magical and shamanistic rites and various sacrifices can be safely assumed.

Catalogue of Bronze Age bird representations from the Carpathian Basin²⁶

List 1. Bird-shaped rattles

1. *Biatorbágy–Öreg-hegy* (Pest m., H)
STEIN 1936, 343, 9. kép; DINNYÉS–KÖVÁRI–LOVAG–TETTAMANTI–TOPÁL–TORMA 1986, 30, 1/3. lh., 11. t. 19.
2. *Buják–Tarisznyapart* (Fig. 2) (Nógrád m., H)
3. *Cruceni/Torontálkeresztés, Grave 32* (jud. Timiș, RO)
VASIĆ–VASIĆ 2003, 166, 167 Abb. 11; SZENTMIKLOSI 2006, Pl. 2.1.
4. *Dunaalmás–Uradalmi regálási temető* (Komárom-Esztergom m., H)
BÓNA 1975, 214, Taf. 262.7; VADÁSZ 1986, 20, 7. t. 1–3; KISS 2001, 166, 121. kép 3.
5. *Dunaujváros–Kosziderpadlás* (Fejér m., H)
KOVÁCS–STANCZIK 1980, 44 note 7.; KOVÁCS 1992, 82.
- 6a. *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34 Nr. 18, 50 Abb. 4.1; SZATHMÁRI 1992, 139–140, Abb. 98; CSÁNYI–TÁRNOKI 1992, 206 Nr. 431.
- 6b. *Füzesabony–Öregdomb* (Heves m., H)
TOMPA 1934–1935, 95, Taf. 40.20; KOVÁCS 1989–90, 34 Nr. 19, 50 Abb. 4.3; SZATHMÁRI 1992, 138 Abb. 97, 140; CSÁNYI–TÁRNOKI 1992, 206 Nr. 430.
- 6c. *Füzesabony–Öregdomb* (Heves m., H)
TOMPA 1934–1935, 95, Taf. 41.26; KALICZ 1968, 119–120, Nr. 47, 154, Taf. 115.4; BÓNA 1975, 155, Taf. 263.4; KOVÁCS 1989–1990, 34, Nr. 20, Abb. 2.3.
7. *“Harc”* (Tolna m., H)
BÓNA 1975, 214, Taf. 261.7; KISS 2001, 166, 121. kép 8.
- 8a. *Jászdózsa–Kápolnahalom* (Jász-Nagykun-Szolnok m., H)
CSÁNYI–TÁRNOKI 1992, 206, Nr. 437.
- 8b. *Jászdózsa–Kápolnahalom* (Jász-Nagykun-Szolnok m., H)
CSÁNYI–TÁRNOKI 1992, 206, Nr. 436.
- 9a. *Kaposvár–Toponár, Grave 283* (Somogy m., H)
KISS 2001, 62, 166, 121. kép 1.
- 9b. *Kaposvár–Toponár, Grave 283* (Somogy m., H)
KISS 2001, 62, 166, 121. kép 2.
- 10a. *Királyszentistván–Csatári malom, Grave 12* (Veszprém m., H)
BÓNA 1975, 213, Taf. 211.1, Taf. 222.2, Taf. 262.1; KISS 2001, 166, 63. kép 8, 120. kép 6–7.
- 10b. *Királyszentistván–Csatári malom, Grave 12* (Veszprém m., H)
BÓNA 1975, 213, Taf. 211.1, Taf. 222.3, Taf. 262.2; KOVÁCS 1977, 20. t.; KISS 2001, 166, 63. kép 8, 120. kép 6–7.
- 10c. *Királyszentistván–Csatári malom, Grave 12* (Veszprém m., H)
BÓNA 1961, 13–14, 12. kép; BÓNA 1975, 213, Taf. 211.1, Taf. 222.1, Taf. 262.3; KISS 2001, 166, 63. kép 8. 120. kép 6–7.
- 11a. *Kisterenye–Hársas (or Kisterenye–Aranyhegy)* (Nógrád m., H)
KUBINYI 1861, 97, 16.108. tábla.
- 11b. *Kisterenye–Hársashegy* (Nógrád m., H) (Fig. 3)
12. *Korbovo* (SCG)
VASIĆ–VASIĆ 2000, 135–136, Fig. 12.
- 13a. *Mađarovce/Magyarád (today Santovka-Malinovec)* (okr. Levice, SK)
VISEGRÁDI 1911, 38, 7. t. 3.
- 13b. *Mađarovce/Magyarád (today Santovka-Malinovec)* (okr. Levice, SK)
VISEGRÁDI 1911, 38, 7. t. 4; TOČÍK 1978, Taf. 50.6; 1981a, 111–112 (site given erroneously as Nitriansky Hrádok–Zámeček).
- 14a. *Mala Vrbica–Livade* (Serbia)
VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.7.
- 14b. *Mala Vrbica–Livade* (SCG)
VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.9.
- 14c. *Mala Vrbica–Livade* (SCG)
VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.10; VASIĆ–VASIĆ 2003, 166, 167 Abb. 10.
15. *Malé Kosihy/Kiskeszi–Török domb* (okr. Nové Zámky, SK)
KALICZ 1968, 123, Nr. 110, Taf. 115.2.
- 16a. *Nitriansky Hrádok/Kisvárad–Zámeček* (okr. Nové Zámky, SK)
TOČEK 1978, Taf. 50.5; 1981a, 112; FURMÁNEK–VELIAČIK–VLADÁR 1999, 171, Taf. 22a.
- 16b. *Nitriansky Hrádok/Kisvárad–Zámeček* (okr. Nové Zámky, SK)
TOČÍK 1978, Taf. 55.9; 1981a, 117.
- 16c. *Nitriansky Hrádok/Kisvárad–Zámeček* (okr. Nové Zámky, SK)
TOČÍK 1978, Taf. 126.20; 1981b, 31.
17. *Ostrovul Mare* (jud. Mehedinți, RO)
DUMITRESCU 1974, 354, Fig. 400.
18. *Papkeszi–Felsőmajor* (Veszprém m., H)
KISS 2001, 166, 121. kép 5a–b.
19. *Piliny–Várhegy* (Nógrád m., H)
HAMPEL 1876, 120, LXXXIV t.; 1886, LXXI. t. 1; 1890, Taf. 71.1.
20. *Sárisáp* (Komárom-Esztergom m., Hungary)
BÓNA 1975, 214, Taf. 209.4, KISS 2001, 166, 121.4. kép.
21. *Siófok–Széplak–Vadkacsás, Grave 84* (Somogy m., H)
KOVÁCS 1989–90, 38 note 42.
22. *Százhalombatta–Földvár* (Pest m., H)
POROSZLAI–VINCZE 2004, 64–65, Nr. 102; FEKETE 2005, 47, Pl. 2.3a–b.
23. *Szécsény–Kerekdomb* (Nógrád m., H)
NYÁRY 1907 227–229, 4a–c. kép; BÓNA 1975, 155, Taf. 262.5; KOVÁCS 1989, 11, 7. kép 8.
24. *Tiszafüred–Ásotthalom* (Jász-Nagykun-Szolnok m., H)
Unpublished; KOVÁCS 1989–1990, 39, note 49.
25. *Tiszaug–Kéménytető* (Jász-Nagykun-Szolnok m., H)
BÓNA 1975, 214, Taf. 259.4a–c.
- 26a. *Tőszeg–Laposhalom* (Jász-Nagykun-Szolnok m., H)
KALICZ 1968, 122, Nr. 86, Taf. 115.5 (site given erroneously as Szécsény–Kerekdomb); BÓNA 1975, 155, Taf. 262.6; 1992d, 104, Abb. 68; CSÁNYI–TÁRNOKI 1992, 206, Nr. 434.

- 26b.** *Tószeg* (Jász-Nagykun-Szolnok m., H)
KALICZ 1968, Taf. 115.1.
- 27.** *Vatin/Vattina* (SCG)
VASIĆ–VASIĆ 2000, 135–136, Fig. 14.
- 28.** *Veselé–Hradisko* (okr. Piešťany, SK)
TOČÍK 1964, 39 obr. 21.3a–b, 43, 88, Tab. 42.18.
- 29a.** *Veszprém–Bajcsy-Zsilinszky út* (Veszprém m., H)
BÓNA 1975, 214, Taf. 261.6; KISS 2001, 166, 101. kép 4a–c, 121. kép 7a–b.
- 29b.** *Veszprém–Tiszti lakások, Grave 6* (Veszprém m., H)
ÉRI–KELEMEN–NÉMETH–TORMA 1969, 244 Nr. 51/43c; BÓNA 1975, 214; KISS 2001, 166.
- 29c.** *Veszprém–Tiszti lakások, Grave 6* (Veszprém m., H)
ÉRI–KELEMEN–NÉMETH–TORMA 1969, 244 Nr. 51/43c; BÓNA 1975, 214; KISS 2001, 166.
- 29d.** *Veszprém–Tiszti lakások, Grave 6* (Veszprém m., H)
Unpublished; ÉRI–KELEMEN–NÉMETH–TORMA 1969, 244, Nr. 51/43c; BÓNA 1975, 214; KISS 2001, 166.
- 30.** *Zagyvapálfalva* (Fig. 1) (Nógrád m., H)
- 31.** *Zamárdi* (Somogy m., H)
KISS 2001, 166, 121. kép 6a–c.
- 32.** *Unknow site, Hungary*
KALICZ 1968, 119–120, Nr. 47, Taf. 115.3; BÓNA 1975, Taf. 263.5a–b.

List 2. Bird-shaped askoi

- 1.** *Almásfüzitő, Grave 5(?)* (Komárom-Esztergom m., H)
KOVÁCS 1972, 9, Fig. 1.5, 16; KISS 2001, 166, 120. kép 2.
- 2.** *Alsóvadász–Várdomb* (Borsod-Abaúj-Zemplén m., H)
SZATHMÁRI 2003, 520, Abb. 4–5.
- 3a.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
FISCHL 2006, 34–35, Nr. 61, 159.
- 3b.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
FISCHL 2006, 98, Nr. 359, 159.
- 3c.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
FISCHL 2006, 101–102, Nr. 376, 159.
- 3d.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
KALICZ 1968, Taf. 70.12; FISCHL 2006, 135, Nr. 513, 159.
- 3e.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
KALICZ 1968, Taf. 70.11.
- 3f.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
Unpublished; FISCHL 2006, 159.
- 3g.** *Ároktő–Dongóhalom* (Borsod-Abaúj-Zemplén m., H)
Unpublished; FISCHL 2006, 159.
- 4.** *Felsőörs* (Veszprém m., H)
ÉRI–KELEMEN–NÉMETH–TORMA 1969, 91 19/10. lh., 91 14. kép; KISS 2001, 166, 120.3. kép.
- 5a.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS–STANCZIK 1980, 48, 4. kép; KOVÁCS 1989–1990, 33, Nr. 5, 48, Abb. 2.4; SZATHMÁRI 2003, 515, Abb. 2.10.
- 5b.** *Füzesabony–Öregdomb* (Heves m., H)
KALICZ 1968, 154, 171, Taf. 115.8; KOVÁCS 1972, 9, Fig. 1.3; 1989–1990, 32, Nr. 1, 47, Abb. 1.1; SZATHMÁRI 2003, 515, Abb. 2.12.
- 5c.** *Füzesabony–Öregdomb* (Heves m., H)
KALICZ 1968, 154, 171, Taf. 115.7; KOVÁCS 1972, 9 Fig. 1.2; 1989, 32 Nr. 2, 47 Abb. 1.3; SZATHMÁRI 2003, 515, Abb. 2.9.
- 5d.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 32, Nr. 3, 47, Abb. 1.2.
- 5e.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 4, 48, Abb. 2.7.
- 5f.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 6, 48, Abb. 2.1.
- 5g.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 7, 48, Abb. 2.6.
- 5h.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 8, 48, Abb. 2.5.
- 5i.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 9, 49, Abb. 3.1.
- 5j.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 10, 49, Abb. 3.2.
- 5k.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 11, 49, Abb. 3.3.
- 5l.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 33, Nr. 12, 49, Abb. 3.4.
- 5m.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34, Nr. 13, 49, Abb. 3.5.
- 5n.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34, Nr. 14, 49, Abb. 3.6.
- 5o.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34, Nr. 15, 49 Abb. 3.7.
- 5p.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34, Nr. 16, 49, Abb. 3.8.
- 5q.** *Füzesabony–Öregdomb* (Heves m., H)
KOVÁCS 1989–1990, 34, Nr. 17, 49, Abb. 3.9.
- 6.** *Halmaj* (Borsod-Abaúj-Zemplén m., H)
Unpublished; KOVÁCS 1972, 11, note 28.
- 7.** *Hódmezővásárhely–Gorzsa–Kovács István-tanya* (Csongrád m., H)
GAZDAPUSZTAI 1957, 80, 18. t. 2a–b.
- 8.** *„Hosszúpályi”* (Hajdú-Bihar m., H)
KALICZ 1968, 64, No. 10b, 98, Taf. 11.1a–c; BRADAČ 2002, 73, Sl. 4a–c; SZATHMÁRI 2003, 515, Abb. 2.4; DANI 2005a, 247, 39. t. 29.
- 9.** *Kecskéd* (Komárom-Esztergom m., H)
DUŠEK 1960b, 8, 28, Nr. 29, Taf. 4.3; BÓNA 1975, Taf. 262.4 (site given erroneously as Monostor); KISS 2001, 166, 120. kép 1; SZATHMÁRI 2003, 515, Abb. 2.13.
- 10.** *Mezőcsát–Pástidomb* (Borsod-Abaúj-Zemplén m., H)
KALICZ 1968, Taf. 69.1, Taf. 115.9; SZATHMÁRI 2003, 515, Abb. 2.8.
- 11.** *Nagyrev–Zsidóhalom* (Jász-Nagykun-Szolnok m., H)
KOVÁCS–STANCZIK 1980, 1–3. kép; KOVÁCS 1992, 80–81, Abb. 46; SZATHMÁRI 2003, 515, Abb. 2.14.
- 12.** *Papkeszi* (Veszprém m., H)
KISS 2001, 166.
- 13.** *Periam/Perjámos/Perjamosch* (jud. Timiș, RO)
ROSKA 1942, 224, 270. kép.
- 14.** *Pir/Szilágypér* (jud. Satu Mare, RO)
BADER 1978, 49, Pl. 29.8.
- 15.** *Polgár–Kenderföldek* (Hajdú-Bihar m., H)
Unpublished; SZATHMÁRI 2003.
- 16.** *Ponorul de la Călățea or Peștera Călățea/Kalota-barlang* (jud. Bihor, RO)
ROMAN–NÉMETHI 1986, 221, 224, Fig. 14.6.

17. *Rabe/Rábé-Anka-sziget* (Vojvodina, SCG)
BANNER 1939, 80, 4.5a–b. kép, (site given erroneously as Sövényháza); SZATHMÁRI 2003, 515, Abb. 2.1.
18. *Sálacea/Szalacs* (jud. Bihar, RO)
BADER 1978, 49, Pl. 19.9.
19. *Săcueni/Székelyhid/Zickelhid* (jud. Bihar, RO)
BADER 1978, 49, Pl. 29.10.
20. *Tiream/Mezőterem/Terem* (jud. Satu Mare, RO)
Unpublished; KOVÁCS 1972, 11, note 29.
21. *Tiszafüred-Majoroshalom* (Jász-Nagykun-Szolnok m., H)
KOVÁCS 1977, 45–46. tábla; 1990, Abb. 1–5; SZATHMÁRI 2003, 515, Abb. 2.11.
22. *Tiszalúc–Dankadomb* (Borsod-Abaúj-Zemplén m., H)
KALICZ 1968, Taf. 52.10; KOVÁCS 1972, 9, Fig. 1.1, 11; SZATHMÁRI 2003, 515, Abb. 2.5.
23. *Tiszatardos* (Borsod-Abaúj-Zemplén m., H)
KALICZ 1968, Taf. 60.3, Taf. 115.6; SZATHMÁRI 2003, 515, Abb. 2.6.
24. *Tószeg–Laposhalom* (Jász-Nagykun-Szolnok m., H)
MOZSOLICS 1969, 283, Fig. 4.2; KOVÁCS 1972, 9, 10–11, Fig. 1.4; BÓNA 1975, Taf. 262.6; SZATHMÁRI 2003, 515, Abb. 2.7.
25. *Túrkeve–Terehalom* (Jász-Nagykun-Szolnok m., H)
CSÁNYI-TÁRNOKI 1996, 8. kép; SZATHMÁRI 2003, 515, Abb. 2.3.
26. *Wietenberg (Sighişoara/Segesvár/Schäßburg)* (jud. Muş, Romania)
POPESCU 1944, 101–102, Abb. 45.4.
27. *Zók–Várhegy* (Baranya m., H)
TOMPA 1934–1935, 61, Taf. 20.6; KOVÁCS 1977, 1. t.; BRADÁČ 2002, 73, Sl. 3; SZATHMÁRI 2003, 515, Abb. 2.2.
28. “*Szabolcs-Szatmár-Bereg m.*”
KALICZ 1968, 68, 75, 98, Taf. 16.1a–b; DANI 2005, 246, 39. t. 28.

List 3. Bird-shaped vessels

A) Vessels with bird-shaped body

1. *Bökényimindszent (today Mindszent)* (Csongrád m., H)
KALICZ 1968, 154, Taf. 114.1a–b; KOVÁCS 1972, 9, Fig. 1.6, 16; 1977, 10. t.; BÓNA 1975, 98, Taf. 263.2; BRADÁČ 2002, 74, Sl. 5a–b.
2. *Cârna* (jud. Dolj, RO)
DUMITRESCU 1961, 73, 152, 350, Pl. 103.540, Pl. 109.540.
3. *Dunaiújváros–Duna-dűlő, Grave 779* (Fejér m., H)
KOVÁCS 1972, 17, Fig. 3; 1977, 37. t.; 1992, 80, Abb. 43; BÓNA 1961, 13–14, 13. kép; 1975, Taf. 263.1; CSÁNYI-TÁRNOKI 1992, 206, Nr. 435.
4. *Mala Vrbica–Livade* (SCG)
VUKMANOVIĆ–POPOVIĆ 1996, Tab. 5.8; VASIĆ–VASIĆ 2000, 135, Fig. 11; 2003, 163, 166, Abb. 9.
5. *Ostrovul Corbului* (jud. Mehedinți, RO)
REICH 2005, 233, Abb. 2.3.
6. *Pecica/Pécska/Alt-Petschka* (jud. Arad, RO)
DUMITRESCU 1974, 358, Fig. 403.
7. *Starčevo* (Vojvodina, SCG)
GARAŠANIN 1952, 64, Fig. 1–1a, 65, Fig. 2; 1958, 79, Taf. 17.3.
8. *Szentes–Tés* (Csongrád m., H)
KALICZ 1968, Taf. 114.2a–c.
9. *Szihalom* (Heves m., H)
KALICZ 1968, 160, Taf. 81.7.
10. *Törtel* (Pest m., H)
KOVÁCS 1972, 19.4. kép, 27–28; 1981, 79, Abb. 3.
11. *Vatin/Vattina/Wattin (today Vršac)* (Vojvodina, SCG)
KOVÁCS 1972, 9, Fig. 1.7, 16.
12. *Vučedol–Gradac (today Vukovar)* (Slavonia, HR)
SCHMIDT 1945, 106–108, Taf. 50.1a–b; BRADÁČ 2002, 72, Sl. 1a–b; VASIĆ–VASIĆ 2003, 160, Abb. 2.
13. *Balatonfüzfő–Jánoshegyi utca* (Veszprém m., H)
REGENYE 1996, 57, Taf. 3.4.
- 14a. *Cârna, Grave 71* (jud. Dolj, RO)
DUMITRECU 1961, 73–74, Nr. 271, 152, 350, Pl. 80.271, Pl. 109.271, Pl. 149.271.
- 14b. *Cârna, Grave 114* (jud. Dolj, RO)
DUMITRECU 1961, 102, Nr. 438, Pl. 93.438, Pl. 109.438, Pl. 135.438, Pl. 149.428.
- 14c. *Cârna–Ostrovogania, Grave 8* (jud. Dolj, RO)
REICH 2005, 233, Abb. 2.8.
- 15a. *Korbovo* (SCG)
GARAŠANIN 1958 [1959], 84, Taf. 17.5; CERMANOVIĆ–KUZMANOVIĆ 1960, 190, Sl. 18; KOVÁCS 1972, 9, Fig. 1.10.
- 15b. *Korbovo–Pesak, Grave 7* (SCG)
CERMANOVIĆ–KUZMANOVIĆ 1960, 187, Sl. 7.
16. *Kunszentmárton* (Jász-Nagykun-Szolnok m., H)
BÓNA 1961, 15, 15. kép; 1975, Taf. 190.5; 1992a, 34, Abb. 18; CSÁNYI-TÁRNOKI 1992, 206, Nr. 439.
- 17a. *Orsoya* (Montana, BG)
BONEV 1996, 47, Obr. 6; VASIĆ–VASIĆ 2003, 161–162, Abb. 3.
- 17b. *Orsoya* (Montana, BG)
BONEV 1996, 47, Obr. 7; VASIĆ–VASIĆ 2003, 161–163, Abb. 4.
- 17c. *Orsoya* (Montana, BG)
FILIPOV 1974, 20, Obr. 10B–r; BONEV 1996, 46, Obr. 4; 2002, 6, Obr. 4; VASIĆ–VASIĆ 2003, 163–164, Abb. 5.
- 17d. *Orsoya* (Montana, BG)
FILIPOV 1974, 20, Obr. 10a; BONEV 1996, 46, Obr. 5; VASIĆ–VASIĆ 2003, 163–164, Abb. 6.
- 17e. *Orsoya* (Montana, BG)
VASIĆ–VASIĆ 2003, 163, 165, Abb. 7.
- 17f. *Orsoya* (Montana, BG)
GEORGIEV 1982, 197, Abb. 4.4; VASIĆ–VASIĆ 2003, 163, 165, Abb. 8.
- 17g. *Orsoya* (Montana, BG)
REICH 2005, 233–234, Abb. 2.7.
18. *Ostrovul Mare* (jud. Mehedinți, RO)
DUMITRESCU 1974, 354–355, Fig. 401.

19a. *Szeremle* (Bács-Kiskun m., H)
WOSINSKY 1904, 47–48, 59. t. 5; KOSSACK 1954, 18,
120 Nr. K91, Taf. 5.12; KOVÁCS 1972, 9, Fig. 1.9, 16;
REICH 2005, 233 Abb. 2.2.

19b. *Szeremle* (Bács-Kiskun m., H)
WOSINSKY 1904, 47–48, 59. t. 6; BÁNDI-KOVÁCS
1969–1970, 7. t. 4.5; KOVÁCS 1972, 9, Fig. 1.8; REICH
2005, 233, Abb. 2.1.

19c. *Szeremle, Grave 8* (Bács-Kiskun m., H)
KISS 2001, 166, 120. kép 4–5.

C) Bowls with bird-headed lobular rims

20a. *Mošorin-Feudvar* (Vojvodina, SCG)

HÄNSEL-MEDOVIĆ 1994, 192, 199, Abb. 9.3; REICH
2005, 231–232, Abb. 1.1.

20b. *Mošorin* (Vojvodina, SCG)
REICH 2005, 232, Abb. 1.5.

21. *Pákozd-Várhegy* (Fejér m., H) (Fig. 5)

22a. *Szeremle, Grave 18* (Bács-Kiskun m., H)
REICH 2005, 231–232, Abb. 1.2.

22b. *Szeremle, Grave 27* (Bács-Kiskun m., H)
REICH 2005, 232, Abb. 1.3.

23. *Vršac-At, Grave 2* (Vojvodina, SCG)
MAJNARIĆ-PANĐŽIĆ 1985, T. 4.3; MEDOVIĆ 1996,
170, T. 10.4; REICH 2005, 231–232, Abb. 1.4.

Notes

- 1 We would like to thank Viktória Kiss for making available her unpublished PhD dissertation.
- 2 We would like to thank Ildikó Szathmári, the reviewer of the article, for her valuable remarks and suggestions.
- 3 We would like to express our gratitude to Andrea Vaday for allowing the publication of the find. For the preliminary report on the excavation see VADAY 2003–2004; *ibid.* 2004.
- 4 We would like to thank Gábor Váczi who drew our attention to the find, allowed its publication, and prepared the drawing.
- 5 Since the authors do not agree with the traditional concept of “archaeological culture” – usually thought of as a clearly delineable archaeological unit, identified with an ethnic group – the more neutral expression of “pottery style” will be used. This is intended not as a simple substitution, a mere change of terminology. Obviously, the concept of “archaeological culture” is meant to cover many more aspects of life as well, but its identification is mainly based on pottery. For the present purpose – the determination of the spatial and chronological context – the reference to pottery styles seems just as adequate, and it does not carry any additional connotations.
- 6 According to Gábor Váczi (personal communication), who is working on the excavated material, the earliest pottery from the site is Late Kisapostag/Early Incrusted Ware style, dated to the transition between the Early and Middle Bronze Ages.
- 7 The material is going to be analyzed and published by Szilvia Guba.
- 8 One of the pieces from Maďarovce (List 1.13b) had an interesting afterlife. A. Točík published a bird-shaped rattle from Nitriansky Hrádok–Zámeček (TOČÍK 1978, Taf. 50.6), which is identical both in its form and decoration, even in the shape of the damage at the place of the broken-off head, to the rattle from Maďarovce published by Visegrádi in 1911. Based on the published illustrations it is beyond doubt that we are dealing with the same object. It might be impossible today to find out how the mix-up happened, since Točík even gave the exact context of the find (TOČÍK 1981a, 111–112): allegedly it was found in Pit 307 in Sector b/13. It is possible that the materials from the two sites were mixed in the museum storage rooms, or that the photo of the rattle from Maďarovce was published instead of that of the piece from Nitriansky Hrádok.
- 9 According to V. Kiss’ data, it is registered in the museum of Szekszárd as a stray find from an unknown site (KISS 2001, 166, note 11).
- 10 A. Točík interpreted the find as a fragment of the zoomorphic handle of a clay spoon (TOČÍK 1964, 88), T. Kovács, however, listed it as the fragment of a bird-shaped rattle (KOVÁCS 1972; 1989–1990, 38). Based on the shape of the fragment it can be the head of a rattle belonging to this group. For J. Paulík’s interpretation see below.
- 11 We agree with T. Kovács that the bird-shaped askos from Ōcsöd is more close to Copper Age exemplars from Romania (KOVÁCS 1972, 15, note 41). See e.g. BERCIU 1967, 58, Fig. 16b, Plate 23; MARINESCU-BÎLCU 1990).
- 12 In his article of 1972 T. Kovács mentioned an askos from Rétközberencs (KOVÁCS 1972, 11), which however, does not exist. Apparently Kovács misunderstood N. Kalicz’s article (KALICZ 1970, 26): Kalicz’s text states that the presence of askoi in both the Hatvan and Ottomány style material is only one of the many common elements. Kalicz does not mention an askos from Rétközberencs–Paramdomb, nor does the most recent analysis of the material (DANI 2005). Although this exemplar is mentioned again in one of his other articles (KOVÁCS–STANCZIK 1980, 49), in the later ones it is already omitted (KOVÁCS 1989–1990; 1990).
- 13 Although according to Wosinsky’s description the rattle came from a “layer”, associated with Transdanubian Incrusted Ware, the shape and decoration of the rattle – as mentioned by Wosinsky himself (WOSINSKY 1890, 114) – is much closer to the bird-shaped rattles of the Lusatian type material, consequently it can be dated to the Late Bronze Age.
- 14 Perhaps a similar bird-shaped rattle standing on a funnel-shaped pedestal was also made in the Late Bronze Age, although it was found in the fill of the disturbed Grave 23 of the Lombard Period cemetery of Gyirmót–Homokdomb (TOMKA 2005, 251, 261, Abb. 6.1).

- According to Andrea Vaday, who participated in the excavation and whom we would like to thank for drawing our attention to the find, the rattle was intact at the time of its discovery. Since similar finds are not known from the Migration Period, it can be assumed that the rattle was found during the Early Middle Ages in a nearby Late Bronze Age cemetery, and then deposited in a grave. Two rattles with pressed globular shape and loop handles, decorated with concentric circles might have had a similar fate. They were found in Grave 44 of the 11th century AD cemetery of Szob–Vendelin, but can probably be dated to the Middle Bronze Age (HÖLLRIGL 1932–1933, 95 30. kép).
- 15 A flat, oval altar standing on four human feet was found in Túrkeve–Terehalom (KOVÁCS 1992, 78, 60 Abb. 44). The altars from Darda (BÁNDI–ZOFFMANN 1966, 48, 7. t. 1; BÁNDI–KOVÁCS 1969–1970, 107, 11. t. 4; KOVÁCS 1977, 19. t) and Esztergom (KISS 2001, 166, 122. kép 13) also have four human feet. Perhaps an altar from Cárna is also supported by human feet (DUMITRESCU 1961, Pl. 103.541). The fragment of an altar on four feet with rounded rectangular cross-section was found in an Early Bronze Age layer with Nagyrév style material at Tószeg–Laposhalom (BANNER–BÓNA–MÁRTON 1959, 90, Abb. 1.18a–b; KALICZ–SCHREIBER 1984, 157, Taf. 46.6), while the cemetery of Tószeg–Ökörhalom yielded a round altar standing on four feet with round cross-section (BANNER–BÓNA–MÁRTON 1959, 135, Abb. 6, 139). A rectangular altar with four feet is known from Berettyóújfalú–Herpály (MÁTHÉ 1984, 149, Fig. 6.2a–c, 157–158; 1992, 172 Abb. 129; CSÁNYI–TÁRNOKI 1992, 207, Nr. 445). A number of fragments were found at the tell settlements of Sálacea and Békés–Várdomb as well (BADER 1978, Pl. 25.7, Pl. 29.21; BANNER–BÓNA 1974, Taf. 11.1–2,7, Taf. 16.2, Taf. 23). An altar with four cylindrical legs was found in Grave 12 of the cemetery of Királyszentistván (BÓNA 1975, Taf. 221.18, Taf. 222.4–4a), associated with the three bird-shaped rattles. Similar altars were discovered in Graves 18, 22 and 29 as well (BÓNA 1975, Taf. 230.7, Taf. 232.14, Taf. 236.10, Taf. 237.3), the latter actually yielded two exemplars. Another piece was discovered in the Middle Bronze Age cemetery of Patince in Slovakia (DUŠEK 1957, Obr. 317.9; 1960a). A fragment is known from Tarcál–Méz máj (KALICZ 1968, 154, Taf. 58.16), an intact one from Vác–Pogányvár (KALICZ 1968, 154, Taf. 95.21). The piece from Ároktő (FISCHL 2006, 59, Nr. 176, 159) is also fragmentary. A leg fragment from Százhalombatta–Földvár could also have been the leg of a similar altar (FEKETE 2005, 49, Pl. 2.4).
 - 16 Comb-shaped pendants are characteristic products of the metallurgy of Transdanubia in the Middle Bronze Age and are known mostly from Tolnanémedi type hoards. See MOZSOLICS 1967, 91; BÓNA 1975, 215–216; HONTI–KISS 1999–2000, 84–87.
 - 17 The decoration on the neck can be seen neither on T. Kovács', nor on Bóna's illustrations, but is clearly visible on the photo published by N. Kalicz.
 - 18 According to R. and V. Vasić (VASIĆ–VASIĆ 2003, 157–58), the ornaments on the neck of bird representations are not anthropomorphic features, but are the rendering of the patterns on real life birds as observed in nature by the Bronze Age population. Consequently, based on the position of their neck and head for example the birds drawing and sitting on the clay chariot from Dupljaja can be identified as belonging to the order of Anseriformes, and the pattern on their necks suggest that they are mallards. Although in this specific case this might be true, in most other cases these decorations are much more complex and cannot reflect – only – the patterns of the feathers of these birds. This approach is also contradicted by the presence of many other anthropomorphic elements and the human jewellery (e.g. pendants, spirals).
 - 19 Such bronze leg spirals are known from Middle Bronze Age bronze hoards (e.g. Apa. Páulis, Kispalád, Balatonkiliti, Dunaújváros–Kosziderpadlás III, Mezőberény, Zsadány–Orosipuszta: MOZSOLICS 1967, Taf. 14.2, Taf. 18.5, Taf. 17.4, Taf. 37.2, Taf. 51.3–4, Taf. 67.4, Taf. 69.1–4).
 - 20 The prehistoric use of psychoactive substances and the spread of alcohol consumption has received increasing attention in recent research. The role of the latter might be especially important, mainly after the middle of the 4th millennium BC. It can be assumed that this life-style of perhaps Near Eastern origin spread across Europe around this time, together with the use of the so-called secondary products (e.g. animal traction, dairy products, wool, etc.) and metal vessels. On prehistoric psychoactive substances and alcohol consumption see SHERATT 1987; 1991; 1995.
 - 21 Simple Middle Bronze Age rattles are known from many regions and sites of the Carpathian Basin, e.g. Váršand (BÓNA 1975, 132, Taf. 141.16, Taf. 148.7), Nitriansky Hrádok (FURMÁNEK–VELIAČIK–VLADÁR 1999, 170, Abb. 73.10, Taf. 22a), Szarvas (KALICZ 1968, Taf. 112.8a–b), Szeremle (BÓNA 1975, 213, Taf. 254.11), Szentés–Tés (BÓNA 1975, 213, Taf. 260.8,10), Tiszaug–Kéménytető (BÓNA 1975, 213, Taf. 259.5, Taf. 260.7), Veszprém (BÓNA 1975, Taf. 261.3–5,8–17). Vessels used as rattles appear mainly associated with Transdanubian Incrusted Ware, e.g. Békés–Várdomb (BANNER–BÓNA 1975, 154, Taf. III.6), Királyszentistván (BÓNA 1975, 212, Taf. 218.19), Márok (BÓNA 1975, 213, Taf. 247.3,5) and Ságvár (TOMPA 1934–1935, Taf. 25.5). The settlement of Füzesabony–Öregdomb yielded an anthropomorphic rattle (KOVÁCS 1989–1990, 32, 50 Abb. 4.2).
 - 22 The finding spot of this piece was given previously as “Emmeln” (which was taken over by Kaul as well). The error was corrected by O. Wilbertz (WILBERTZ 1992, 106; JACOB–FRIESEN 2006, 63).
 - 24 Hajdúböszörmény–Csege halom: HAMPEL 1886, 65.3. tábla; PATAY 1969b, Taf. 46.2; 1990, 41 Nr. 57, Taf. 30.57; KOVÁCS 1977, 76. tábla; KEMENCZEI 1984, 172, Taf. 196.1; JANKOVITS 1996, 318 Abb. 7.3; Mezőkövesd: PATAY 1969b, Abb. 2.3, Taf. 41–42; 1990, 41, Nr. 60, Taf. 31.60; Nyírlugos: PATAY

- 1969b, Taf. 47.1; 1990, 41 Nr. 61, 32.61; KEMENCZEI 1984, Taf. 215A.25; Sényő-Dajka-hegy: PATAY 1969b, Taf. 47.2; 1990, 41 Nr. 62, Taf. 33.62; Szentes-Nagyhegy II: PATAY 1969b, 177, Abb. 9; 1990, 41–42, Nr. 63, Taf. 34.63; Sâg: PETRESCU-DÎMBOVIȚA 1977, 134, Pl. 320.1–2; Remetea Mare: MEDELEȚ 1974, Abb. 1–2; Buza: SOROCEANU-BUDA 1978, 101, Abb. 1, 102 Abb. 4.1; Bokavić: KÖNIG 2004, 120, Taf. 48.253–254.
- 24 The interpretation of this motif is among the most controversial ones in the iconography of the Nordic Late Bronze Age. The identification of the symbol as a cult axe seems, however, the most convincing, especially since – beside razors and other media – it appears on such cultic axes as well (Viby: KAUL 1998, 189 Fig. 121; Bredebækgård: KAUL 2003, 49, Abb. 20a, 50 Abb. 20b). See also SCHAUER 1985, 135–142, with further literature.
- 25 This opinion is advocated – among others – by H. Thrane (THRANE 1965, 196). P. Patay does not agree (PATAY 1969a, 20–21), however, and suggests the presence of more workshops producing such buckets.
- 26 The catalogue includes objects outside the Carpathian Basin as well, if they belong to the same types that can be found in the research area.

BIBLIOGRAPHY

- BADER 1978 BADER, T., *Epoca bronzului în nord-vestul Transilvaniei. Cultura pretracică și tracică. – Die Bronzezeit in Nordwestsachsen*. București 1978.
- BADER 1991 BADER, T., *Die Schwerter in Rumänien*. PBF IV, 8. Stuttgart 1991.
- BANNER 1939 BANNER J., *Ujabb adatok a zóki-kultúra elterjedéséhez. – Neue Beiträge zur Verbreitung der Zóker-Kultur*. *Dolg* 15 (1939) 73–92.
- BANNER 1960 BANNER J., *Az Erkel Ferenc Múzeum legrégebb ritkaságai*. In: (szerk.): Dankó I., *A gyulai Erkel Ferenc Múzeum jubileumi évkönyve*. Gyula 1960, 29–45.
- BANNER-BÓNA 1974 BANNER J.-BÓNA I., *Mittelbronzezeitliche Tell-Siedlung bei Békés*. *Fontes ArchHung* Budapest 1974.
- BANNER-BÓNA-MÁRTON 1959 BANNER J.-BÓNA I.-MÁRTON L., *Die Ausgrabungen von L. Márton in Tószeg*. *Acta ArchHung* 10 (1959) 1–140.
- BÁNDI 1968 BÁNDI G., *A dunántúli mészbetétes edények népének keletmagyarországi kapcsolatai. – The East-Hungarian Relations of the People of Transdanubian Incrusted Pottery*. *JPMÉ* 13 (1968 [1971]) 63–73.
- BÁNDI-KOVÁCS 1969–1970 BÁNDI G.-KOVÁCS T., *Adatok Dél-magyarország bronzkorának történetéhez (A Szeremle-csoport). – Beiträge zur Geschichte der Bronzezeit in Südungarn (Szeremle-Gruppe)*. *JPMÉ* 14 (1969–1970 [1974]) 97–111.
- BÁNDI-ZOFFMANN 1966 BÁNDI G.-ZOFFMANN Zs., *Középső bronzkori hamvasztásos temetők Baranyában. – Brandgräberfelder der Mittelbronzezeit im Komitat Baranya*. *JPMÉ* (1966) 43–56.
- BÁTORA 2000 BÁTORA, J.: *Das Gräberfeld von Jelšovce/Slowakei. Ein Beitrag zur Frühbronzezeit im nordwestlichen Karpatenbecken*. *PAS* 16. Kiel 2000.
- BERCIU 1967 BERCIU, D., *Romania before Burebista*. *Ancient Peoples and Places* 57. London 1967.
- BIANCO PERONI 1970 BIANCO PERONI, V., *Die Schwerter in Italien. – Le spade nell'Italia continentale*. PBF IV, 1. München 1970.
- BONEV 1996 BONEV, A., *Po vâprosa za t. nar. „Golyama kolesnica ot s. Duplya”, Banatska oblast. – Sur la question du „Grand char du village de Duplea” dans la région du Banat*. *Arheologiya* 38/4 (1996) 43–48.
- BONEV 2002 BONEV, A., *Kultovi predmeti ot Severozapadna Trakiya ot kâsnata bronzova i načaloto na rannata Želyazna epoha. – Cult Objects from the Late Bronze Age and the Beginning of the Early Iron Age in Northwestern Thrace*. *Arheologiya* 43/2 (2002) 5–12.
- BOUZEK 1967 BOUZEK, J., *Die griechisch-geometrischen Bronzefögel*. *Eirene* 6 (1967) 115–139.
- BOUZEK 1970 BOUZEK, J., *Die Anfänge des griechisch-geometrischen Symbolguts*. *Eirene* 8 (1970) 97–122.

- BÓNA 1961 BÓNA I., *Magyarországi művészet a honfoglalásig*. Művészettörténet 19. Budapest 1961.
- BÓNA 1975 BÓNA I., *Die mittlere Bronzezeit Ungarns und ihre südöstlichen Beziehungen*. ArchHung 49. Budapest 1975.
- BÓNA 1992a BÓNA I., *Bronzezeitliche Tell-Kulturen in Ungarn*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 9–39.
- BÓNA 1992b BÓNA I., *Bronzeguss und Metallbearbeitung bis zum Ende der mittleren Bronzezeit*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 48–65.
- BÓNA 1992c BÓNA I., *Wagen und Wagenmodelle in den Tell-Kulturen*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 73–75.
- BÓNA 1992d BÓNA I., *Tószeg-Laposhalom*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 101–14.
- BRADAČ 2002 BRADAČ, M. M., *Vučedolska "gobulica" kao posuda. – The "dove" from Vučedol as a vessel*. OA 26 (2002) 71–98.
- BRADLEY 2006 BRADLEY, R., *Danish razors and Swedish rocks: Cosmology and the Bronze Age landscape*. *Antiquity* 80 (2006) 372–389.
- CERMANOVIĆ-KUZMANOVIĆ 1960 CERMANOVIĆ-KUZMANOVIĆ, A., *Nova nekropola Žitobrske kulture – „Pesak” kod Korbovo*. *Starinar* 11 (1960) 185–192.
- CLAUSING 2002 CLAUSING, C., *Geschnürte Beinschienen der späten Bronze und älteren Eisenzeit*. JRGZM 49 (2002 [2003]) 149–187.
- CLAUSING 2003 CLAUSING, C., *Ein urnenfelderzeitlicher Hortfund von Slavonski Brod, Kroatien*. JRGZM 50 (2003 [2004]) 47–205.
- CSÁNYI-TÁRNOKI 1992 CSÁNYI M.–TÁRNOKI J., *Katalog der ausgestellten Funde*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 175–210.
- CSÁNYI-TÁRNOKI 1996 CSÁNYI M.–TÁRNOKI J., *Bronzkori tell-telepek a Közép-Tisza vidékén*. In: (szerk.): Madaras L., *Vendégségben őseink háza táján*. Kiállítás vezető. Szolnok 1996, 31–48.
- DANI 2005 (manuscript) DANI J., *A Felső-Tisza-vidék kora bronzkora a tell-kultúrákat megelőző időszakban*. PhD Thesis manuscript, Budapest–Debrecen 2005.
- DINNYÉS-KÖVÁRI-LOVAG-TETTAMANTI-TOPÁL-TORMA 1986 DINNYÉS I.–KÖVÁRI K.–LOVAG ZS.–TETTAMANTI S.–TOPÁL J.–TORMA I., *Pest megye régészeti topográfiája. A budai és szentendrei járás (XIII/1.)* MRT 7. Budapest 1986.
- DUMITRESCU 1961 DUMITRESCU, V., *Necropola de incinerare din epoca bronzului de la Cîrna. – La nécropole d'incinération de l'âge du bronze de Cîrna*. *Biblioteca de Arheologie* 4. București 1961.
- DUMITRESCU 1974 DUMITRESCU, V., *Arta preistorică în România*. București 1974.
- DUŠEK 1957 DUŠEK, M., *Severopanónska kultura na Slovensku. – Die nordpannonische Kultur in der Slowakei*. AR 9 (1957) 834–851.
- DUŠEK 1960a DUŠEK, M., *Patince – pohrebisko severopanonskeje kultúry. – Patince – das Gräberfeld der nord-pannonischen Kultur*. In: Chropovský, B.–Dušek, M.–Polla, B., *Pohrebiská zo staršej doby bronzovej na Slovensku I. – Gräberfelder aus der älteren Bronzezeit in der Slowakei I*. ArchSlov Fontes 3. Bratislava 1960, 137–296.
- DUŠEK 1960b DUŠEK, M., *A kecskédi és monostori bronzkori temető. – Das Gräberfeld in Kecskekéd und Monostor aus der Bronzezeit*. RégFüz Ser. II. 8. Budapest 1960.
- ELIADE 2001 ELIADE, M., *A samanizmus. Az eksztázis ősi technikái*. Osiris könyvtár – Vallástörténet. Budapest 2001.
- ÉRI-KELEMEN-NÉMETH-TORMA 1969 ÉRI I.–KELEMEN M.–NÉMETH P.–TORMA I., *Veszprém megye régészeti topográfiája. A veszprémi járás*. MRT 2. Budapest 1969.
- FEKETE 2005 FEKETE Cs., *The incrustated pottery at the Bronze Age settlement of Százhalombatta*. In: (szerk.): Poroszlai I.–Vicze M., SAX 2. Százhalombatta

- Archaeological Expedition. Report 2 – Field Seasons 2000–2003. Százhalombatta 2005, 45–64.
- FILIPOV 1974 FILIPOV, T., *Keramika i idolna plastika ot kasnobronzovija nekropol pri s. Orsoja, Mihajlovgradski okrag. – Céramique et plastique d'idoles de la nécropole du bronze récent du village Orsoja (département de Mihailovgrad)*. *Arheologiya* (1974/2) 12–23.
- FISCHL 2000 P. FISCHL K., *A Gerjen-csoport kritikai vizsgálata. – Die kritische Untersuchung der Gerjen-Gruppe*. *KEMMK* 7 (2000) 135–147.
- FISCHL 2006 P. FISCHL K., *Ároktő-Dongóhalom bronzkori tell telep. – Bronzezeitliche Tell-Siedlung in Ároktő-Dongóhalom*. *Borsod-Abaúj-Zemplén Megye Régészeti Emlékei* 4. Miskolc 2006.
- FURMÁNEK 1980 FURMÁNEK, V., *Die Anhänger der Slowakei*. PBF XI, 3. München 1980.
- FURMÁNEK–VELIAČIK–VLADÁR 1999 FURMÁNEK, V.–VELIAČIK, L.–VLADÁR, J., *Die Bronzezeit im slowakischen Raum*. PAS 15. Rahden/Westf. 1999.
- GARAŠANIN 1952 GARAŠANIN, D. M., *Jedan preistoriski sud u obliku ptice iz Starčeva. – Une vase en forme d'oiseau*. *RVM* 1 (1952) 64–68.
- GARAŠANIN 1958 GARAŠANIN, M., *Neolithikum und Bronzezeit in Serbien und Makedonien*. *BRGK* 38 (1958 [1959]) 1–130.
- GARDAWSKI 1979 GARDAWSKI, A., *Sztuka plastyczna i figuralna kultury lużyckiej*. In: (Red.): Dąbrowski, J.–Rajewski, Z., *Prahistoria ziem Polskich IV. Od środkowej epoki brązu do środkowego okresu lateńskiego*. Wrocław, Warszawa, Kraków & Gdańsk 1979, 309–314.
- GAZDAPUSZTAI 1957 GAZDAPUSZTAI Gy., *Néhány tiszamenti bronzkori lelet. – Einige frühbronzezeitliche Funde aus dem Theissgebiet*. *MFME* (1957) 79–92.
- GEDIGA 1979 GEDIGA, B., *Zagadnienia religii*. In: (red.): Dąbrowski, J.–Rajewski, Z., *Prahistoria ziem Polskich IV. Od środkowej epoki brązu do środkowego okresu lateńskiego*. Wrocław–Warszawa–Kraków–Gdańsk 1979, 320–341.
- GEDL 1981 GEDL, M., *Die Rasiermesser in Polen*. PBF VIII, 4. München 1981.
- GEDL 1983 GEDL, M., *Die Nadeln in Polen I. Frühe und ältere Bronzezeit*. PBF XIII, 7. München 1983.
- GEDL 1996 GEDL, M., *Jungbronzezeitliche bronzene Trinkhörne aus Nordpolen*. In: (Hrsg.): Kovács, T., *Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen*. *Festschrift für Amália Mozsolics zum 85. Geburtstag*. Budapest 1996, 379–395.
- GEORGIEV 1982 GEORGIEV, G., *Die Erforschung der Bronzezeit in Nordwestbulgarien*. In: (Hrsg.): Hänsel, B., *Südosteuropa zwischen 1600 und 1000 v.Chr.* PAS 1. Berlin 1982, 187–202.
- GUBA 2005 GUBA, Sz., *Late Bronze Age finds of the excavation campaign 1991–1993*. In: (szerk.): Poroszlai I.–Vicze M., *SAX 2. Százhalombatta Archaeological Expedition. Report 2 – Field Seasons 2000–2003*. Százhalombatta 2005, 27–44.
- HAMPEL 1876 HAMPEL J., *Catalogue de l'exposition préhistorique*. Budapest 1876.
- HAMPEL 1886 HAMPEL J., *A bronzkor emlékei Magyarhonban I*. Budapest 1886.
- HAMPEL 1890 HAMPEL J., *Alterthümer der Bronzezeit in Ungarn*. Budapest 1890.
- HÄNSEL 1969 HÄNSEL, B., *Plastik der jüngeren Bronzezeit und der älteren Eisenzeit aus Bulgarien*. *Germania* 47 (1969) 62–86.
- HÄNSEL 2000 HÄNSEL, B., *Die Götter Griechenlands und die südost- bis mitteleuropäische Bronzezeit*. In: (Red.): Gediga, B.–Piotrowska, D., *Kultúra symboliczna kręgu pól popielnicowych epoki brązu i wczesnej epoki żelaza w Europie środkowej. – Die symbolische Kultur der Urnenfelderkreises in der Bronze- und frühen Eisenzeit Mitteleuropas*. *Prace Komisji Archeologicznej* 13., *Biskupińskie Prace Archeologiczne* 1. Warszawa–Wrocław–Biskupin 2000, 331–344.
- HÄNSEL–MEDOVIĆ 1994 HÄNSEL, B.–MEDOVIĆ, P., *Bronzezeitliche Inkrustations-Keramik aus Feudvar bei Mošorin an der Theißmündung*. *ZM* 5 (1994) 189–199.

- HILLER 2001 HILLER, G., *Vogelbarkenpektorale von picenisch-liburnischen Typ*. In: (Hrsgs.): Boehmer, R. M.–Maran, J., *Lux Orientis. Archäologie zwischen Asien und Europa. Festschrift für Harald Hauptman. Internationale Archäologie, Studia honoraria 12.* Rahden/Westf. 2001, 197–200.
- HONTI-KISS 1999–2000 HONTI SZ.–KISS V., *Neuere Angaben zur Bewertung der Hortfunde vom Typ Tolnanémedi*. *Acta ArchHung* 51 (1999–2000) 71–96.
- HÖCKMANN 2001 HÖCKMANN, O., *Etruskische Schifffahrt*. *JRGZM* 48 (2001 [2003]) 227–308.
- HÖLLRIGL 1932–1933 HÖLLRIGL J., *Árpádkori keramikánk II. Domború fenekű edények*. *ArchÉrt* 46 (1932–33 [1934]) 85–98.
- HRALOVÁ 1962 HRALOVÁ, J., *Das Lausitzer Gräberfeld in Malá Belá*. *Fontes Archaeologici Pragenses* 5. Pragae 1962.
- ILKIĆ 2006 ILKIĆ, M., *Terakote kasnog brončanog i starijeg željeznog razdoblja iz Sotina. – Terrakotten der Spätbronzezeit und der älteren Eisenzeit aus Sotin*. *Prilozi Instituta za arheologiju u Zagrebu* 23 (2006) 53–66.
- ILON 2002 ILON G., *Késő bronzkori kincslelet Szombathelyről. Napbárka szimbólumok a Kárpát-medencei urnamezős kultúra lemeztárgyain. – Late Bronze Age artifacts from Szombathely. The so-called "Sun-bark" symbols on the plate artifacts of the Carpathian-basin's Urn-field Culture*. *Savaria* 27 (2002 [2003]) 119–147.
- INNERHOFER 2000 INNERHOFER, F., *Die mittelbronzezeitlichen Nadeln zwischen Vogesen und Karpaten. Studien zur Chronologie, Typologie und regionale Gliederung der Hügelgräberkultur*. UPA 71. Bonn 2000.
- JACOB-FRIESEN 2006 JACOB-FRIESEN, G., *Zu einem reich verzierten Rasiermesser „aus dem Regierungsbezirk Lüneburg“*. *Die Kunde* 57 (2006) 59–78.
- JANKOVITS 1996 JANKOVITS, K., *Beiträge zu der Situla und Bronzepfanne mit Handgriff in Nordostitalien in der Spätbronzezeit*. In: (Hrsg.): Kovács T., *Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen. Festschrift für Amália Mozsolics zum 85. Geburtstag*. Budapest 1996, 303–322.
- JANKOVITS 1997 JANKOVITS, K., *La ricostruzione di due nuovi schinieri dei tipo a lacci dall'Ungheria*. *Acta ArchHung* 49 (1997) 1–21.
- JANKOVITS 2003 JANKOVITS, K., *Neue Angaben zu den scheibenförmigen Anhängern mit kreuzförmigen Rippen und Buckeln*. *Acta ArchHung* 54(2003)273–278.
- JOCKENHÖVEL 1974a JOCKENHÖVEL, A., *Ein reich verziertes Protovillanova-Rasiermesser (Ein Beitrag zum urnenfelderzeitlichen Symbolgut)*. In: (Hrsg.): Müller-Karpe, H., *Beiträge zu italienischen und griechischen Bronzefunden*. PBF XX, 1. München 1974, 81–88.
- JOCKENHÖVEL 1974b JOCKENHÖVEL, A., *Eine Bronzeamphore des 8. Jahrhunderts v. Chr. von Gevelinghausen, Kr. Meschede (Sauerland)*. *Germania* 52 (1974) 16–54.
- KALICZ 1968 KALICZ, N., *Die Frühbronzezeit in Nordost-Ungarn. Abriss der Geschichte des 19.–16. Jahrhunderts v. u. Z.* *ArchHung* 45. Budapest 1968.
- KALICZ 1970 KALICZ N., *Bronzkori telep Rétközberencs határában – A Bronze Age settlement in the outskirts of Rétközberencs*. *ArchÉrt* 97 (1970) 23–31.
- KALICZ-SCHREIBER 1984 KALICZ-SCHREIBER, R., *Komplex der Nagyrév - Kultur*. In: (Hrsg.): Tasić, N., *Kulturen der Frühbronzezeit des Karpatenbeckens und Nordbalkans. Balcano-Pannonica* 22. Beograd 1984, 133–190.
- KALICZ-SCHREIBER 1990 KALICZ-SCHREIBER, R., *Symbolic Representations on Early Bronze Age Vessels*. *JIES* 18 (1990) 59–107.
- KALICZ-SCHREIBER 1991 KALICZ-SCHREIBER, R., *Das spätbronzezeitliche Gräberfeld von Budapest (Ungarn)*. *PZ* 66 (1991) 161–196.
- KAUL 1998 KAUL, F., *Ships on Bronzes. A Study in Bronze Age Iconography and Religion*. *Publications from the National Museum, Studies in Archaeology and History* 3. Copenhagen 1998.
- KAUL 2003 KAUL, F., *Der Mythos von der Reise der Sonne. Darstellungen auf Bronzegegenständen der späten Nordischen Bronzezeit*. In: (Hrsg.): Springer, T.,

- Gold und Kult der Bronzezeit. Germanisches Nationalmuseum, Nürnberg, 22. Mai bis 7. September 2003. Nürnberg 2003, 36–51.
- KAUL 2005 KAUL, F., *Bronze Age tripartite cosmologies*. PZ 80(2005)135–148.
- KEMENCZEI 1981 KEMENCZEI, T., Der Bronzefund von Vajdáciska (Nordungarn). In: (Hrsg.): Lorenz, H., Studien zur Bronzezeit. Festschrift für Wilhelm Albert v. Brunn. Mainz/Rhein 1981, 151–161.
- KEMENCZEI 1984 KEMENCZEI, T., *Die Spätbronzezeit Nordostungarns*. ArchHung 51. Budapest 1984.
- KEMENCZEI 1991 KEMENCZEI, T., *Die Schwerter in Ungarn II. Vollgriffschwerter*. PBF IV, 9. Stuttgart 1991.
- KILIAN-DIRLMEIER 1979 KILIAN-DIRLMEIER, I. *Anhänger in Griechenland von der mykenischen bis zur spätgeometrischen Zeit (Griechisches Festland, Ionische Inseln, dazu Albanien und Jugoslawisch Mazedonien)*. PBF XI, 2. München 1979.
- KISS 1997 KISS V., *A mészbetétes edények népe késői fázisának sírlelete Veszprémből. – Die Grabfunde aus der Spätphase der Inkrustierten Keramik von Veszprém*. ComArchHung (1997) 39–49.
- KISS 2001 (manuscript) KISS V., *A mészbetétes kerámia kultúrája telepei és temetői a Közép- és Dél-Dunántúlon*. PhD Thesis manuscript, Budapest 2001.
- KISS 2002 KISS V., *Bronzkori csónakmodell Dárdáról. – A Bronze Age boat-model from Dárda*. Ősrégészeti Levelek 4 (2002) 60–66.
- KOSSACK 1954 KOSSACK, G., *Studien zum Symbolgut der Urnenfelder- und Hallstattzeit Mitteleuropas*. RGF 20. Berlin 1954.
- KOSZAŃSKA 1946–1947 KOSZAŃSKA, A. H., *Skarb naczyń brązowych z Biernac w pow. turieckim. – Un dépôt de vases en bronze de Biernacice arr. de Turek*. Przegląd Archeologiczny 7 (1946–1947) 106–110.
- KOVÁCS 1969 KOVÁCS T., *A százhalombattai bronzkori telep. – Bronze Age settlement at Százhalombatta*. ArchÉrt 96 (1969) 161–169.
- KOVÁCS 1972 KOVÁCS, T., *Askoi, Bird-shaped Vessels, Bird-shaped Rattles in Bronze Age Hungary*. FolArch 23 (1972) 7–28.
- KOVÁCS 1977 KOVÁCS T., *A bronzkor Magyarországon*. Budapest 1977.
- KOVÁCS 1981 KOVÁCS, T., *Bronzezeitliche Tradition in der hallstattzeitlichen Kunst Transdanubiens*. In: (Red.): Eibner, C.–Eibner, A., Die Halstattkultur. Symposium Steyr 1980. Linz 1981, 65–78.
- KOVÁCS 1989 KOVÁCS T., *Adatok az Ipoly-Zagyva-vidék középső bronzkorához. – Beiträge zur mittleren Bronzezeit der Eipel-Zagyvagegend*. ArchÉrt 114 (1989) 3–21.
- KOVÁCS 1989–1990 KOVÁCS, T., *Menschen- und Tierdarstellungen an der bronzezeitlichen Siedlung von Füzesabony-Öregdomb*. Agria 25–26 (1989–1990) 31–51.
- KOVÁCS 1990 KOVÁCS, T., *Eine bronzezeitliche Rarität: Askos mit menschlichem Gesicht von Tiszafüred und seine südöstlichen Beziehungen*. FolArch 41 (1990) 9–27.
- KOVÁCS 1991 KOVÁCS, T., *Das bronzezeitliche Goldarmband von Dunavecse*. FolArch 42 (1991) 7–25.
- KOVÁCS 1992 KOVÁCS T., *Glaubenswelt und Kunst*. In: (Hrsg.): Meier-Arendt, W., Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss. Frankfurt a.M. 1992, 76–82.
- KOVÁCS–STANCZIK 1980 KOVÁCS T.–STANCZIK I., *Bronzkori aszkosz Nagyrévről. – Bronze Age ascos from Nagyrev*. ArchÉrt 107 (1980) 44–52.
- KÖNIG 2001 KÖNIG, P., *Ein alturnenfelderzeitliche Vogelplastik von Boljanić, Gde. Gračanica, Nordostbosnien*. In: (Hrsgs.): Boehmer, R. M.–Maran, J., Lux Orientis. Archäologie zwischen Asien und Europa. Festschrift für Harald Hauptman. Internationale Archäologie, Studia honoraria 12. Rahden/Westf. 2001, 251–255.
- KÖNIG 2004 KÖNIG, P., *Spätbronzezeitliche Hortfunde aus Bosnien und der Herzegowina*. PBF XX, 1. Stuttgart 2004.
- KRÄMER 1985 KRÄMER, W., *Die Schwerter in Österreich und der Schweiz*. PBF IV, 10. München 1985.

- KUBACH 1977 KUBACH, W., *Die Nadeln in Hessen und Rheinhessen*. PBF XIII, 3. München 1977.
- KUBINYI 1861 KUBINYI F., *Magyarországban talált kő és bronzkori régiségek*. ArchKözl 2 (1861) 79–113.
- LAUX 1976 LAUX, M., *Die Nadeln in Niedersachsen*. PBF XIII, 4. München 1976.
- MAJNARIĆ-PANDŽIĆ 1985 MAJNARIĆ-PANDŽIĆ, N., *Srednjobrončanodobni grobovi na Atu u Vršcu. – Gräber der mittleren Bronzezeit in At bei Vršac*. OA 10 (1985) 41–61.
- MARINESCU-BÎLCU 1990 MARINESCU-BÎLCU, S., *Askod' et rhytons énéolithiques des régions balkano-danubiennes et leurs relations avec le Sud, à la lumière de quelques pièces de Cascioarele*. Dacia 34 (1990) 5–22.
- MARKOVÁ 2001 MARKOVÁ, K., *Die Plastik der älteren Bronzezeit in der Slowakei*. In: (Red.): Gediga, B.–Mierziński, A.–Piotrowski, W., *Sztuka epoki brązu i wczesnej epoki żelaza w Europie środkowej. – Die Kunst der Bronzezeit und der frühen Eisenzeit in Mitteleuropa*. Prace Komisji Archeologicznej 14., Biskupińskie Prace Archeologiczne 2. Wrocław – Biskupin 2001, 353–364.
- MAROSI 1930 MAROSI A., *A pákozdvári őstelep – Die urzeitliche Siedlung zu Pákozdvár*. ArchÉrt 44 (1930) 53–73, 280–281.
- MATTHÄUS 1980 MATTHÄUS, H., *Mykenische Vogelbarken. Antithetische Tierprotomen in der Kunst des östlichen Mittelmeerraumes*. AKorr 10 (1980) 319–330.
- MATTHÄUS 1981 MATTHÄUS, H., *KYKNOI ΔΕ ΗΣΑΝ ΤΟ ΑΡΜΑ – Spätmykenische und urnenfelderzeitliche Vogelplastik*. In: (Hrsg.): Lorenz, H., *Studien zur Bronzezeit*. Festschrift für Wilhelm Albert v. Brunn. Mainz/Rhein 1981, 277–297.
- MÁTHÉ 1969–1970 SZ. MÁTHÉ M., *Középső bronzkori fegyverlelet Téglásról. – A Find of Weapons at Téglás from the Middle Bronze Age*. DMÉ (1969–1970 [1971]) 61–66.
- MÁTHÉ 1984 SZ. MÁTHÉ, M., *Preliminary Report on the 1977–1982 Excavations at the Neolithic and Bronze Age Settlement of Berettyóújfalu-Herpály. Part II. Bronze Age*. Acta ArchHung 36 (1984) 137–149.
- MÁTHÉ 1992 SZ. MÁTHÉ M., *Berettyóújfalu-Herpály-Földvár*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 170–173.
- MÁTHÉ 1996 SZ. MÁTHÉ, M., *The 'missing' axe of the Hajdúsámson treasure*. In: (Hrsg.): Kovács T., *Studien zur Metallindustrie im Karpatenbecken und den benachbarten Regionen*. Festschrift für Amália Mozsolics zum 85. Geburtstag. Budapest 1996, 125–128.
- MEDELEȚ 1974 MEDELEȚ, F., *Die Bronzesitula von Remetea Mare (Kreis Timiș)*. Dacia 18 (1974) 95–102.
- MEDOVIĆ 1996 MEDOVIĆ, P., *Die inkrustierte Keramik der Mittelbronzezeit in der Vojvodina*. In: (ed.): Tasić, N., *The Yugoslav Danube Basin and the Neighbouring Regions in the 2nd Millennium B.C*. Belgrade–Vršac 1996, 163–172.
- MERHART 1940 von MERHART, G., *Zu den ersten Metallhelmen Europas*. BRGK 30 (1940 [1941]) 4–42.
- MERHART 1956–1957 von MERHART, G., *Geschnürte Schienen*. BRGK 37–38 (1956–1957 [1958]) 91–147.
- MERHART 1969a von MERHART, G., *Panzer-Studie*. In: (Hrsg.): Kossack, G., *Hallstatt und Italien. Gesammelte Aufsätze zur Frühen Eisenzeit in Italien und Mitteleuropa*. Bonn 1969, 149–171.
- MERHART 1969b von MERHART, G., *Über einige Gattungen von Bronzegefäßen*. In: (Hrsg.): Kossack, G., *Hallstatt und Italien. Gesammelte Aufsätze zur Frühen Eisenzeit in Italien und Mitteleuropa*. Bonn 1969, 280–379.
- MESTERHÁZY 1976 MESTERHÁZY K., *Agyag kocsimodell Pocsajról. – Clay Cart Model from Pocsaj*. ArchÉrt 103 (1976) 223–230.
- MOZSOLICS 1954 MOZSOLICS, A., *Neuere hallstattzeitliche Helmfunde aus Ungarn*. Acta ArchHung 5 (1954) 35–54.
- MOZSOLICS 1967 MOZSOLICS A., *Die Bronzefunde des Karpatenbeckens. Depotfundhorizonte von Hajdúsámson und Koszider*. Budapest 1967.

- MOZSOLICS 1969 MOZSOLICS, A., *La stratigraphie, base de la chronologie de l'âge du bronze de la Hongrie*. *Origini* 3 (1969) 275–294.
- MOZSOLICS 1973 MOZSOLICS, A., *Bronze- und Goldfunde des Karpatenbeckens. Depotfundhorizonte von Forró und "pályi*. Budapest 1973.
- MOZSOLICS 1985 MOZSOLICS, A., *Bronzefunde aus Ungarn. Depotfundhorizonte von Aranyos, Kurd und Gyermely*. Budapest 1985.
- MÜLLER-KARPE 1959 MÜLLER-KARPE, H., *Beiträge zur Chronologie der Urnenfelderzeit nördlich und südlich der Alpen*. RGF 22. Berlin 1959.
- MÜLLER-KARPE 1963 MÜLLER-KARPE, H., *Vogelkopfmesser*. *Germania* 41 (1963) 9–13.
- NEES 1932–1933 NEES M., *A tibolddaróci kincslelet*. *ArchÉrt* 45 (1932–1933 [1934]) 164–174.
- NEPPER–MÁTHÉ 1971 M. NEPPER I.–SZ. MÁTHÉ M., *A Hajdú-Bihar megyei múzeumok régészeti tevékenysége 1969–1971 (Leletkataszter)*. – *The Archaeological Activity of the Museums of Hajdú-Bihar County in the Years 1969. 1971 (A Survey of Finds)*. *DMÉ* (1971 [1972]) 35–54.
- NEUGEBAUER 1994 NEUGEBAUER, J.-W., *Bronzezeit in Österreich*. Wissenschaftliche Schriftenreihe Niederösterreich. Wien 1994, 98–101.
- NOVOTNÁ 1997 NOVOTNÁ, M., *Zur Mobilität in der Bronzezeit*. *SPFFBU* 46 (1997 [1998]) 169–179.
- NOVOTNÁ 2001 NOVOTNÁ, M., *Symbole vom Rad und Sonne in der Kunst der Bronzezeit*. In: (Red.): Gediga, B.–Mierziński, A.–Piotrowski, W., *Sztuka epoki brązu i wczesnej epoki żelaza w Europie środkowej*. – *Die Kunst der Bronzezeit und der frühen Eisenzeit in Mitteleuropa*. *Prace Komisji Archeologicznej* 14., *Biskupińskie Prace Archeologiczne* 2. Wrocław – Biskupin 2001, 365–375.
- NOWIŃSKI 2000 NOWIŃSKI, J. T., *Grzechotki ludności kultury lużyckiej w kontekście przesilenia sakralnej – Die Tonklappern der Bevölkerung der Lausitzer Kultur im Kontext des sakralen Raumes*. In: (Red.): Gediga, B.–Piotrowska, D., *Kultúra symbolická kruhu pól popielnicových epoki brázu i wczesnej epoki želaza w Europie środkowej – Die symbolische Kultur der Urnenfelderkreises in der Bronze- und frühen Eisenzeit Mitteleuropas*. *Prace Komisji Archeologicznej* 13., *Biskupińskie Prace Archeologiczne* 1. Warszawa, Wrocław & Biskupin 2000, 256–78.
- NYÁRY 1907 NYÁRY A., *Ásatás a szécsényi kerekdombon (Nógrád m.)*. *ArchÉrt* 27 (1907) 222–231.
- PATAY 1969a PATAY, P., *Bronz szitula a Magyar Nemzeti Múzeum gyűjteményében*. – *Bronzesitula aus der Sammlung des Ungarischen Nationalmuseums*. *FolArch* 20 (1969) 11–24.
- PATAY 1969b PATAY, P., *Der Bronzefund von Mezökövesd*. *Acta ArchHung* 21 (1969) 167–216.
- PATAY 1971 PATAY, P., *Bemerkungen zu den Situlenpaar von Granzin, Kreis Lübz*. *Bodendenkmalpflege in Mecklenburg, Jahrbuch* 1971 [1972] 265–272.
- PATAY 1990 PATAY, P., *Die Bronzegefäße in Ungarn*. *PBF* II, 10. München 1990.
- PAULÍK 1962 PAULÍK, J., *Mazanica s plastickou výzdobou v dobe bronzovej na Slovensku*. – *Lehmbewurf mit plastischer Verzierung aus der Bronzezeit in der Slowakei*. *ŠtZ* 10 (1962) 27–57.
- PAULÍK 1969 PAULÍK, J., *Mohyla z mladšej doby bronzovej v Lužanoch*. – *Ein Hügelgrab aus der jüngeren Bronzezeit in Lužany*. *ZSNM* 63 (1969) 3–51.
- PAULÍK 1999 PAULÍK, J., *Nález hlinenej vtácej loďky v Dvorníkoč-Posádke I*. – *Der Fund einer tönernen Vogelbarke in Dvorníky Posádka I*. *ZSNM* 93 (1999) 29–54.
- PAULÍK 2000 PAULÍK, J., *Nález hlinenej vtácej loďky v Dvorníkoč-Posádke II*. – *Der Fund einer tönernen Vogelbarke in Dvorníky Posádka II*. *ZSNM* 94 (2000) 29–60.
- PAULÍK 2001 PAULÍK, J., *Nález hlinenej vtácej loďky v Dvorníkoč-Posádke III*. – *Der Fund einer tönernen Vogelbarke in Dvorníky Posádka III*. *ZSNM* 95 (2001) 9–72.

- PETRES 1982 F. PETRES, É., *Neue Angaben über die Verbreitung der spätbronzezeitlichen Schutzwaffen*. Savaria 16 (1982 [1983]) 57–80.
- PETRESCU-DÎMBOVIȚA 1977 PETRESCU-DÎMBOVIȚA, M., *Depozitele de bronzuri din România*. Biblioteca de Arheologie 30. București 1977.
- POPESCU 1944 POPESCU, D., *Die frühe und mittlere Bronzezeit in Siebenbürgen*. Biblioteca Muzeului Național de Antichități din București 2. București 1944.
- POROSZLAI 2000 POROSZLAI, I., *Excavation campaigns at the Bronze Age tell site at Százhalombatta-Földvár. I. 1989 – 1991; II. 1991 – 1993*. In: (eds.): Poroszlai I.–Vicze M., SAX. Százhalombatta Archaeological Expedition. Annual Report 1 – Field Season 1998. Százhalombatta 2000, 13–73.
- POROSZLAI–VICZE 2004 POROSZLAI I.–VICZE M., *Százhalombatta története a bronzkortól napjainkig. A százhalombattai „Matrica” Múzeum állandó kiállításának katalógusa*. Százhalombatta 2004.
- REGENYE 1995 REGENYE J., *Neue Funde der transdanubischen inkrustierten Keramik auf dem Balaton-Hochland*. PáMÉ 6 (1996) 53–63.
- REICH 2002 REICH, C., *Das Gräberfeld von Cîrna*. PZ 77 (2002) 159–179.
- REICH 2005 REICH, C., *„Vogelmenschen und Menschenvögel”. Bronzezeitliche Vogel-Menschen-Darstellungen im mittleren und unteren Donauraum*. In: (Hrsgs.): Horejs, B.–Jung, R.–Kaiser, E.–Teržan, B., *Interpretationsraum Bronzezeit*. Bernard Hänsel von seinen Schülern gewidmet. UPA 121. Bonn 2005, 231–239.
- REICH 2007 REICH, C., *Das Gräberfeld von Szeremle und die Gruppen inkrustierter Keramik entlang der mittleren und unteren Donau*. Berliner Beiträge zur Vor- und Frühgeschichte 13. Berlin 2007.
- ROMAN–NÉMETI 1986 ROMAN, P.–NÉMETI, I., *Descoperiri din perioada timpurie (Pre-Otomani) a epocii bronzului în Nord-Vestul României – Découvertes de la période ancienne (pré-Otomani) de l'âge du bronze dans le nord-ouest de la Roumaine*. SCIVA 37 (1986) 198–232.
- ROSKA 1942 ROSKA M., *Erdély régészeti repertóriumai. I. Óskor*. Cluj/Kolozsvár 1942.
- SCHAUER 1978 SCHAUER, P., *Die urnenfelderzeitlichen Bronzepanzer von Fillinges, Dép. Haute-Savoie, Frankreich*. JRGZM 25 (1978 [1982]) 92–130.
- SCHAUER 1985 SCHAUER, P., *Spuren orientalischen und ägäischen Einflusses im bronzezeitlichen nordischen Kreises*. JRGZM 32 (1985) 123–95.
- SCHAUER 1988–1989 SCHAUER, P., *Mittelbronzezeitliche Vogelplastik*. MAGW 118–119 (1988–1989) 45–59.
- SHALGANOVA 1995 SHALGANOVA, T., *The Lower Danube Incrusted Pottery Culture*. In: (Eds.): Bailey, D. W.–Panayotov, I., *Prehistoric Bulgaria*. Monographs in World Archaeology 22. Madison, Wis. 1995, 291–308.
- SHERRATT 1987 SHERRATT, A., *Cups that Cheered: The Introduction of Alcohol to Prehistoric Europe*. In: (eds.): Waldren, W.–Kennard, R., *Bell Beakers of the Western Mediterranean*. The Oxford International Conference 1986. BAR-IS 331. Oxford 1987, 81–101.
- SHERRATT 1991 SHERRATT, A., *Sacred and Profane Substances: The Ritual Use of Narcotics in Later Neolithic Europe*. In: (eds.): Garwood, P.–Jennings, D.–Skeates, R.–Toms, J., *Sacred and Profane*. Proceedings of a Conference on Archaeology, Ritual and Religion. Oxford University Committee for Archaeology Monographs 32. Oxford 1991, 50–64.
- SHERRATT 1995 SHERRATT, A., *Alcohol and its alternatives: Symbol and substance in early Old World cultures*. In: (eds.): Goodman, J.–Lovejoy, P.–Sherratt, A., *Consuming Habits. Drugs in History and Anthropology*. London–New York 1995, 11–46.
- SOROCEANU–BUDA 1978 SOROCEANU, T.–BUDA, V., *Der Bronzegefäßshort von Buza (Kr. Cluj)*. Dacia 22 (1978) 99–106.
- STEIN 1936 STEIN, G., *Új kőkorszaki lelőhely Bián. – Ein neuer Fundort steinzeitlicher Kulturdenkmäler bei Bia*. Vasi Szemle 3 (1936) 342–346.

- STOCKHAMMER 2004 STOCKHAMMER, P., *Zur Chronologie, Verbreitung und Interpretation urnenfelderzeitlicher Vollgriffschwerter*. Tübinger Texte 5. Rahden/Westf. 2004.
- SZATHMÁRI 1992 SZATHMÁRI I., *Füzesabony-Öregdomb*. In: (Hrsg.): Meier-Arendt, W., *Bronzezeit in Ungarn. Forschungen in Tell-Siedlungen an Donau und Theiss*. Frankfurt a.M. 1992, 134–140.
- SZATHMÁRI 2003 SZATHMÁRI I., *Beiträge zu den Vogeldarstellungen der bronzezeitlichen Tell-Kulturen*. In: (Hrsgs.): Jerem, E.–Raczky, P., *Morgenrot der Kulturen. Frühe Etappen der Menschheitsgeschichte in Mittel- und Südosteuropa. Festschrift für Nándor Kalicz zum 75. Geburtstag*. Archaeolingua 15. Budapest 2003, 513–523.
- SZENTMIKLOSI 2006 SZENTMIKLOSI, A., *The relations of the Cruceni-Belegiš culture with the Žito Brdo–Gârla Mare culture*. *Analele Banatului* 14 (2006) 229–269.
- TARI 1992 TARI E., *A ceglédi Öregszőlők régészeti emlékei*. Ceglédi Füzetek 26. Cegléd: 1992.
- TÁRNOKI 1984 TÁRNOKI J., *Buják – Tarisznyapart, Kerekdomb (Nógrád m.)*. RégFüz Ser. I. 38 (1984 [1985]) 7–8.
- THRANE 1965 THRANE, H., *Dänische Funde fremder Bronzegefäße der jüngeren Bronzezeit (Periode IV)*. *Acta ArchHung* 36 (1965) 157–207.
- TOČÍK 1964 TOČÍK, A., *Opevnená osada z doby bronzovej vo Veselom. – Befestigte bronzezeitliche Ansiedlung in Veselé*. *ArchSlov Fontes* 5. Bratislava 1964.
- TOČÍK 1978 TOČÍK, A., *Nitriansky Hrádok-Zámeček. Bronzezeitliche befestigte Ansiedlung der Maďarovce Kultur. II. Tafeln, Pläne*. *MatArchSlov* 3. Nitra 1978.
- TOČÍK 1981a TOČÍK, A., *Nitriansky Hrádok-Zámeček. Bronzezeitliche befestigte Ansiedlung der Maďarovce Kultur. Band I – Text. Heft 1*. *MatArchSlov* 3. Nitra 1981.
- TOČÍK 1981b TOČÍK, A., *Nitriansky Hrádok-Zámeček. Bronzezeitliche befestigte Ansiedlung der Maďarovce Kultur. Band I – Text. Heft 2*. *MatArchSlov* 3. Nitra 1981.
- TOMKA 2005 TOMKA, P., *Langobardenforschung in Nordwestungarn*. In: (Hrsgs.): Pohl, W.–Erhardt, P., *Die Langobarden. Herrschaft und Identität. Denkschriften der Österreichischen Akademie der Wissenschaften, philosophisch-historische Klasse 329., Forschungen zur Geschichte des Mittelalters* 9. Wien 2005, 247–264.
- TOMPA 1934–1935 TOMPA, F., *25 Jahre Urgeschichtsforschung in Ungarn, 1912–1936*. *BRGK* 24–25 (1934–1935 [1937]) 27–127.
- TOPÁL 1973a TOPÁL J., *Bronzkori lemezdiadém Ócsáról. – Bronze Age plate diadem from Ócsa*. *StCom* 2 (1973) 3–11.
- TOPÁL 1973b TOPÁL J., *Bronzkori ékszerlelet Ócsáról*. *ArchÉrt* 100 (1973) 3–18.
- TORMA 1976 TORMA I., *Ein Grab der transdanubischen inkrustierten Keramik aus Esztergom*. *MittArchInst* 6 (1976 [1977]) 25–37.
- UZSOKI 1963 UZSOKI A., *Bronzkori temető Mosonszentmiklós-Jánosházapusztán. – Bronzezeitliches Gräberfeld in Mosonszentmiklós-Jánosházapuszta*. *Arrabona* 5 (1963) 5–89.
- VADAY 2003–2004 VADAY A., *Kazár (több korszakú régészeti lelőhely feltárásának előzetes jelentése)*. *Nógrád Megyei Múzeumok Évkönyve* 27–28 (2003–2004) 203–216.
- VADAY 2004 VADAY A., *Kazár (több korszakú régészeti lelőhely)/Kazár (multi-period archaeological site)*. *Régészeti kutatások Magyarországon/Archaeological Investigations in Hungary* 2003, 51–64.
- VADÁSZ 1986 VADÁSZ É., *Adatok Dunaalmás középső bronzkori településtörténetéhez. Lenhardt György magángyűjteménye I. – Angaben zur mittelbronzezeitlichen Siedlungs-geschichte von Dunaalmás*. *KEMMK* 2 (1986) 15–35.
- VASIĆ–VASIĆ 2000 VASIĆ, R.–VASIĆ, V., *The origins of some „Waterfowl cultures” on the Balkan Peninsula*. *Boletino Sede para el Estudio delos Humedales Mediterráneo* 16 (2000) 131–139.

- VASIĆ–VASIĆ 2003 VASIĆ, R.–VASIĆ, V., *Bronzezeitliche und eisenzeitliche Vogeldarstellungen im Zentralbalkan*. PZ 78 (2003) 156–189.
- VASIĆ–VASIĆ 2003–2004 VASIĆ, R.–VASIĆ, V., *Identifikacija ptičjih predstava u praistoriji. – Identification of bird representations in prehistory*. Starinar 53–54 (2003–4) 181–192.
- VASILIEV 1985–1986 VAILIEV, V., *Descoperiri arheologice cu semnificatie cultică în aşezarea din prima epocă a fierului de la Teleac (jud. Alba). – Les découvertes archéologiques et signification cultique dans l'établissement fortifié du premier âge du fer de Teleac (dép. d'Alba)*. ActaMN 22–23 (1985–1986) 79–90.
- VÁCZI 2002 VÁCZI G., *Középső bronzkori temetkezések Alcsutdoboz környékén. – Middle Bronze Age burials from the environs of Alcsutdoboz*. Ősrégészeti Levelek 4 (2002) 67–75.
- VISEGRÁDI 1911 VISEGRÁDI J., *A magyarádi őstelep*. MKÉ 5 (1911) 30–39.
- VUKMANOVIĆ–POPOVIĆ 1996 VUKMANOVIĆ, M.–POPOVIĆ, P., *Predmeti kultne namene na nazalištima bronzanog doba na Đerdapu. – Cult objects on Bronze Age sites in the Iron Gate*. ZNM 16 (1996) 89–94.
- VULPE 1970 VULPE, A., *Die Äxte und Beile in Rumänien I*. PBF IX, 2. München 1970.
- WELS-WEYRAUCH 1978 WELS-WEYRAUCH, U., *Die Anhänger und Halsringe in Südwestdeutschland und Nordbayern*. PBF XI, 1. München 1978.
- WĘGRZYNOWICZ 2000 WĘGRZYNOWICZ, T., *Uwagi o figurach i wizerunkach ptaków ze stanowisk kultury wysockiej – Bemerkungen zu Vogelfiguren und -darstellungen aus Fundstellen der Wysocko-Kultur*. In: (Red.: Gediga, B. & Piotrowska, D.) *Kultura symboliczna kręgu pól popielnicowych epoki brązu i wczesnej epoki żelaza w Europie środkowej – Die symbolische Kultur der Urnenfelderkreises in der Bronze- und frühen Eisenzeit Mitteleuropas*. Prace Komisji Archeologicznej 13., Biskupińskie Prace Archeologiczne 1. Warszawa, Wrocław & Biskupin 2000, 227–236.
- WILBERTZ 1992 WILBERTZ, O. M., *Ein reich verziertes Bronzerasiermesser aus dem „Bahnhofsfield“ in Liebenau, Ldkr. Nienburg*. Die Kunde 43 (1992) 99–113.
- WOSINSKY 1890 WOSINSKY M., *Leletek a lengyeli őstelepéről. Második jelentés*. ArchKözl 13 (1890) 45–211.
- WOSINSKY 1896 WOSINSKY M., *Tolnavármegye az őskortól a honfoglalásig. I–II*. Budapest 1896.
- WOSINSKY 1904 WOSINSKY M., *Az őskor mészbetétes diszítésű agyagművészete*. Budapest 1904.
- ZIPF 2004 (manuscript) ZIPF, G., *Studien zu den Anfängen figürlicher Darstellungen im endbronze- und früheisenzeitlichen Frankreich und Italien. Motive, Dekorträger und Kontexte*. PhD Thesis manuscript, Berlin 2004.

Sz. Guba
Kubinyi Ferenc Múzeum
Szécsény, Ady E. u. 7.
H-3170

V. Szeverényi
MTA Régészeti Intézet
Budapest, Úri u. 49.
H-1014