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Circular burial features of the Tumulus culture in the northern Carpathian Basin

Kruhové pohřební objekty mohylové kultury v severní části Karpatské kotliny

– *Jakub Godiš** –

KEYWORDS

Middle Bronze Age – Tumulus culture – Carpathian Basin – burial rite – grave construction – circular ditches – stone rings/wreaths

ABSTRACT

The paper is focused on reviewing the current state of research on the circular features around graves at burial grounds associated with Carpathian Tumulus culture and its related groups in the northern Carpathian Basin. During the Middle Bronze Age (16th to 14th centuries BC), features of this type appeared in southern Slovakia and Hungary in two basic forms, either as circular ditches or stone rings/wreaths. These are in most cases considered to be indirect evidence of mounds, now mostly non-existent, built of earth and even stone, which they encircled on the outside, however, this interpretative model is not always applicable. In the last two decades, the number of sites where their occurrence has been documented almost doubled. At present, there are known from at least 16 sites situated in the area between the Lower Váh valley, across the bend of the River Danube to the Middle Tisza Basin, which was the territory of the Carpathian facies of the Tumulus culture. Terrain features of this type are directly related to the long-debated terminology discussion of whether it is at all legitimate to attribute the adjective 'tumulus' to this archaeological cultural entity. This question arises when compared with the characteristics of the burial tradition practised in the western Tumulus culture zone, which extended from Moravia and eastern Austria further to Czechia, Germany, and eastern France. In the presented study, the geographical distribution of the circular burial features, their main characteristics, as well as some specific features are discussed. The way of the central graves are furnished and their chronological position is also briefly evaluated in the analysis, as this distinctive element of the burial rite had a wider temporal span. Finally, some comments are made on the graves surrounded by circular ditches and the interpretation of these structures as remnants of possible earthen tumuli, in light of some of the more recent and precisely documented discoveries. These support the opinion that during the Middle Bronze Age (Bz B–C stages), in some lowland areas of the vast Carpathian Basin, actual mounds could occasionally be built over the graves of socially prominent individuals.

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1. Introduction

One of the most distinctive attributes of the funerary rite in the prehistory of mankind is the construction of above-ground structures made of earth or stones over the final resting places of the dead, which occurred in various chronological periods, as well as distinct geographical regions of the World (see e.g. Harding 2012). During the European Bronze Age, it was most significant between 16th and 14th centuries BC, to the extent that it had given its name to a vast cultural complex extending from eastern France to central Hungary (see e.g. Makarowicz 2017, further references there). From the very beginnings of archaeology forming as a modern science, including the former Austria-Hungary in the late 19th century, prehistoric tumuli have attracted special attention, which usually resulted in unprofessional excavations of these often easily visually recognizable terrain relics in the landscape (e.g. Keszthely; Lipp 1885; see also Godiš, Styk 2019, 213–215, further references there; Smolenice; Sándorfi 1896; Dušek 1980).

The main intention of this paper[1] is to review the current state of research on sites associated with the (Carpathian) Tumulus culture and its related groups in the Pannonian Basin, where circular or slightly oval-shaped features in the form of ditches and stone rings/wreaths[2] surrounding the central grave have been found. If they were at least a few metres in diameter, they are usually considered to be indirect remnants of past earthen mounds. However, it must be made clear at the outset, that this interpretation model should not be generalised (see Trefný 2013, 133, further references there), although here presented article discusses some of the key terrain observations from this region that support it quite sufficiently. The studied area is primarily focused on the northern Carpathian Basin[3] lowlands, while to present a more complex picture; sites associated either to Piliny culture in the northeast or the Middle Danube Tumulus culture in the west were also briefly mentioned (cf. Fülöp, Váczi 2014, Fig. 3, 4; Mengyán, Hrabák 2023, Fig. 7). In addition to synthesising all available data, another purpose of the study is to contribute to the occasionally emerging debate about to what extent, if at all, it is legitimate to refer about a real 'Tumulus' period *sensu stricto* within the Carpathian Bronze Age (especially, its northwestern zone). This is in the context of what is customary called as *Hügelgräberzeit* in a wide geographical area reaching from Burgenland and Moravia in the east, through Bohemia and the Upper Danube region to Bavaria in the west and the adjacent regions there (see e.g. Píč 1900; Reinecke 1924, 43–44; Willvonseder 1937). The increasing number of circular features discovered lately on burial grounds in southern Slovakia and most of Hungary, but also a certain level of this phenomenon occurrence intensity should in fact justify the use of a more

or less accepted term among the scientific community – Carpathian Tumulus culture,[4] which was first introduced in the late 1950s by the leading Slovak archaeologist A. Točík (1956, 25; 1960a, 259–301; 1960b, 28–30). This term should also emphasize the distinct habitus of this archaeological entity (defined mainly by funerary rite and ceramic style based also on local older 'Carpathian' traditions) apart from the 'typical' Tumulus culture spread in the west, outside the Carpathian-Danube region. Preventive rescue excavations of the past two decades have substantially enriched the source base and offer a new perspective on this issue. Based on the collected data, it is time to discuss in more detail both the characteristics and specifics of circular burial features, as well as the graves that they delineated. This study comments mainly on their geographical distribution, then construction attributes (dimensions, adjacent specific features etc.), but also chronology, which is derived from the dating of the central graves, since this funerary tradition lasted in this region for several generations with varying intensity. Finally, a few remarks are made about a group of graves encircled by ditches, for which several key clues exist, that allow us to interpret at least some of them as the indirect remains of past tumuli.

2. Carpathian Tumulus period without tumuli or what the archaeological record shows

Anton Točík (1960a) in his candidate's dissertation, as a fundamental work on the Early and Middle Bronze Age conception of southwestern Slovakia, validated the use of the adjective 'Carpathian Tumulus' for the archaeological cultural entity, which he initially defined, mainly by the then excavation of the burial ground in Svätý Peter (formerly Dolný Peter). At this site several circular ditches around the inhumation graves dated to the beginning of the Middle Bronze Age were professionally documented most likely for the first time in the Carpathian-Danube region. He also assumed that these rarely occurring sunken features could '*...indicate also in the Carpathian Basin a custom of burial in a delineated area, which was respected, and the soil from the ditch was probably used to pile up the mound...*' (Točík 1960a, 265). Shortly thereafter, E. Jílková (1961, 88) responded rather sceptically to the legitimacy of this adjective used on the newly introduced archaeological culture, pointing to the acute need for detailed analysis of the material from other contemporary sites in Hungary and the surrounding areas, thus verifying the argument of A. Točík's assertion that the Carpathian[5] Tumulus culture was spread over the western and some eastern regions of the Carpathian Basin (later geographically specified, Točík 1978, 103; recently updated; Godiš 2019, 19–20; mapa 1–3). It should be noted, that E. Jílková at that time had already experience with the research of the Tumulus culture in western Bohemia (see Šaldová 1988, 572–574). She considered his argument that tumuli were built only where the material was available (usually stone or gravel covered with sand and earth) as insufficient to legitimately classify this archaeological entity within the Central European Tumulus cultural complex. Moreover, she pointed out that for basically all the Tumulus cultural groups in the west of the Carpathian Basin, burial under mounds reflected a characteristic attribute of their funerary rite, even where the raw material required for their construction had to be transported from longer distances. Eva Jílková (1961, 88) further added that in the Carpathian-Danube region it would be possible to name[6] it a 'real' Tumulus group (or culture) only if the occurrence of mounds was a relatively common phenomenon documented in burial sites.

More than 60 years have passed since this pertinent discussion, and field research in the area of interest defined here has made significant progress, mainly thanks to large-scale preventive excavations. Despite many of here discussed sites lack adequate publication, which is the task for the researchers in the future, it is at least possible for now to point out a few crucial discoveries that provide new insights into this interesting, lately much-discussed topic. At present, more than 25 sites dated to the Middle Bronze Age (Bz B–C stages), where circular burial features (including small-sized stone cairns) have been documented are known from the area between the Little Carpathians and Lake Neusiedl, across the Danube Lowland (Basin)

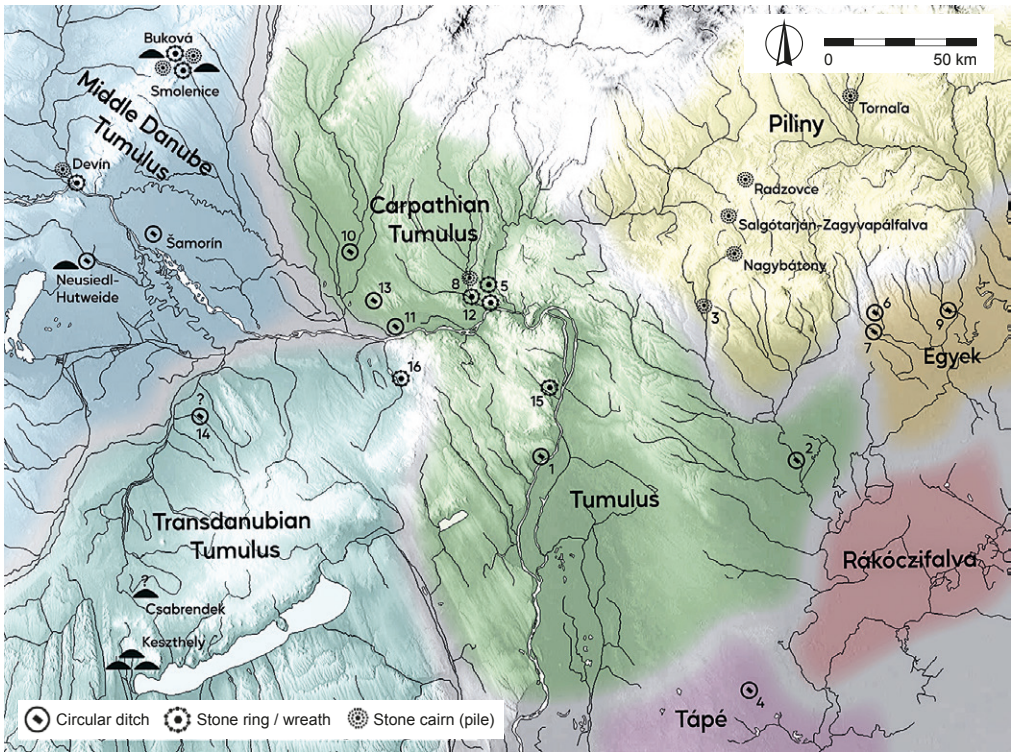


Fig. 1. Sunken and stone circular features around graves at Middle Bronze Age sites (Bz B–C stages) in the northern Carpathian Basin (numbering of sites – see Tab. 1). Author J. Godiš.

Obr. 1. *Zahloubené a kamenné kruhové objekty kolem hrobů na lokalitách střední doby bronzové (stupně Bz B–C) v severní části Karpatské kotliny (číslování lokalit – viz tab. 1). Autor J. Godiš.*

and the Danube Bend to the Middle Tisza Basin, including the mountainous regions of Cserhát, Mátra and Bükk in northern Hungary (Fig. 1). This number also includes sites in the territory of the Middle Danube Tumulus culture, which reached from the Moravia to the periphery of the northwestern Carpathian Basin, i.e. in western Slovakia and eastern Austria (Devín, Buková, Smolenice, Neusiedl-Hutweide, Šamorín-Šámot). In addition to those, sites from the milieu of Piliny culture, which is linked with the later historical regions of Nográd/Novohrad and Gemer-Malohont (Nagybátony, Salgótarján-Zagyvapálfalva, Radzovce, Tornaľa; formerly Šafárikovo) are also part of this count. However, it should be noted here that no ditches around graves are known from the latter regions; just stone rings and wreaths or especially cairns made of stacked rocks, which usually reach small dimensions, often just about 1 m in diameter and are not comparable to the burial structures analysed here (see Furmánek, Mitáš 2010, 85, obr. 17). Nevertheless, discoveries of the much larger circular grave features also within the Piliny culture cemeteries can be expected in the future excavations, similar to well-known richly furnished grave 216/69 found in Radzovce, over which was a stone cairn of about 7 × 8 m in size (Furmánek, Mitáš 2010, 82, obr. 37:b; Furmánek et al. 2016, 119, Abb. 175, Taf. CV:3).

As emphasized before, the aim of this study is to discuss in more detail larger-sized circular burial features (more than few metres in diameter) situated in the regions, where Carpathian Tumulus culture communities and its related groups (e.g. Egyek, Tápé) were distributed. Since the time of the A. Točík´s dissertation, at least 16 sites have been registered, or places where the adjoining material (mostly pottery stylistics) allows for a more precise cultural classification (Tab. 1). A total of over 41 circular ditches and 18 stone rings or wreaths surrounding the graves were documented. In some cases, however, such a determination is difficult, even impossible, for various reasons,[7] and therefore it should be avoided to attempt a strict cultural classification[8] of each individual site. The burial grounds in Jobbágyi and Maklár situated in the border zone with the western group of the southeastern Urnfield cultures (Piliny culture),[9] seem particularly problematic[10] in this context; but the 'influence' of the Tumulus culture on the communities who buried there was evident from the surroundings. Unequivocal grave finds of the Tumulus culture are known from this 'contact' territory, such as the sites of Szurdokpüspöki or Mezőnagymihály; Guba, Bácsmegi 2009; Fischl, Hajdu 2016). This is also true of the cemetery in Vértesszőlős located in the western foothills of the Gerecse Mountains or the recently discovered Koszider period[11] burial ground in Tét in northwestern Transdanubia, to which it will be possible to comment after their proper publication. Given its location, its association with the Carpathian Tumulus culture might seem unambiguous. Still, the preliminary excavation results of Vértesszőlős site suggest its strong ties to the west, i.e. eastern Austria. Defining the cultural affiliation of the Middle Bronze Age sites in this region or assessing the characteristics of the (mainly) ceramic material is a task for further research. There seem to be several indications that from the advanced phase of the Tumulus period (Bz B2–C1 stages) onwards we can speak of some attributes that can be considered as 'Transdanubian' specifics (e.g. distinctive cremations as a possible reminiscence of a Encrusted Pottery culture tradition, influences from the eastern Alpine zone). As far as goes for the Tumulus culture period in Western Transdanubia, this has been recently thoroughly summarised by G. Ilon (2024). Despite all the above, these sites located in 'peripheral' zones are considered in this study and once fully published, will shed more light on the way of interference between Carpathian lowland communities with the cultural regions either on the north (Piliny) or west (Middle Danube Tumulus).

3. The origins of burial under a mound on the Middle Danube in the 2nd millennium BC

The custom of mound burial had much deeper roots in the northwestern Carpathian Basin and the adjacent regions to the west, even before it was widely adopted in the Middle Bronze Age (more Stuchlík 1990a, 128–142; 2006, 131–134, further references there; also Jockenhövel 1999, 334–336, Abb. 5). These were evidenced in this territory only at the final stages of the Eneolithic, however, the earliest tumulus graves were usually not sunk below ground level but were placed directly on the surface. This way of burying continued into the Early and Middle Bronze Age, but with a change – the dead were placed in a sunken grave, over which the earthen mound was subsequently raised (Benkovsky-Pivovarová 1987, 167–172; Kern 2011, 161–168; Bátora 2012, 88–91). Apart from this, also in the eastern regions of the Carpathian Basin, the enclosure of graves with circular ditches and – the building of earthen mounds over them – has been documented during the Late Eneolithic / Early Bronze Age in the burial sites of the Grave Pit (Yamnaya) culture (see Scholtz 2010, 299, further references there). The large-scale excavations carried out in the 1970s and 1980s at the Mad'arovce-Věteřov-Böheimkirchen cultural complex burial grounds in

No.	Site	References
1	Budapest-Nagytétény-Érdliget	Bészédes, Szilas 2006; 2007; Szilas 2017
2	Jánoshida – Berek	Csányi 1980; 2003; 2016; 2017; 2019
3	Jobbágyi – Hosszú-dűlő	Fülöp, Váczi 2014; Fülöp 2016
4	Kiskunfélegyháza-Páka – Dósa-tanya	Kulcsár 1992; Somogyvári 1992; Wicker et al. 2001
5	Letkés – Kertészföldek	Nagy 1970; Kovács 1996
6	Maklár – Koszpérium	Szabó 1961; 1963a; 1963b; Mengyán et al. 2024
7	Maklár – Nagyrét II	Mengyán, Hrabák 2023
8	Malá nad Hronom – Rövid föld	Točík 1959; 1964; Ožďáni 1984; 2015
9	Mezőnagymihály – Nagyecsér-Észak	Fischl, Hajdu 2016
10	Nové Zámky – Berek	Rejholcová 1962; Točík 1982
11	Radvaň nad Dunajom-Žitava – Červený piesok	Hüssen et al. 2018
12	Salka I – Zsellér föld	Točík 1964
13	Svätý Peter I – Pasienky	Dušek 1959a; 1959b; 1969; Godiš 2015
14	Tét – Gyömörei útmelletti dűlő	Ujvári 2022; Ilon 2024
15	Üröm – Magyar-Bolgár Barátság TSz	Holport 1980
16	Vértesszőlős – Vasútvonal mente III	Pál 2010; Pál, Cseh 2013

Tab. 1. List of Tumulus culture sites (Bz B–C stages) in the northern Carpathian Basin with graves bounded by circular ditches or stone structures (rings/wreaths). Sites with stone usage are highlighted in grey.

Tab. 1. *Soupis lokalit mohylové kultury (stupně Bz B–C) v severní části Karpatské kotliny s hroby ohraničenými kruhovými žlaby nebo kamennými strukturami (kruhy/věnci). Lokality s použitím kamenů jsou zvýrazněny šedě.*

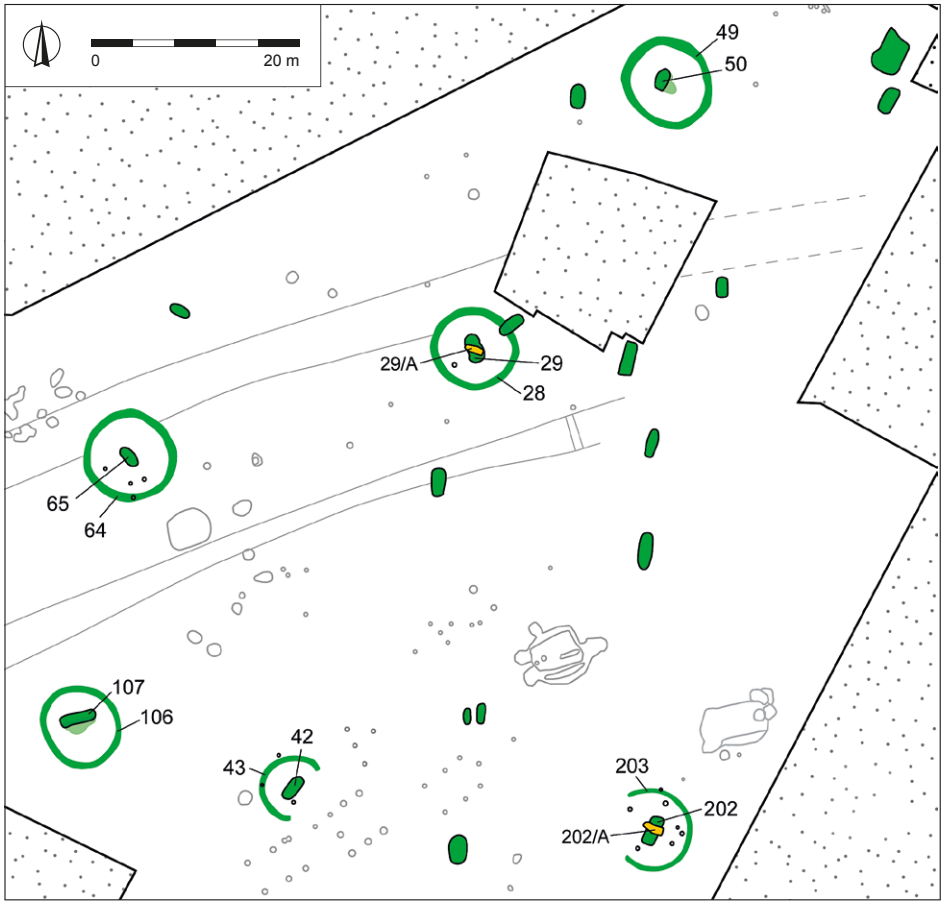


Fig. 2. Budapest-Nagytétény-Érdliget. Plan of the Tumulus culture burial ground. After Szilas 2017, Fig. 3; modified by J. Godiš.

Obr. 2. *Budapest-Nagytétény-Érdliget. Plán pohřebiště mohylové kultury. Podle Szilas 2017, Fig. 3; upravil J. Godiš.*

Jelšovce in southwestern Slovakia (Bátora 2000), Borotice in south Moravia (Stuchlík 2006), as well as at Traisen Valley in Lower Austria (Neugebauer 1994a, 90, further references there) provided a lot of important data on the research of the Early to Middle Bronze Age transition in this region. At these sites, several graves surrounded by circular ditches were discovered and since then, were considered as unequivocal evidence for the local continuity of this mound burial tradition, which preceded the 'classical' Tumulus period itself (Stuchlík 1990b; 1992). By some it can be even indication of the autochthonous origin of the Central European Tumulus culture, which should firstly emerge in the late Mad'arovce-Věteřov-Böheimkirchen cultural milieu (Bátora 2004, 253; 2012, 87, 92–95, Abb. 3). This complex question is still a matter of debate among researchers, while the western – Upper Danubian – origin of the Tumulus culture is generally assumed. From there, sometime around the early 16th century BC, smaller communities may have migrated eastwards and south-eastwards, also into the Middle Danube region, while their funerary traditions spread with them, elements of which could be adopted by the local population (see e.g. Dzięgielewski et al. 2010, 10–15; Makarowicz 2017, 129–131, further references there). The following chapter briefly introduces the individual sites located in the northern lowland regions of the Carpathian Basin, where circular burial features attributed to the Tumulus culture have been documented.

4. Summary of the studied sites attributed to the Tumulus culture

4.1 Budapest-Nagytétény-Érdliget

On the southwestern outskirts of Budapest in the Nagytétény-Érdliget[12] urban section (district XXII), a preventive rescue excavation was conducted in 2005–2006, which uncovered burial features from the Middle Bronze Age (Late Bronze Age in the Hungarian chronology; see the endnote),[13] Urnfield and Pre-Scythian period, as well as traces of Celtic settlement (Beszédes, Szilas 2006, 147–158; 2007, 233–235; Szilas 2017, 213–250). The most significant discovery was the 17 inhumation graves of the Tumulus culture, many of which had been robbed in the past. In six cases, the grave pits were surrounded by ring ditches

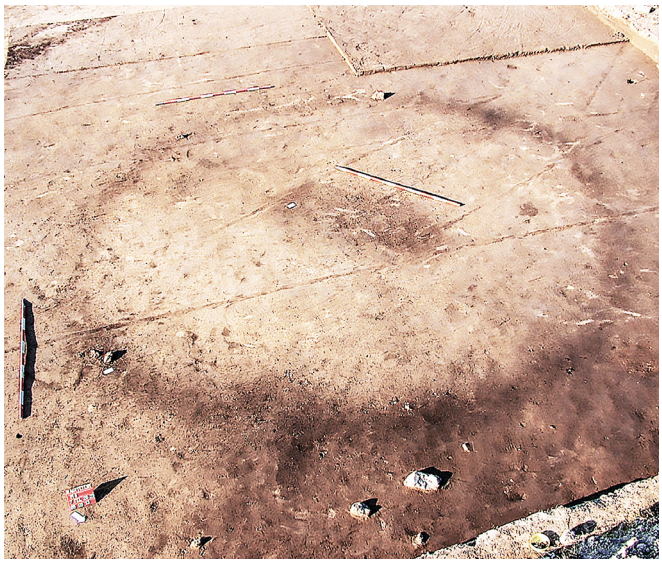


Fig. 3. Budapest-Nagytétény-Érdliget. Grave 29 with a circular ditch 28. After Szilas 2017, Fig. 5:1; Archive of the Aquincum Museum.

Obr. 3. *Budapest-Nagytétény-Érdliget. Hrob 29 s kruhovým žlabem 28. Podle Szilas 2017, Fig. 5:1; Archiv Aquincumi Múzeum.*

(graves 29, 42, 50, 65, 107, 202), which enclosed an area with an outer diameter ranging from 6.3–9 m. Ditches were 30–80 cm wide with a maximum depth of only 10–25 cm (Fig. 2, 3). In a few cases, the circular ditch was not preserved in its entirety, but most likely it was also closed, as well as these features were tens of metres apart and did not form any clusters. In the vicinity of some of the graves remains of post-holes were found, which could be related to its above-ground construction (see Chapter 7.3). At present, it is the first properly documented and published burial site from the earliest phase of the Tumulus culture in central Hungary, i.e. in the vicinity of today's Budapest. In addition, this excavation has provided important insights into the interpretation possibilities of ring ditches around graves as indirect remnants of earthen mounds, thanks to the rare superpositions of presumed Early Iron Age[14] graves over those dated to the Middle Bronze Age (see Chapter 9).

4.2 Jánoshida – Berek

Between 1974–1979, there was a systematic excavation in Jánoshida – Berek, where 278 graves associated to Tumulus culture were documented (135 inhumations, 109 urn graves, 34 scattered cremations, and 14 pithoi) (Csányi 1980, 153–164; 2003, 162–163; 2016, 109–119; 2017, 201–212; 2019, 47–64). The remnants of four ditches encircling the graves were also found in the excavated area – features A, B, C, D. In addition to these, another oblong ditch was identified, along with an arcuate post-pit structure of uncertain date[15] and questionable function – feature E (Fig. 4; to this issue see also Jockenhövel 1999, 340). The circular features reliably dated to the Middle Bronze Age were concentrated in the presumed central zone of the burial ground and were aligned on the NNE–SSW axis. Three of these surrounded the cremation graves B/46, B/114, C/118, D/151 and

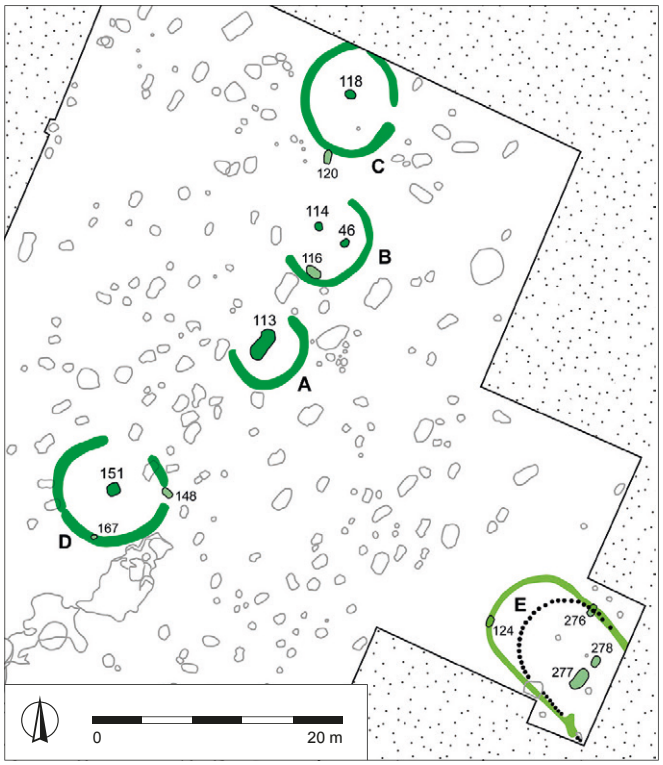


Fig. 4. Jánoshida – Berek. Plan of the Tumulus culture burial ground. After Csányi 2019, 1. kép; modified by J. Godiš.

Obr. 4. *Jánoshida – Berek. Plán pohřebiště mohylové kultury. Podle Csányi 2019, 1. kép; upravil J. Godiš.*

Fig. 5. Jánoshida – Berek. Grave 113 with circular ditch – feature A. After Csányi 2003, Fig. 27.

Obr. 5. *Jánoshida – Berek. Hrob 113 s kruhovým žlabem – objekt A. Podle Csányi 2003, Fig. 27.*

one partially disturbed ditch enclosed inhumation grave A/113 (Fig. 5). These burials were distanced 4 to 10 m apart by ditches and their outer diameter ranged from 6.1 to 8.9 m. The width of the ditches ranged from 50–75 cm, while their preserved depth was approximately 45–60 cm. Recently, radiocarbon data were published for a disturbed grave 113 (see Csányi 2019, 50, 1. táblazát), which supports the previous conclusions, that it was one of the earliest features from the time when the cemetery was established (DeA-7941, 3167 ± 24 BP). This was also suggested by stratigraphic observations, where cremation graves were found directly in some of the ditches (e.g. graves 148, 167 in ditch D; grave 124 in ditch E).

4.3 Jobbágyi – Hosszú-dűlő

In 2014, a preventive rescue excavation was carried out at the Jobbágyi – Hosszú-dűlő, where 207 Middle Bronze Age graves were documented (Fülöp, Váczi 2014, 413–421). Based on the informative report, it was a biritual cemetery with a significant predominance of cremation graves (inurned and scattered). Apart from this, it was characterised by the plentiful use of stone in the construction of the graves, which were substantially damaged due to agricultural activities. In some cases, small oval-shaped stone embankments (piles) over graves have been documented in an intact position, which were about 1 m in diameter and 0.5 m high (Fülöp, Váczi 2014, 413). The schematic plan of the excavation also shows that one symbolic and another pit grave were surrounded by circular stone structures of closely unspecified dimensions (Fülöp, Váczi 2014, Fig. 2).

4.4 Kiskunfélegyháza-Páka – Dósa-tanya

Between 1988–1993, rescue excavations at Kiskunfélegyháza-Páka – Dósa-tanya uncovered 25 Tumulus culture graves in the biritual cemetery (18 inhumations, 7 cremations), together with remnants of three partly disturbed circular ditches associated with inhumations (Kulcsár 1992, 9–21; Somogyvári 1992, 13–26; 2016, 137; Wicker et al. 2001, 69–71). These were superposed with later Sarmatian burials and other more recent features. Within the inner area bounded by the largest ditch (feature 71), about 12 m in outer diameter, which had probably an opening in its southeastern part, two disturbed graves 41 (central) and 59 (secondary) were found (Fig. 6). A second, half the size ditch about 6 m in diameter (feature 13), surrounded grave 7, which was also robbed (Somogyvári 1992, 4., 5. kép). Only grave 92 was intact, but the adjacent ditch (feature 177) had been heavily

disturbed by later features, so its diameter, as well as the exact shape is unknown.[16] The leader of the excavation does not exclude the possibility that there may have been other circular ditches on the site, of which no traces have survived due to earthworks activities (Somogyvári 1992, 16).

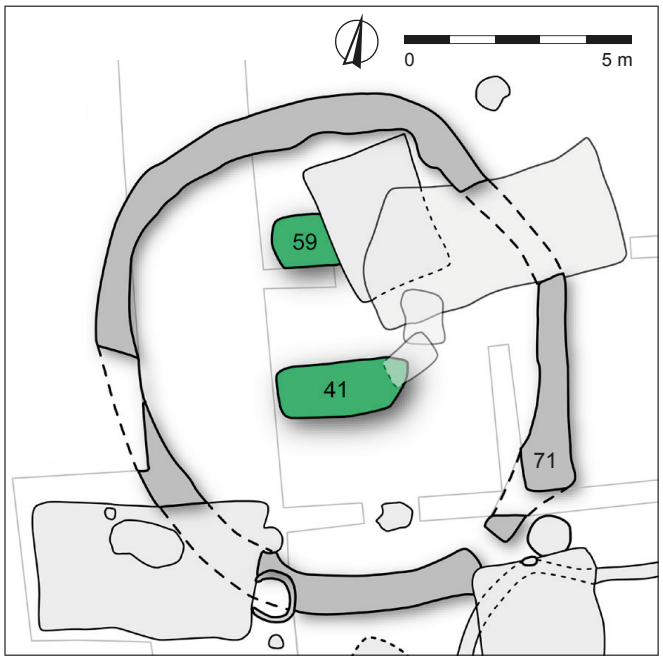


Fig. 6. Kiskunfélegyháza-Páka – Dósa-tanya. Detail of the excavation plan. Graves 41 and 59 bounded by ditch 71. After Somogyvári 1992, 1. kép; Archive of the Kiskun Museum; modified by J. Godiš.

Obr. 6. *Kiskunfélegyháza-Páka – Dósa-tanya. Detail plánu výzkumu. Hroby 41 a 59 ohraničené žlabem 71. Podle Somogyvári 1992, 1. kép; Archiv Kiskun Múzeum; upravil J. Godiš.*

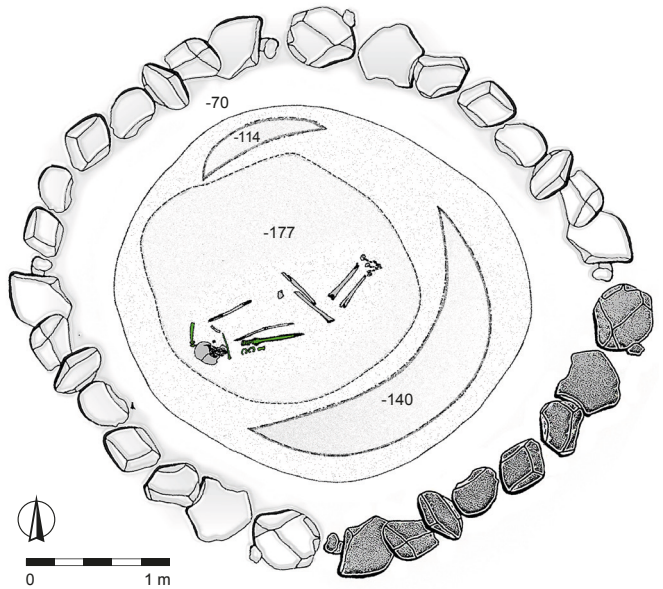


Fig. 7. Letkés – Kertészföldek. Grave 37 with a hypothetical reconstruction of a stone ring (dark highlighted stones indicate the preserved part of the feature; the scale is approximate). After Kovács 1996, Fig. 1a; modified by J. Godiš.

Obr. 7. *Letkés – Kertészföldek. Hrob 37 s hypoteticky rekonstruovaným kamenným kruhem (tmavě zvýrazněné kameny označují dochovanou část objektu; měřítko je přibližné). Podle Kovács 1996, Fig. 1a; upravil J. Godiš.*

4.5 Letkés – Kertészföldek

Rescue excavations conducted in Letkés[17] – Kertészföldek (site is also known as Ipolytölgyes – Vízállásjelző) between 1964 and 1967 uncovered about 53 Tumulus culture graves (at least 9 inhumations, 30 cremations of which 8 urn graves). The burial ground allegedly shared many similarities with the nearby cremation necropolis in Salka I, situated just a few km, on the other bank of the River Ipel'. It concerns mainly various forms of stone used in the construction of the graves, while those made in the form of rings or wreaths were documented in several cases (Papp 1965, 232; Nagy 1970, 111; Torma ed. 1993, 122–123). The only feature published[18] so far from this excavation is the inhumation grave 37, where an individual of elite social status was buried, as evidenced by both an oversized grave pit with a bench-like walls and a circular structure built of stones at the level of its surface with an outer diameter of circa 4 m (Fig. 7). The unique rank of the dead is also confirmed by the furnishing consisting of the short bronze sword (long dagger), a richly decorated battle-axe, bracelets, a pin, a tweezer, and gold jewellery (Kovács 1996, 115; 2000, 98–99).

4.6 Maklár – Koszpérium

In 1960 and 1962, around 142 Bronze Age graves[19] were excavated in Maklár – Koszpérium. Most of the cremations date to the Middle Bronze Age, and their ceramic furnishing significantly mixes stylistic elements of the Tumulus und and Piliny cultures (Szabó 1961, 286; 1963a, 23; 1963b, 299). Based on stratigraphic observations, several graves had been dated to an early Tumulus culture and these cremations were bounded by small circular ditches (13 cases in total). The results of the excavations have not been made to public, but recently a quite unique discovery of two ditch graves from this site was published (Mengyán et al. 2024; see also Kovács 2000, 104, Anm. 13). These were scattered cremations 41 and 42 inside rectangular pits with rounded corners, found close to each other with remarkable furnishing (stone polished axe, bronze dagger and jewellery), which were enclosed and joined by circular ditches (Fig. 8). The larger ditch around grave 41 had an outer diameter of ca 2.7 m and was no more than 30 cm wide, with a smaller oval-shaped ditch 170 × 90 cm in size, 'attached' to it from the southwest, bounding grave 42 (Mengyán et al. 2024, 6, Fig. 4:A).

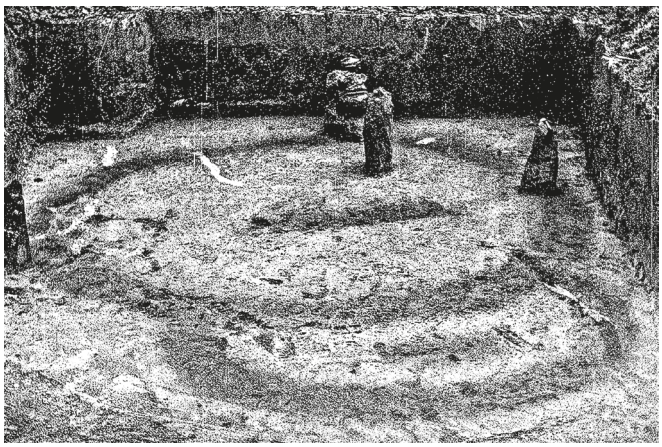


Fig. 8. Maklár – Koszpérium. Cremation graves 41 and 42 encircled by ditches. After Mengyán et al. 2024, Fig. 2.

Obr. 8. *Maklár – Koszpérium. Kremační hroby 41 a 42 ohraničené žlábky. Podle Mengyán et al. 2024, Fig. 2.*

4.7 Maklár – Nagyrét II

The more recently discovered circular ditches are known from Maklár – Nagyrét II, where preventive excavation took place in the 2021–2022 season. This site is located about 1 km from the above mentioned Koszpérium burial ground (Mengyán, Hrabák 2023, 8–16; Mengyán et al. 2024, Fig. 1). A total of 210 graves associated to the Tumulus culture were documented (112 urn graves, 95 scattered cremations and 3 graves without human remains). Within these were five scattered cremation graves bounded by small circular ditches with an outer diameter of about 3–3.5 m and a width of 30–40 cm (Fig. 9). Each of the features was open, i.e. it had an 'entrance', which for three graves was pointed towards the northeast, one to the north and another towards the northwest direction (see Mengyán, Hrabák 2023, Fig. 3).

Fig. 9. Maklár – Nagyrét II. Cremation graves with open circular ditches. After Mengyán, Hrabák 2023, Fig. 6.

Obr. 9. *Maklár – Nagyrét II. Kremační hroby s otevřenými kruhovými žlábky. Podle Mengyán, Hrabák 2023, Fig. 6.*

4.8 Malá nad Hronom – Rövid föld

In 1958–1959, a rescue excavation was conducted in Malá nad Hronom – Rövid föld, where about nine Tumulus culture graves within the disturbed biritual cemetery were documented (Točík 1959, 175–176; 1964, 39–41). One feature worthy of a special attention is the one labelled as 'grave 34', which had two circular stone enclosures[20] while four burials were allegedly found inside these (Fig. 10). The outer stone wreath was approximately 5.7 m in diameter and was damaged by ploughing (Točík 1976, 88). From the information presented by A. Točík, there were supposedly three Early Bronze Age urn graves, and one urn grave dated to the Tumulus culture (grave 34/III). This was discovered at a depth of 50 cm and deformed by the pressure of the inner cairn (?) with an empty centre. There was another feature also encircled by rocks of 4.5 m in diameter found in the same depth bounding the central grave 41 with rectangular ground-plan (190 × 80 cm) of unknown orientation, which was leaned by stones (Fig. 11; see Točík 1964, Taf. XXXII:6). This was according to excavation report also disturbed by tillage (or robbed), as only a few cremation remains and pottery sherds were found in its filling. Rescue excavation at the Rövid föld site continued in 1983, but then no grave circular structures made of rocks were discovered (Ožďáni 1984, 171; 2015, 140, obr. 137). In total, at least 31 graves (23 inurned and 2 scattered cremations, 6 inhumations) have been identified at the burial ground, including the previous excavation at the end of the 1950s (Furmánek, Ožďáni 1990, Abb. 1), but these have not yet been published.

Fig. 10. Malá nad Hronom – Rövid föld. Grave 34/III with a stone wreath and inner cairn. After Točík 1964, Taf. XXXII:3; Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra, T-28855.

Obr. 10. *Malá nad Hronom – Rövid föld. Hrob 34/III s kamenným věncem a vnitřním příkrovem. Podle Točík 1964, Taf. XXXII:3; Archiv Archeologického ústavu SAV, v. v. i., Nitra, T-28855.*

Fig. 11. Malá nad Hronom – Rövid föld. Grave 41 with a stone ring. After Točík 1964, Taf. XXXII:5; Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra, T-28873.

Obr. 11. *Malá nad Hronom – Rövid föld. Hrob 41 s kamenným kruhem. Podle Točík 1964, Taf. XXXII:5; Archiv Archeologického ústavu SAV, v. v. i., Nitra, T-28873.*

4.9 Mezőnagymihály – Nagyecsér-Észak

In 2008, a rescue excavation was carried out in the Mezőnagymihály – Nagyecsér-Észak , where six burial features of the Tumulus culture and seven urn graves dated to Bz D–Ha A stages were documented (Fischl, Hajdu 2016, 141–160). The most striking features were the two closed[21] ring ditches (41 and 87) identified around two inhumation neighbouring graves 58 and 88, equally oriented on the W–E, i.e. WSW–ENE axis (Fig. 12, 13). Directly above those graves, inurned cremations of the Urnfield culture were discovered (see Chapter 9). About a metre from Tumulus culture grave 58, which was located in the centre of the area bounded by the ditch, another (empty) rectangular pit was found, interpreted as a child's grave 91. The smaller circular ditch associated to grave 88 had a diameter of about 2.5 m, while the other adjacent to grave 58 was up to 5.3 m in size. The width of the ditches in both cases was no

more than 40 cm. Inside the smaller ditch (feature 87), a pyre (feature 89) was discovered, in which accumulated remains of charcoals and burnt pottery sherds were found. Apart from this, there were several post- or column-holes documented near the circular ditch, as well as near the wall of the grave pit (Fischl, Hajdu 2016, 153, 154; see Chapters 7.2 and 7.3).

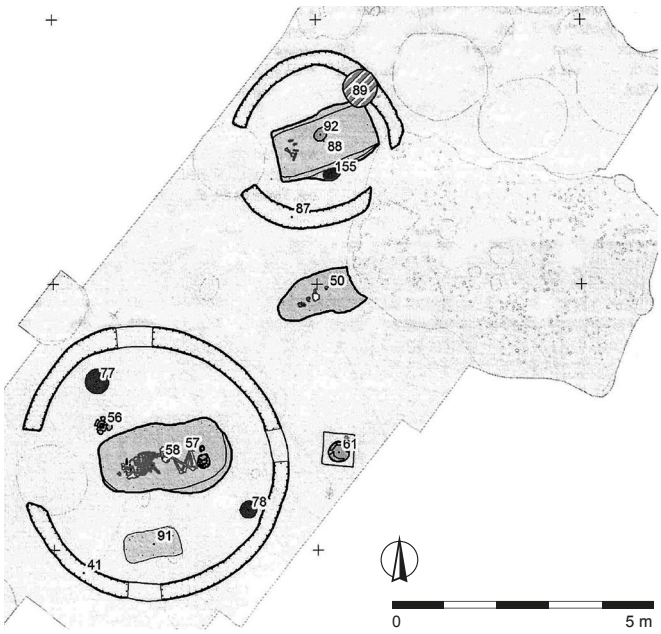


Fig. 12. Mezőnagymihály – Nagyecsér-Észak. Detail of excavation plan with the graves 58 (91) and 88 surrounded by circular ditches – features 41 and 87. After Fischl, Hajdu 2016, 2. kép; modified by J. Godiš.

Obr. 12. *Mezőnagymihály – Nagyecsér-Észak. Detail plánu výzkumu s hroby 58 (91) a 88 ohraničenými kruhovými žlaby – objekty 41 a 87. Podle Fischl, Hajdu 2016, 2. kép; upravil J. Godiš.*

Fig. 13. Mezőnagymihály – Nagyecsér-Észak. Graves 58 and 91 encircled by ditch 41. After Fischl, Hajdu 2016, 3. kép: 1; photo by G. A. Szörényi, Herman Ottó Museum.

Obr. 13. *Mezőnagymihály – Nagyecsér-Észak. Hroby 58 a 91 obkroužené žlabem 41. Podle Fischl, Hajdu 2016, 3. kép: 1; foto G. A. Szörényi, Herman Ottó Múzeum.*

4.10 Nové Zámky – Berek

So far in the literature a little-known site of the Tumulus culture where remnants of a circular ditch have been actually found around the grave is Nové Zámky – Berek. In 1955, a grave (1/55) was accidentally discovered when digging on a sandpit in a military training ground, from which a set of rare bronze jewellery of Central-Western European origin was rescued (Točík 1982, 28–30). Later, in 1962, a survey excavation was conducted at this site, where a small segment of an arcuate ditch was identified on one of the sand dunes (Dune I) close to the place, where the above-mentioned grave was found (Fig. 14). This feature was interpreted as the remnants of the ditch surrounding the grave, specifically A. Točík stated that '*...in addition to the remains of grave pit 1/55, almost half of the circular ditch of Ø 12 m was uncovered*'. According to him, the ditch had a depth of 60 to 80 cm in some places, and it reached a maximum width of 60 cm (Točík 1976, 119; 1982, 25). Revising the documentation of the survey excavation (Rejholcová 1962), the attached and apparently slightly schematised plan indicates that the dimensions of the ditch published earlier by A. Točík were probably highly overestimated.[22] Based on the known size of the survey trenches mentioned in the report and the dimensions of the nearby discovered grave pits, the scale on the plan was verified, which means that the outer diameter of the ditch associated with grave 1/55 was likely much smaller, approximately 6.5 m. Finally, further indication supporting past existence of the ditch and possibly the earthen mound is the fact that two Early Medieval graves (4/62 and 8/62) were partly sunken into the Bronze Age ditch, right at the 'foot' of the delimited space.

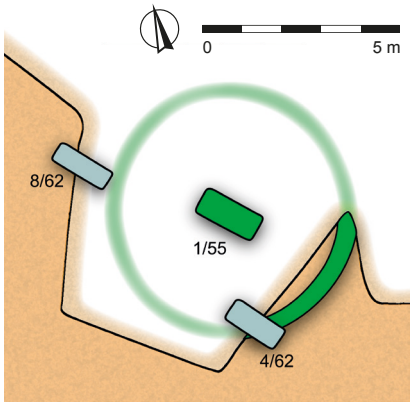


Fig. 14. Nové Zámky – Berek. Detail of a survey excavation plan with remnants of circular ditch around grave 1/55. After Rejholcová 1962; Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra; modified by J. Godiš.

Obr. 14. *Nové Zámky – Berek. Detail plánu zjišťovacího výzkumu se zbytky kruhového žlabu kolem hrobu 1/55. Podle Rejholcová 1962; Archiv Archeologického ústavu SAV, v. v. i., Nitra; upravil J. Godiš.*

4.11 Radvaň nad Dunajom-Žitava – Červený Piesok

The grave with a circular ditch was identified in 2010 during a large-scale geophysical survey in the Radvaň nad Dunajom-Žitava – Červený Piesok (Hüssen et al. 2018, 71–73). A trial excavation was carried out at the place of the magnetic anomaly in 2013, when an underground anthropogenic feature was documented in detail. The outline of a ditch began to appear at a depth of about 45–55 cm, as well as central rectangular oval grave pit oriented on the W–E axis (Fig. 15, 16). Dimensions of the feature varied from the level of its visual identification (280–285 × 150 cm) towards the bottom (225 × 130 cm), as the pit had sloping walls, so an actual depth was about 45 cm (or 90–95 cm from the current ground level). No furnishings were present in the grave as it had been robbed in the past. Only a few rocks (identified as limestone), small fragments of human bones and a few teeth of an adult were found in its fill. The circular ditch's outer diameter reached at most 11 m and its width was 75–80 cm at depth, where it was clearly identifiable (50 cm from ground level). It was open in the southeastern part at a width of circa 90 cm, while small, atypical pottery sherds were found here. These were interpreted as traces of grave robbing or ritual practices associated

with burial. The stratigraphy of the ditch filling indicated that it remained open after digging and was visible in the landscape for a long time. About 25 m south of the grave, there was a stray find of a bronze funnel-shaped pendant typical of the Koszider period (Hüssen et al. 2018, obr. 38:2). The geophysical survey did not detect any other anomalies in the surroundings (see Hüssen et al. 2018, obr. 39:B), and therefore either this was an isolated feature, or the other contemporary graves nearby have been destroyed in the past by agricultural activity.

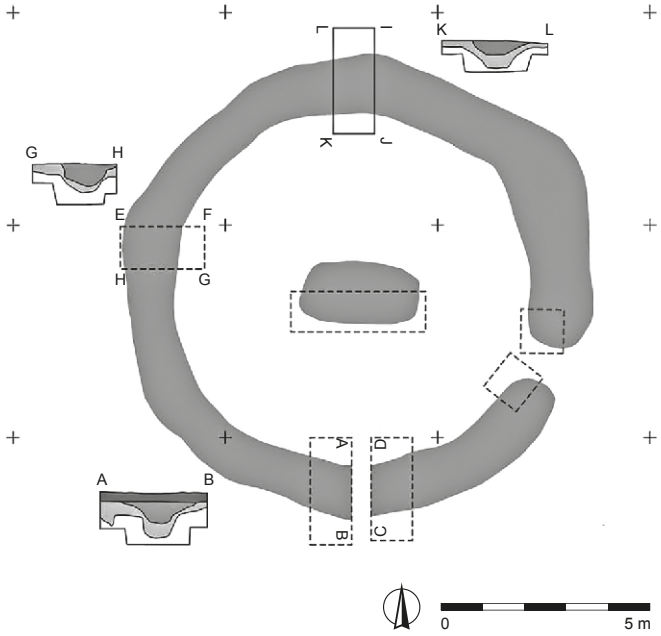


Fig. 15. Radvaň nad Dunajom-Žitava – Červený Piesok. Plan of circular ditch grave. After Hüssen et al. 2018, obr. 40:A.

Obr. 15. *Radvaň nad Dunajom-Žitava – Červený Piesok. Plán hrobu s kruhovým žlabem. Podle Hüssen et al. 2018, obr. 40:A.*

Fig. 16. Radvaň nad Dunajom-Žitava – Červený Piesok. Grave surrounded by a ditch. After Hüssen et al. 2018, obr. 40:B.

Obr. 16. *Radvaň nad Dunajom-Žitava – Červený Piesok. Hrob ohraničený žlabem. Podle Hüssen et al. 2018, obr. 40:B.*

4.12 Salka I – Zsellér föld

Circular burial feature in the form of the stone ring was discovered in 1962 in Salka I – Zsellér föld[23], which is till date the largest excavated Tumulus culture cemetery with 172 graves (68 inurned, 83 scattered and 12 inhumations[24]) in southern

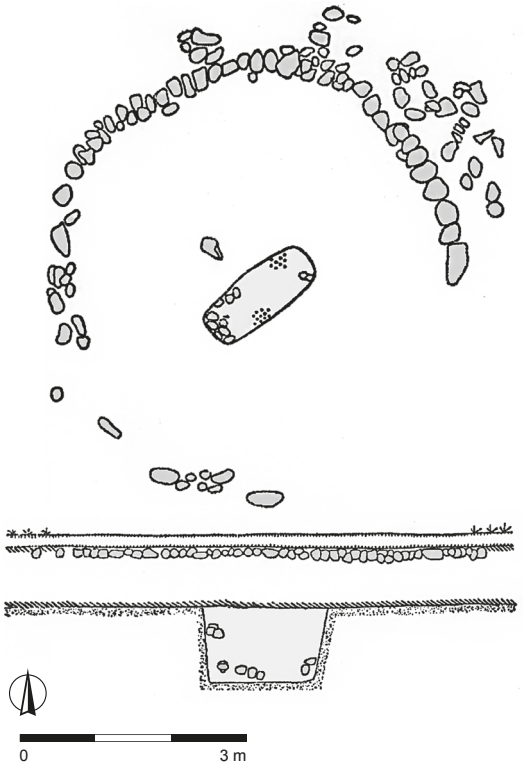


Fig. 17. Salka I – Zsellér föld. Plan of grave 181 with a circular stone enclosure. After Točík 1964, Abb. 3:6, 7; modified by J. Godiš.

Obr. 17. *Salka I – Zsellér föld. Plán hrobu 181 s kamenným kruhovým ohrazením. Podle Točík 1964, Abb. 3:6, 7; upravil J. Godiš.*

Slovakia (Točík 1964, 3–37). A distinctive feature of the burial ground is the frequent use of stone in the grave constructions, as is the case in the nearby site Letkés. Among these, grave 181 stands out, bounded by a stone ring with an outer diameter of 5.6–6 m (Fig. 17, 18; see also Točík 1964, Taf. VII:5). This was found at the eastern edge of the excavated area, although it is not confirmed that there was the burial ground's periphery. In the middle of the area demarcated by stones, there was a scattered cremation grave, but it had the rectangular ground-shape (180 × 70 cm) that is standard for the burial of an unburnt body (Točík 1964, 36). Anton Točík assumed that it

Fig. 18. Salka I – Zsellér föld. Cremation grave 181 bounded by a stone ring. Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra, T-33341.

Obr. 18. *Salka I – Zsellér föld. Kremační hrob 181 ohraničen kamenným kruhem. Archiv Archeologického ústavu SAV, v. v. i., Nitra, T-33341.*

reflected '*...a surviving tradition of graves with skeletons...*' as was probably also the case of another biritual double grave 34/60 with an extended rectangular pit (485 × 85 cm) found at the same site (1964, 10, 59, Taf. II:5). Close to the west of the stone ring of grave 181, there was an urn grave 170, which was also surrounded by a small circle made of rocks with a diameter of only about 1 m (Točík 1964, 34, Abb. 3:8, 9, Taf. VI:6).

4.13 Svätý Peter I – Pasienky

One of the first excavated sites of a crucial significance (in terms of the excavation extent and the state of preservation) to the understanding of the Tumulus culture origins in the northwestern Carpathian Basin so far is the burial ground in Svätý Peter I (formerly Dolný Peter) – Pasienky (or Salaš JRD – Unified Agricultural Cooperative). It was systematically excavated in 1958–1959 (Dušek 1959b, 21–34; 1969, 51–80), where a total of 56 Middle Bronze Age graves were found (39 inhumations, 5 cremations and one biritual double grave). It is important to emphasize that the necropolis, or a substantial part of it, appears to have been completely excavated (Fig. 19). In the central part of the burial ground there were six inhumation graves (7, 9, 16, 20, 21, 25), each bounded by a circular ditch with an outer diameter of 3.8–8.4 m, a width of 35–50 cm, and a preserved depth of about 20–35 cm (Fig. 20). In terms of spatial distribution, these features formed a coherent grouping aligned along the WNW–ESE axis, which is indicative of an organised selection of the burial spots within the necropolis. This is also confirmed by the absence of superpositions, which would be caused by digging new grave pits, as well as by the respecting of the inner area marked by ditches, which was allegedly without finds. One of the remarkable finds at this site were the concentrations of charcoal remains and burnt animal bones, which were found in the three ditches encircling the graves 7, 9, and 20 (see Chapter 7.2).

4.14 Tét – Gyömörei útmelletti dűlő

In 2021, there was a rescue excavation in Tét – Gyömörei útmelletti dűlő, where 22 early Tumulus culture graves (including stretched inhumations) were discovered yielding typical metal jewellery of the Koszider period (Ujvári 2022, 71). From the scarce published information, it is known that a circular ditch of unspecified dimensions was identified, which was situated among two grave groups, within the burial ground. It cannot be ruled out that it originally surrounded the previously destroyed central grave, as suggested by the very shallow level at which the other graves were recognised (Ilon 2024, 415–416).

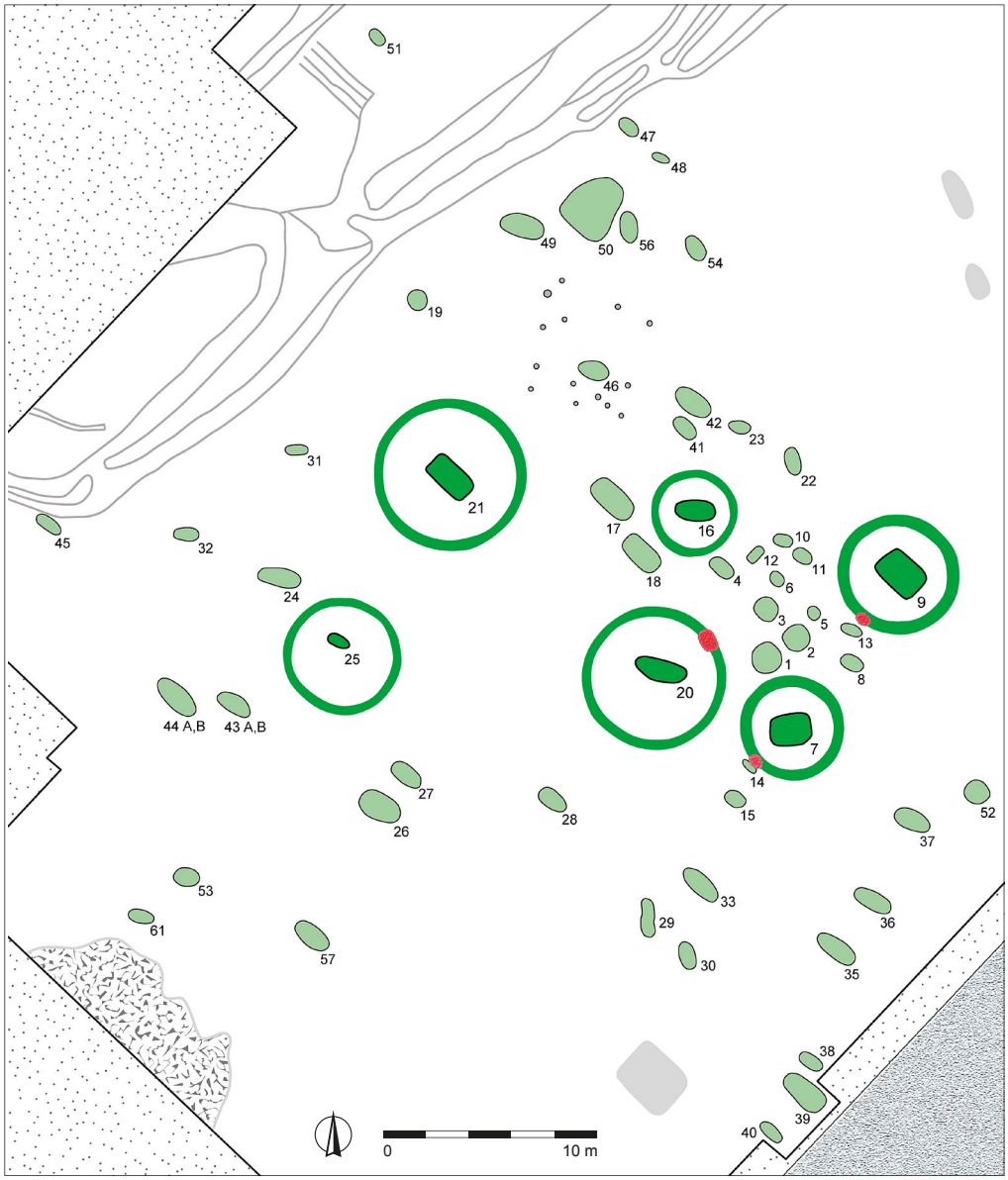


Fig. 19. Svätý Peter I – Pasienky. Plan of the Tumulus culture burial ground. After Dušek 1969, Plan 4; modified by J. Godiš.

Obr. 19. *Svätý Peter I – Pasienky. Plán pohřebiště mohylové kultury. Podle Dušek 1969, Plan 4; upravil J. Godiš.*

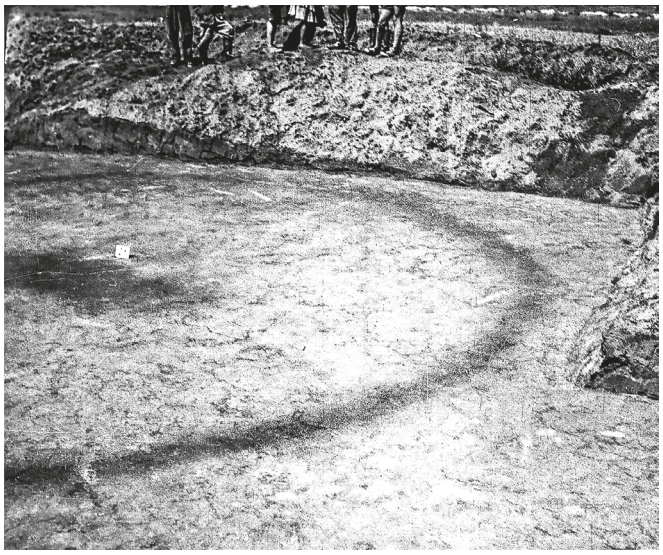


Fig. 20. Svätý Peter I – Pasienky. Grave 21 encircled by a ditch. After Dušek 1969, Taf. XXXI:5; Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra, T-25255a.

Obr. 20. *Svätý Peter I – Pasienky. Hrob 21 ohraničený žlabem. Podle Dušek 1969, Taf. XXXI:5; Archiv Archeologického ústavu SAV, v. v. i., Nitra, T-25255a.*

4.15 Üröm – Magyar-Bolgár Barátság TSz

A survey excavation was carried out in Üröm – Magyar-Bolgár Barátság TSz in 1977, which was evoked by the representative stray artefacts associated with Tumulus culture rescued from the previously destroyed graves located in vicinity of the local farmyard. The documented features were already heavily disturbed due to the previous earthworks at the site conducted with heavy machinery (Holport 1980, 57–78). In one of the trial trenches, at a depth of 50 cm, an irregular arched structure built of flat stones was discovered, while in the nearby trench this feature continued at the same depth, but its alignment had been disturbed (Holport 1980, 59, 1. kép). Finds of pottery and metal objects from the area marked by these structures show that some of the graves in what was undoubtedly biritual burial ground were originally surrounded by wreath of stacked rocks several metres in diameter.

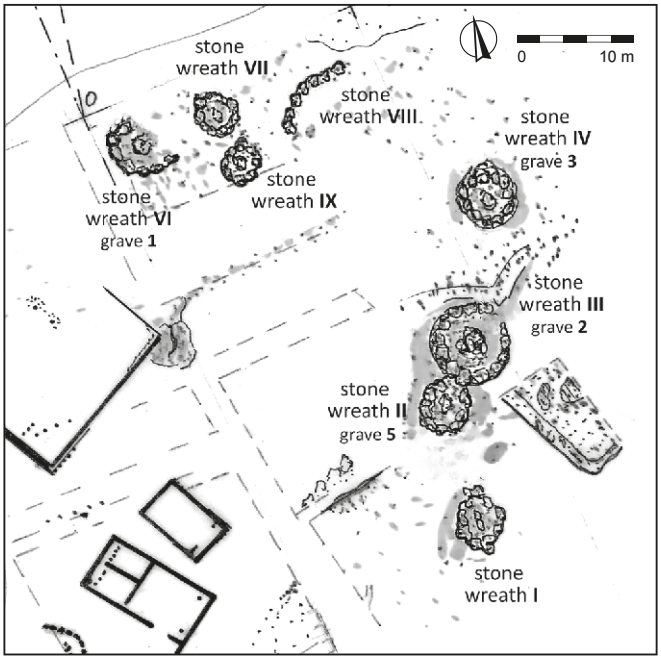


Fig. 21. Vértesszőlős – Vasútvonal mente III. Detail of an excavation plan of the Tumulus culture burial ground with circular stone structures around the graves. After Pál, Cseh 2013, 1. tábla; Archive of the Tatabánya Museum; modified by J. Godiš.

Obr. 21. *Vértesszőlős – Vasútvonal mente III. Detail plánu výzkumu pohřebiště mohylové kultury s kruhovými kamennými konstrukcemi kolem hrobů. Podle Pál, Cseh 2013, 1. tábla; Archiv Tatabányai Múzeum; upravil J. Godiš.*

4.16 Vértesszőlős – Vasútvonal mente III

In 2009, a preventive excavation took place in Vértesszőlős – Vasútvonal mente III, where a biritual cemetery of the Tumulus culture was discovered (Pál 2010, 388; Pál, Cseh 2013, 5–19). From the preliminary report it is known that 8 Middle Bronze Age[25] graves (3 scattered cremations, 4 inhumations and 1 symbolic) were found at a depth of about 50–80 cm, all of which were encircled by stacked stones in the form of a wreath, i.e. in several layers (Fig. 21). Their diameter[26] varied from approximately 3.5 to 7 m, but one of the disturbed enclosures ('VIII. kőkör') reached even up to 10 m (Pál, Cseh 2013, 1.–3. tábla). Several graves with wide stone wreaths had a cairn piled up in its centre (Fig. 22), while inhumations were rectangularly lined with stones. Structures were built of non-local sandstone, which had to be brought from the nearby Gerecse Mountains.

Fig. 22. Vértesszőlős – Vasútvonal mente III. Grave 3 with a stone wreath IV. After Pál, Cseh 2013, 3. tábla:5. kép; Archive of the Tatabánya Museum.

Obr. 22. *Vértesszőlős – Vasútvonal mente III. Hrob 3 s kamenným věncem IV. Podle Pál, Cseh 2013, 3. tábla:5. kép; Archiv Tatabányai Múzeum.*

5. Problems of identification of circular burial features in field excavations

Before discussing above presented features in depth, a few brief comments should be made on the possibilities of their preservation regarding erosion processes and anthropogenic activity (more on the detailed examination of this issue see e.g. Trefný 2013, 131–133). If the grave had a superior outer surface treatment (construction) in the form of earthen mounds, even combined with a stone ring or wreath, then archaeological traces of it may indeed not have survived at all to this day. Unless they were of more monumental dimensions, earthen embankments with little or no use of stone practically did not preserve in the lowland agriculturally exploited regions of the Pannonian Basin. Also, the rocks were generally simply piled up to the surface level and thus more easily exposed to destruction (tillage, extraction, etc.) after the burial had ceased. Therefore, when evaluating the results of the excavations of some burial sites with dense distribution of graves, sometimes researchers have tended to conclude that mounds (earthen or stone) may have originally stood over some of them, which were found surrounded by a wider 'empty space'. On the other hand, if a surrounding ditch was dug around the central grave pit at the level of its surface, the impact of the subsequent feature archaeologisation processes should – under the usual circumstances – result in the preservation of its negative (scouring of the ditch walls, weathering, etc.). Traces of these ancient earthworks can therefore be archaeologically observable even in the present day, moreover in the cases where there was some stone construction inside the area encircled by the ditch. It follows that identifying the nature of the original outer, i.e. surface treatment for graves of this type may not always be reliable, as it depends on the individual case which attribute of their arrangement has archaeologically 'survived'. Whether it is just a simple circular ditch around the grave, an embankment (earthen mound) above the grave with a surrounding ditch or, on the other hand, a stone ring or wreath reinforcing an earthen mound (or a cairn – pile of stones), possibly also with a circular ditch. Therefore, the occurrence of circular ditches, or rocks placed concentrically around a central grave, is not always rightly interpreted as mounds, although this may often have been the case. As was evidenced in other (pre)historical periods, the circular ditches may have been covered by an earthen mound too – excluding the cases of later overlaying (superpositions) with the secondary burials, when embankment could be altered – i.e. have not surrounded the tumulus, if it was even built (see Scholtz 2010, 300, Fig. 8, further references there). To add, it is suggested by many that the soil from the ditch was placed over the central grave to create embankments, but cases are known when it was used to build a low earthen wall from the ditch's outer side.

Shortly, a few remarks on the excavation methods should be made in relation to the fact that the traces of above-ground structural features are usually relatively rare to have been preserved.[27] Consideration must also be given to the suitability and extent of the using heavy machinery, i.e. an excavator when lowering the topsoil (hummus); the negatives of circular ditches – if their depth was only a few tens of centimetres – can be destroyed in the initial process of the excavation itself if carelessly handled. This could also explain cases where the 'isolated' grave pit on the larger uncovered cemetery had been found, which may have originally been surrounded by a shallow circular feature (e.g. Bátora 2004, 241, Abb. 1; Egry 2004, 122, 2. térkép; Ilon 2024, 415; Kustár, Wicker 2004, 79, I. tábla). The situation is much more favourable with stone rings and mainly massive wreaths, as their unintentional destruction, usually during rapid and poorly managed rescue excavations, is immediately apparent, so at least these features are identified, even when heavily disturbed. It follows from the above that the state of the archaeological record of circular grave features is affected not only by objective factors, such as the circumstances of the natural potential for preservation of the feature itself but also by the experience and carefulness of the lead archaeologist and their choice of technique used in the excavation.

6. Spatial distribution of Middle Bronze Age circular funerary features in the Carpathian Basin

The mapping of the studied sites in the northern Carpathian Basin clearly points to the fact that burial grounds with ditches around graves dated to the Middle Bronze Age are located exclusively in lowland areas, whereas presence of graves encircled by stone structures were rather linked to hilly or mountainous regions (Fig. 1). One can lean towards the 'common-sense' argument, which has been stated long ago by several researchers, that this can be simply explained with extent of availability of stone raw material needed for the construction of these structures (e.g. Kovács 1975, 40, note 29; Trogmayer 1975, 148; Pichlerová 1976, 18; Furmánek, Ožďáni 1990, 136). On the other hand, however, cases where this material was undoubtedly transported over a greater distance (at least several kilometres) should not be overlooked, as can be evidenced e.g. in Radvaň nad Dunajom (Hüssen et al. 2018, 71; see also Keszthely; Godiš, Styk 2019, 216). The use of the stone in such cases may have had a special meaning and emphasized the 'extra work' that the mourners were willing to do for the deceased to honour him even more. The absence of rocks in the grave, i.e. in the ditch was apparent at sites such as Šamorín-Šámot, Svätý Peter, Nové Zámky, Jánoshida, Mezőnagymihály and Kiskunfélegyháza. Still, this conclusion could be affected by the state of preservation of each individual site (Tab. 2). It is possible that structures made of rocks may have been in some of these sites, but the impact of tillage and other latter disturbances have erased any trace of their past existence. This was indicated for example in Budapest-Nagytétény burial ground, where dislocated stones (even of larger sizes) have been found in the filling of some circular ditches, which were not local and must had been brought there (Fig. 23; Szilas 2017, 238).

Fig. 23. Budapest-Nagytétény-Érdliget. Dislocated stones found in ditch 49 around grave 50. After Szilas 2017, Fig. 10:2; Archive of the Aquincum Museum.

Obr. 23. *Vértesszőlős – Vasútvonal mente III. Dislokované kameny nalezené v žlabu 49 kolem hrobu 50. Podle Szilas 2017, Fig. 10:2; Archiv Aquincumi Múzeum.*

Site / Feature	Circular ditch outer–inner diameter / width / depth	Note
Budapest-Nagytétény		
Grave 29 / ditch 28	825–690 / 40–60 / -15–20 cm	◎ + few rocks in the ditch's filling; other grave sunken to the ditch
Grave 42 / ditch 43	630–570 / 30–45 / -10 cm	◎ (?) + posthole in the W part of the ditch and in S part enclosed by ditch
Grave 50 / ditch 49	900–730 / 70–80 / -25–35 cm	◎ + few rocks in the grave and ditch's filling, as well as at its bottom
Grave 65 / ditch 64	890–765 / 60 / -20 cm	◎ + few rocks in the grave's and ditch's filling; postholes in S part enclosed by ditch
Grave 107 / ditch 106	755–635 / 45 / -15–25 cm	◎
Grave 202 / ditch 203	820–740 / 45 / -25 cm	◎ (?) + symmetrically positioned postholes in area enclosed by ditch
Jánoshida		
Grave 113 / ditch A	615–520 / 65–70 / -45–55 cm	◔ (?) – opening in NE part of the ditch
Grave 114 + 46 / ditch B	730–620 / 55–60 / -50–60 cm	◎ (?) – most probably not fully preserved circular shape
Grave 118 / ditch C	890–730 / 60–75 / -50–55 cm	◔ – opening in E part of the ditch; other grave sunken to the ditch
Grave 151 / ditch D	890–780 / 60–75 / -50–55 cm	◔ (?) – interrupted in E/NNE part of the ditch; other graves sunken close to it
Kiskunfélegyháza		
Grave 41 + 59 / feature 71	1200–1000 cm / -15 cm	◔ – opening in the SE part of the ditch
Grave 7 / feature 13	590–440 cm / – / -20 cm	◎ (?) – interrupted in the NE part of the ditch; cremation grave in the ditch
Grave 92 / feature 177	–	◎ (?) – only segments of irregular circular ditch were documented
Maklár – Koszpérium		
Grave 41	280–260 / 25–30 cm	◎ later urn grave sunken into the ditch
Grave 42	170–90 / 15–25 cm	◎ oblong circular ditch joined to grave's 41 ditch at its SW part
Graves (11)	–	◎
Maklár – Nagyrét II		
Graves (3)	350–300 / 30–40 cm	◔ opening in NE part of the ditch
Grave	350–300 / 30–40 cm	◔ opening in N part of the ditch
Grave	350–300 / 30–40 cm	◔ opening in NW part of the ditch
Mezőnagymihály		
Grave 58 + 91 / ditch 41	530 / 25–30 / -10–20 cm	◔ (?) + two postholes (pillars) – interrupted in the WSW part of the ditch
Grave 88 / ditch 87	255 / 45 / -15 cm	◔ (?) + pyre 🔥 (Ø 50 cm) + pillar – interrupted in the WSW part of the ditch
Nové Zámky – Berek		
Grave 1/55	~ 650 (?) / 60 / -60–80 cm	according to A. Točík (1982) ditch diameter reached about 12 m
Radvaň nad Dunajom		
Grave (P2)	1150–1070 / 75–80 / -65–85 cm	◔ opening in ESE part of the ditch + few rocks in the grave's pit filling
Svätý Peter I		
Grave 7	550–500 / 50 / -25 cm	◎ + pyre in the SW part of the ditch 🔥 (Ø 60 cm); grave sunken to it
Grave 9	560–520 / 40 / -30–35 cm	◎ + pyre in the SW part of the ditch 🔥 (40 × 80 cm); grave sunken to it
Grave 16	410–380 / 30 / -25 cm	◎
Grave 20	700–620 / 35 / -25 cm	◎ + pyre in the NE part of the ditch 🔥 (Ø 80 cm)
Grave 21	840–700 / 40 / -20 cm	◎
Grave 25	675–580 / 35 / -25 cm	◎

Legend: ◎ – closed ditch; ◔ – open ditch; 🔥 – pyre

Tab. 2. Characteristics of circular ditches at the Tumulus culture burial grounds in the Carpathian Basin. For better comparison, the values have been rounded to 0–5–10.
Tab. 2. *Charakteristiky kruhových žlabů na pohřebištích mohylové kultury v Karpatské kotlině. Pro lepší porovnání byly hodnoty zaokrouhleny na 0–5–10.*

The second group of sites, where burial structures made of concentrically stacked stones in form of rings or wreaths were excavated, is characterised by their association with the nearby mountain ranges (Tab. 3). This is apparent at the burial grounds of the Middle Danube Tumulus culture in Buková (Janšák 1959), Smolenice (Dušek 1980) and Devín (Plachá, Furmánek 1976) related to the Little Carpathian mountain range. Another geographically close grouping is represented by the necropolises in Salka, Letkés and Malá nad Hronom situated in the Lower Ipeľ valley, where the stone exploitation from the nearby Börzsöny Mountains can be assumed. The sites of Radvaň nad Dunajom,[28] Vértessződlős and Üröm situated close to the River Danube, located at the foothills of Vértes, Gerecse and Pilis Mountains, can also be included in this grouping. The third group of sites where circular burial structures appeared is associated with the southeastern Urnfield cultural region and clustered in the Mátra and Bükk mountain range in northern Hungary. The abundant stone exploitation for the grave arrangements documented at the large Piliny culture burial grounds with hundreds of graves in Radzovce (Furmánek, Mitáš 2010), Tornaľa (Furmánek 1977), Nagybátony (Patay 1954) and Salgótarján-Zagyvapálfalva (Guba 2020) is not surprising, because its sources were apparently easily available in the surrounding landscape. It seems that the use of rocks may even have sometimes been a 'necessity' when burying the socially significant cremated dead as part of the strict Urnfield funerary customs. The same applies to the lately discovered cemetery in Jobbágyi, located on the 'borderlands' between the Piliny and the Carpathian Tumulus culture, where rocks[29] from Mátra Mountain range were also frequently used for marking graves or for building various constructions for it, including small-sized circular cairns.

7. Characteristics and specifics of grave circular ditches

7.1. Dimensions

One of the outcomes of the comprehensive study by A. Jockenhövel (1999, 350) focused on prehistoric circular sunken funerary features – ditches around graves from the Final Eneolithic to the Late Bronze Age in the regions north of the Alps, was the comparison of the intervals of their dimensions in the various chronological sections. Its results showed that a certain pattern can be traced in this attribute, where ditches dated to the Final Stone Age, Early and Middle Bronze Age had a much smaller diameter compared to their later parallels from the Late Urnfield period (see Jockenhövel 1999, Abb. 8). It was concluded back then that the outer diameter of the Middle Bronze Age ring ditches (sometimes with a slightly oval shape) known from the Carpathian Basin usually ranged from about 5.5 to 9 m, while

Site / Feature	Stone enclosure outer diameter	Note
Jobbágyi		
Symbolic grave	–	Ring of stones
Scattered cremation grave	–	Ring of stones
Letkés		
Grave 37	~ 400 cm	Stone ring was identified in depth about 40–45 cm
Grave 22	–	Stone ring, rocks inside oblong grave pit
Grave 8	–	Stone ring, circular grave pit lined with stones
Malá nad Hronom		
Grave 34/III	570 cm	Outer stone ring, inner stone cairn with empty centre
Grave 41	450 cm	Rectangular stone lining of grave (cremation)
Salka I – Zsellér föld		
Grave 181/62	600–560 cm	Rectangular grave pit (as for inhumation grave)
*Grave 170/62	100 cm	Urn grave covered by small-sized stone ring
Üröm		
Grave (?)	~ 300–400 cm (?)	Remnants of circularly arranged rocks (wreath)
Vértesszőlős		
Stone wreath I	~ 450 cm	Central grave covered by stone cairn
Grave 5 / stone wreath II	~ 500 cm	Central grave covered by stone cairn
Grave 2 / stone wreath III	~ 700 cm	Central grave covered by stone cairn
Grave 3 / stone wreath IV	~ 550 cm	Central grave covered by stone cairn
Grave 1 / stone wreath VI (Str. 0264)	~ 700 cm	Central inhumation grave with stone lining
Stone wreath VII (Str. 0337)	~ 600 cm	Central grave covered by stone cairn
Stone wreath VIII	~ 1000 cm	Heavily disturbed, only NW segment preserved
Stone wreath IX	~ 350 cm	Central grave covered by stone cairn

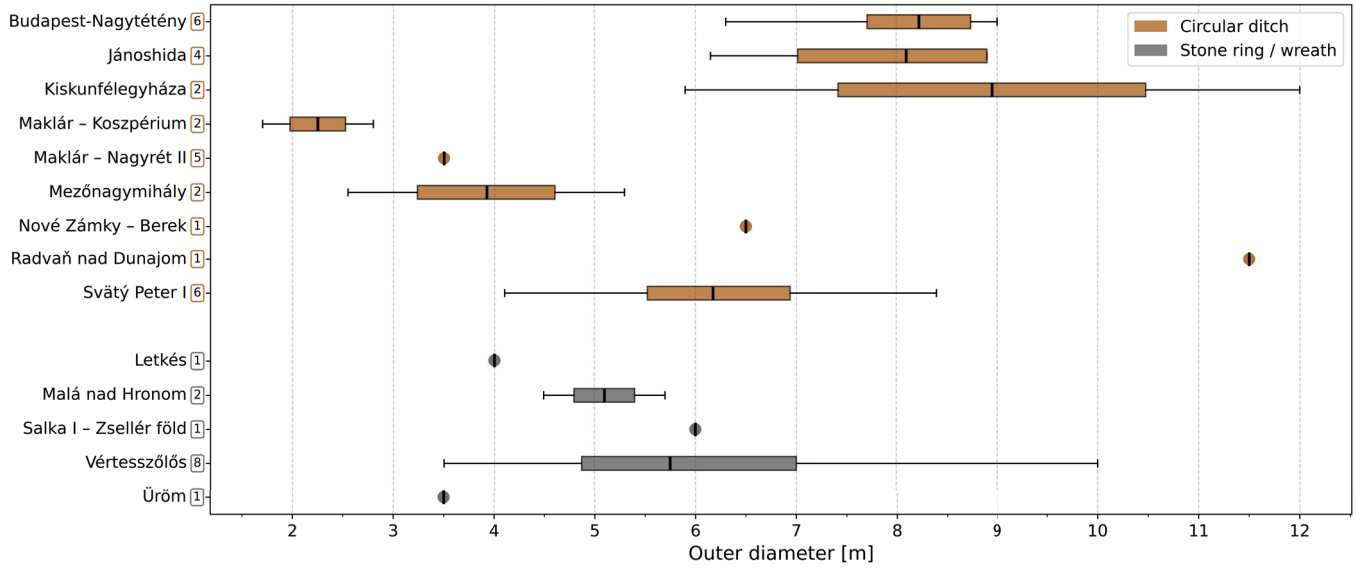
Tab. 3. Characteristics of stone structures (rings/wreaths) at the Tumulus culture burial grounds in the Carpathian Basin.

Tab. 3. *Charakteristiky kamenných struktur (kruhů/věnců) na pohřebištích mohylové kultury v Karpatské kotlině.*

such a features documented in the regions to the west, mainly in southern Germany, were about 7–18 m wide (Jockenhövel 1999, 340–342, Abb. 6). More than 25 years later, it can be stated that the observations for the Carpathian Tumulus culture settlement territories in present-day Slovakia and Hungary are still valid, with minor deviations reaching about 0.5–1 m (Graph 1). This is best exemplified by the extensive excavations of the burial grounds in Svätý Peter (6) and Budapest-Nagytétény (6) or Jánoshida (4), as a representative 'samples', where almost half of the circular structures listed here have been documented. The above-mentioned deviations mostly result from the fact that it is not always clear from the published text whether the dimension of the ditch (if plan is unavailable) refers to its inner or outer diameter, which distorts the conclusions, when sometimes the maximum preserved width of the ditch reached almost 1 m (e.g. Radvaň and Dunajom, Šamorín-Šámot, Neusiedl-Hutweide). As for the circular burial features represented by stone rings or wreaths, these are considerably less evidenced in the studied area (Salka I, Malá nad Hronom, Letkés), and their diameter was usually between 4 to 7 m, with some much larger structures documented in Vértesszőlős. These seem to be relatively smaller compared to similar but usually more structurally complex features (fully covered by rocks) known from the milieu of the Middle Danube Tumulus culture in the west. Moreover, their size was in some cases affected by the secondary stone embankments, as these could serve as family tombs (e.g. Buková, Čeložnice, Pitten; see Bobek 2016).

In this context, the outlined size-frame is being stepped out by grave 16 in Svätý Peter,[30] which was delineated by a small ditch approximately 4 m in diameter, where a child aged 7–12 years was buried (Dušek 1969, 59, Abb. 20). Another exception is the toddler's grave 88 bounded by a ditch about 2.5 m in width at Mezőnagymihály, in which remains of an individual aged 1.5–2.5 years were found (Fischl, Hajdu 2016, 153, 3. kép:6). Although such a statement may seem hasty, both cases indicate that ditches (and presumably mounds) of smaller dimensions may in some cases have been deliberately constructed over the graves of children or juveniles. We might consider whether there could be a potential correlation between the age (and with it possibly a social status, if not inherited) of the deceased and the size of the circular ditch (to this see also Cavazzuti et al. 2022, 66), and if so, whether this phenomenon is confined to certain burial sites or was more widespread within the Carpathian Tumulus culture communities. The lack of anthropological data from here studied sites is currently insufficient[31] for such an analysis. However, it is worth mentioning, for example, that grave 181e of an 8-year-old individual in Pitten was surrounded by a ditch 7.4 m in diameter (Hampl et al. 1978–1981, 108, Taf. 89, 174). On the other hand, at this cemetery smaller tumuli up to 3 m in diameter were mostly built over the children graves, while they had often more oval or almost rectangular shape (see Bobek 2016, 32). This seems to be primarily a site-specific issue and also depended on the burial forms (and thus the required size of the grave pit), which can be observed e.g. at burial sites in northwestern Hungary, namely around Maklár (Koszpérium and Nagyrét II), where small-sized ditches with a diameter of about 2–3.5 m appeared. Even the furnishing of some of them, where exclusive weapons (e.g. polished stone axe) were present, speaks against the idea that a child was buried there (see below Fig. 26:D). The explanation for these various sub-standard dimensions of the circular grave features must, therefore, perhaps be sought elsewhere.

In contrast to what was mentioned above, the circular ditch with an outer diameter of almost 12 m documented in Kiskunfélegyháza enclosing the area in which inhumation graves 41 and 59 were found, represents an above-standard dimension (Fig. 6). So far, the brief excavation results, published only informatively, do not allow us to comment further on the age of the buried and his grave furnishings, nor on the chronological relations of these features to each other. This group of 'oversized' ditches undoubtedly includes the newer discovery from Radvaň and Dunajom. Questionable is the true size of the heavily disturbed ditch,



Graph 1. Comparison of the outer diameter of circular burial features (ditch or stone ring/wreath) attributed to the Tumulus culture in the northern Carpathian Basin. Author T. Kondela.

Graf 1. *Srovnání vnějšího průměru kruhových pohřebních objektů (žlab nebo kamenný kruh/věnec) přisuzovaných mohylové kultuře v severní části Karpatské kotliny. Autor T. Kondela.*

which was later recognized and assigned to grave 1/55 from Nové Zámky – Berek (see Chapter 4.10), as the available information about it is contradictory (Fig. 14). In the case of Nové Zámky, another clue that could support information of A. Točík (1982, 28–29) that the ditch had a diameter of about 12 m is a presumed allochthonous origin of the buried female individual, which is supported by the provenance of the grave finds, namely unique wheel-headed bronze pin with a wider rim distinctive for the Hesse region in central Germany (see also Benkovsky-Pivovarová 2008, 259; Godiš 2019, 167, further literature there; lately e.g. Bunnefeld et al. 2021, 136, Abb. 14, 15). It is in this western Tumulus culture zone where circular burial features, including ditches, of mostly quite larger dimensions[32] (circa 9 to 13 m in diameter) have been documented, compared to those known so far from the Carpathian-Danube-Tisza territory (see Jockenhövel 1999, 341, Abb. 2:11). It is a matter for further research whether these large circular ditches may in some way also be related to the 'western' tradition or even identity of the buried individuals, at a time when the first communities of the Tumulus culture were probably infiltrating the Carpathian Basin during the late Koszider period (as indicated by the stretched-position burials in these cases; see Godiš, Javorek 2024, 123–124, further literature there).

7.2. Pyres

During excavations in Svätý Peter, features consisting of stacked layers of burnt wood and animal bones were discovered in three of the six circular ditches (graves 7, 9 and 20) and interpreted as fireplaces or pyres, which were related to the rituals accompanying the burying of the dead, i.e. funeral feast (Fig. 19; Dušek 1959b, 172; 1969, 51–52, Abb. 18, 19, 21). Stratigraphic observations point to the fact that these features were probably created during the burial process, as they were – according to M. Dušek – found at the bottom of the ditches or, as he stated, the ditch and the pyre were 'equally deep'. From all here studied cases evidenced at other sites, ditches usually had a standard U-profile, without special adjustments of its bottom (just rarely indications of its possible alignment were allegedly observed and described, e.g. Radvaň and Dunajom; Hüssen et al. 2018, 72, obr. 40). Based on the yet unpublished photograph taken during excavation in 1958, it is likely that at least in the case of grave 20 this feature holding the traces of fire was in fact found in the upper filling of (or above) the ditch (Fig. 24). Similarly, an unpublished plan of the pyre discovered in ditch associated with the grave 7 shows that it reached its

Fig. 24. Svätý Peter I – Pasienky. Remains of charred wood and burned animal bones found in the ditch associated with grave 20. Archive of the Institute of Archaeology of the Slovak Academy of Sciences, Nitra, T-25254.

Obr. 24. *Svätý Peter I – Pasienky. Zbytky zuhelnatělého dřeva a spálené zvířecí kosti nalezené ve žlabu souvisejícím s hrobem 20. Archiv Archeologického ústavu SAV, v. v. i., Nitra, T-25254.*

upper fill and not its bottom (Dušek 1959a; Godiš 2015, 13). It seems that their placement within the ditch did not have to be completely random, as can be evidenced by graves 7 and 9, where the fireplaces were set in its southwestern segment, while by grave 20 it was in an opposite side, i.e. on its northeastern edge. Albrecht Jockenhövel (1999, 337) suggests that their placement was subject to a certain 'regularity' that was culturally specific and emphasized the contextual relationship between the central grave, the ditch and the pyre. Animal sacrifices were apparently burnt there as part of the burial ceremony, while oak wood (*Quercus sp.*) served as fuel for the pyre in all the cases in Svätý Peter (Dušek 1969, 56, 63, 65). Also noteworthy is the positioning of graves 13 and 14 close to the pyres in the ditch graves 7 and 9. The upper filling of the grave 14 was, according to field documentation, partially overlain by the fireplace, indicating its earlier dating to a ditch grave 7 (Dušek 1959a; Godiš 2015, 17). So far, this has been a quite exceptional find of this kind, in wider Middle Danube region but more recent discoveries made in Mezőnagymihály showed that the occurrence of this phenomenon must be expected at other, geographically much distant sites (almost 200 km by airline). However, the situation at this site in the northeastern Hungary is slightly different in some ways. According to the observations made by leader of an excavation A. G. Szörényi, a burnt pyre consisting of charcoal and pottery fragments – feature 89 – was located above an already filled-in circular ditch – feature 87 (Fig. 25; Fischl, Hajdu 2016, 153, 155). Insofar as this information can be considered plausible, the question of its association with inhumation grave 88 or with the later cremation grave 92 dated to Urnfield culture remains unresolved. The interpretation that it is evidence of an additional, perhaps commemorative ceremony associated with the sacrifices dedicated to the child previously buried in grave 88, still at the time when this burial ground was used during the Middle Bronze Age is also possible. Such a hypothesis could be supported by the fact that the mentioned pyre was situated in the northeastern part of the ditch, i.e. in a same position as it was in the case of the already mentioned grave 20 in Svatý Peter, although having a differently oriented pit (cf. Dušek 1969, Abb. 21; Fischl, Hajdu 2016, 2. kép). These documented cases indicate a connection of these pyres with the ancestral cult and the veneration of the commemorative places where they were buried, also within the communities of the Carpathian Tumulus culture. In addition, animal bones and ceramic sherds disposed of in the ring ditches as remains of funerary feasts were documented in later prehistoric and historical periods in the Carpathian Basin, too, e.g. in the burial sites of the Vekerzug or the Sarmatian cultures (see Kulcsár 1998, 39; Scholtz 2010, 300–301).

Fig. 25. Mezőnagymihály – Nagyecsér-Észak. Feature 89 (on the left; detail in lower right corner) made of burnt soil mixed with ceramic sherds in ditch 87 encircling grave 88. After Fischl, Hajdu 2016, 3. kép: 6; 4.: 7; photo by G. A. Szörényi; Archive of the Herman Ottó Museum.

Obr. 25. *Mezőnagymihály – Nagyecsér-Észak. Objekt 89 (vlevo; detail v pravém dolním rohu) tvořený přepálenou zeminou smíšenou s keramickými střepy v žlabu 87 obklopujícím hrob 88. Podle Fischl, Hajdu 2016, 3. kép: 6; 4.: 7; foto G. A. Szörényi; Archiv Herman Ottó Múzeum.*

7.3. Post-holes

The earlier discussed graves at Mezőnagymihály are also distinguished from other sites by the presence of small-sized sunken features of circular shape, which most likely were negatives of the column holes. Specifically, there were two of them – features 77 and 78 – situated at the inner edge of ditch 41 (Fig. 12; Fischl, Hajdu 2016, 141, 153). A further analogous feature 155 was evidenced in the middle of the southern grave pit 88's wall, where its function associated with the grave's internal construction should rather be considered. This can be observed in the example of the robbed tumulus grave 153a at Pitten too, where post-holes reinforced with lining stones were found in each corner of the pit, fixing the hollow space of the grave chamber (Hampl et al. 1978–1981, 89, Taf. 68, 69). As a result, it is likely that in Mezőnagymihály could have been a number of these shallow sunken features associated with the grave and its surroundings, but that they were not preserved due to agricultural activities. The function of those documented traces of wooden posts is probably related to the reinforcement of the earthen mound over central grave 58 (Fischl, Hajdu 2016, 154). Such a method of grave construction was well-documented, for example, in Neusiedl-Hutweide, where a mound (tumulus II) surrounded by unusually large circular ditch (21–22 m in diameter) was discovered. By the inner side of the ditch, the traces of wooden above-ground reinforcement structure[33] was identified in consisting of at least 30 post-holes, which were arranged in a circle with diameter of 16 m (see Kaus 1994, 91, Taf. 2). Another comparable analogy is known from Borotice in south Moravia, where few remains of post-holes were found in the slightly oval ditch (690–825 cm) encircling the perimeter of one mound (tumulus 39). The wooden posts were set about 50 to 80 cm apart and the space between could be interlaced with twigs to prevent the piled-up earth mass from eroding (Stuchlík 2006, 126, 146, obr. 121, 139).

The evidence of post-holes related to studied Tumulus culture graves encircled with ditches were also found in Budapest-Nagytétény. Most striking were the symmetrically positioned post-holes (features 204–206) facing each other in the area enclosed by ditch 203, which seems to be the same dating as the central grave 202 (see Szilas 2017, Fig. 22:1, 2). This appears to have been analogous for grave 29 bounded by ditch 28, where a single post-hole was situated southwest of the grave pit (Szilas 2017, Fig. 5:5, 6). Apart from this, in the western segment of the ditch 43 associated to grave 42, a post-hole (feature 78) was discovered, which allegedly intersected it, so its contemporarity to the ditch grave is questionable (Szilas 2017, 221). Similar feature was located to the south of the central grave pit, within the surrounding ditch, but its association with this grave is also uncertain. Lastly, in the southern quarter of the area within the boundaries of the ditch 64 adjacent to grave 65, there was a trio of post-holes SE No. 89–91 (Szilas 2017, 227, Fig. 11). To add

this, no post- or column-holes located at the 'entrance' to open ditches, as has been evidenced in eastern Austria (e.g. Franzhausen, Unterradlberg), have yet been unambiguously documented from the here studied sites (see Neugebauer, Gattringer 1989, Abb. 16:3, 4; Neugebauer et al. 1991, Abb. 44; 1992, Abb. 45). This implies that in future field excavations of the Tumulus culture burial sites in regions studied here, it is particularly important to adjust the excavation method adequately to achieve the eventual identification of these relics of the past wooden constructions linked which could be linked to those graves. Finally, an alternative interpretation should be considered, according to which the wooden posts or columns in some cases were not only related to the stabilisation of the piled-up soil but rather may have functioned as markers of a 'resting place' with some stelae.

7.4. Entrances

Open or interrupted ditches[34] represent of the specificities, which occurrence in the Carpathian-Danube-Tisza region has been so far documented relatively rarely – apart from Pitten (tumulus 153a) and Neusiedl-Hutweide (tumulus II) – only in Radvaň nad Dunajom, Šamorín-Šámot (grave 5/16), Jánoshida (grave C/118), Maklár – Nagyrét II and Kiskunfélegyháza (grave 41).[35] It is evident that the 'entrance' to mostly inhumation graves was often regularly located in the southeastern quarter of the ditch or orientated in that direction (in principle towards the east). This phenomenon is usually interpreted as being related to astronomical observations, more specifically to the rising of the sun, which is in the southeast during the winter solstice and traditionally had an important role in the religious sphere and with the cult of the dead or was seen as a symbol of rebirth (Jockenhövel 1999, 351; Trefný, Dobeš 2008, 240; see also Švejcar et al. 2012, 458). Greater or lesser deviations from this inclination may also reflect the specifics of the local terrain configuration, and thus the fact that the sun does not always appear on the same direction during the year (see Moser et al. 2019, 170–174, Abb. 7). In addition to the paleoastronomical significance of this specific feature, the purely practical function of the ditch break has also been considered by some. If there was relatively flat terrain in the inner area enclosed by the ditch, or just a low earthen mound, this 'open' space could merely serve as an entrance through which to reach the grave place itself (Kostka 2008, 305; Trefný, Dobeš 2010, 337). Also, others suggest – based on detailed terrain observations – that these open enclosures were not always associated with the earthen mounds at all (mainly in cases when a central grave was absent), but rather demarcated the areas, where cultic activities were performed (Schütz 2006, 29–31; Küßner 2017, 175–177). Then, it cannot be ruled out that the ditch around the grave also had a meaning related to the spiritual world (afterlife) and those who came to honour the dead were not allowed to cross it but had to use the symbolic entrance. Finally, important in context of this study are the finds from the Alföld region (Jánoshida, Kiskunfélegyháza, Maklár – Nagyrét II), which are probably not only a bit later than the earliest features of this kind from the Lower Austria[36], dated to the BB1 stage (Neugebauer 1994b, 158; Bátora 2004, 251), but also represents the easternmost documented occurrence of this phenomenon in Carpathian Basin of that time, reaching up to the Middle Tisza Basin. The origin of the Middle Bronze Age open ditches around the graves are to be sought in the Tumulus culture milieu in eastern Austria and southwestern Germany (Godiš, Haruštiak 2020, 128–131, obr. 7). However, the earliest circular funerary sunken features with an east-facing entrance have been sporadically found in Central Europe since the Early Bronze Age (Schunke 2009, 304–306, further references there).

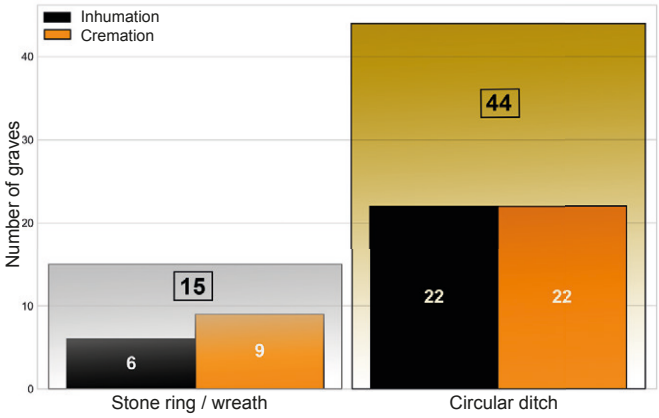
8. Graves encircled by sunken features or stone structures

8.1. Burial forms

From the territory of the Carpathian Tumulus culture widespread mainly in the eastern Danube Lowland, i.e. west of the River Váh and the northern Alföld (to geographical definition see Gaudenyi, Mihajlović 2022b, Fig. 4), as well as northeastern Transdanubia, more than 44 graves encircled[37] by ditches are known, which have been documented at nine sites. On the other hand, constructions built of circularly stacked stones either in the form of rings or wreath are evidenced so far in case at least 15 (or 17 including symbolic) graves in six burial sites. In evaluating summarized data (Graph 2; Tab. 4), it must be emphasized that conclusions are quite skewed due to the varying extent of excavation at individual burial sites.

Within the Carpathian Tumulus culture grave group with circular features in the northern Carpathian Basin, the custom of burying the unburnt body in a rectangular pit (inhumation) was documented at least in 28 cases (22 graves with ring ditch, 6 graves with stone ring/wreath). It can be assumed, that mostly the dead was placed in a crouched position on the side (Svätý Peter, Letkés, Budapest-Nagytétény, Mezőnagymihály), even when the skeleton was fully disintegrated, which was evidenced very frequently at these sites. A noteworthy exception is the grave group at the Kiskunfélegyháza in southern Hungary and Vértesszőlős in northeastern Transdanubia, where the dead were placed in stretched (extended supine) position. According to available information, disturbed grave 1/55 from Nové Zámky – Berek was most probably also this case, as evidenced in nearby contemporary graves 7/62 and 9/62.

Central graves with scattered or inurned cremation were evidenced at least in 31 cases (22 graves with ring ditch, 9 graves with stone ring/wreath) and its occurrence is apparent mainly in the north and northeastern Hungary (Maklár – Koszpérium and Nagyrét II sites, Jánoshida, Jobbágyi). When interpreting this, it has to be taken into consideration that both sites are on the northern periphery of the Alföld region, where the tradition of burning the dead was deeply rooted in the previous funerary rite of the local Hatvan culture from the Early Bronze Age and then the subsequent Vatya culture (e.g. Csányi 2003, 162; Vicze 2003, 155; Tárnoki 2003, 148). This did not change significantly during the Middle Bronze Age, when this region became a contact zone with the distinctive Piliny culture spread in the



Graph 2. Representation of burial forms of the graves surrounded by circular ditch and stone structures, i.e. ring/wreath. Author T. Kondela, J. Godiš.

Graf 2. *Znázornění zastoupení pohřebních způsobů u hrobů obklopených kruhovým žlabem a kamennými strukturami, tj. kruhem/věncem. Autor T. Kondela, J. Godiš.*

Site / Feature	Grave pit dimensions (length / width / depth)	Funerary rite	Grave pit / body orientation	Sex / Age determination
Budapest-Nagytétény				
Grave 29 / ditch 28	255 × 135 × -45 cm	Crouched inhumation	NNW–SSE	♀ 23+ y.
Grave 42 / ditch 43	265 × 118 × -35 cm	Inhumation	NE–SW	–
Grave 50 / ditch 49	215 × 80 × -120 cm	Inhumation	SSW–NNE	20+ y.
Grave 65 / ditch 64	205 × 100 × -95 cm	Inhumation	NW–SE	–
Grave 107 / ditch 106	380 × 195 × -70 cm	Inhumation	WSW–ENE	♂ (?)
Grave 202 / ditch 203	280 × 145 × -45 cm	Inhumation	NNE–SSW	♂ 50+ y.
Jánoshida				
Grave 113 / ditch A	245–155 × 105–50 cm	Inhumation	NE–SW	♂ (?) 20–25 y.
Grave 46 / ditch B	-60 cm	Inurned cremation	–	–
Grave 114 / ditch B	-70 cm	Inurned cremation	–	–
Grave 118 / ditch C	-70 cm	Inurned cremation	–	♂ (?)
Grave 151 / ditch D	–	Scattered cremation	–	–
Jobbágyi				
Grave	–	Symbolic	–	–
Grave	–	Scattered cremation	–	–
Letkés				
Grave 37	~ Ø 270 / ~ Ø 170 × -170 cm	Crouched inhumation	WSW–ENE	♂ 50–55 y.
Grave 22	–	Inhumation (?)	–	–
Grave 8	–	Cremation	–	–
Kiskunfélegyháza				
Grave 41 / feature 71	270 × 130 cm	Stretched inhumation	ENE–WSW	♂ (?)
Grave 59 / feature 71	– / 90 cm	Stretched inhumation	ENE–WSW	–
Grave 7 / feature 13	270 × 85 cm	Stretched inhumation	NE–SW	–
Grave 92 / feature 177	160 × 75 cm	Stretched inhumation	ENE–WSW	–
Maklár – Koszpérium				
Grave 41	100 × 45 cm	Scattered cremation	NW–SE	♂
Grave 42	~ 75 × 30 cm	Scattered cremation	NW–SE	♀
Graves (11)	–	Cremation	–	–
Maklár – Nagyrét II				
Graves (5)	–	Scattered cremation	NW–SE	–
Malá nad Hronom				
Grave 34/III	–	Inurned cremation	–	–
Grave 41	190 × 80 cm	Cremation (?)	–	–
Mezőnagymihály				
Grave 58 / ditch 41	240 × 115 × -50 cm	Crouched inhumation	W–E	♂ 20–25 y.
Grave 91 / ditch 41	110 × 50 × -5–10 cm	Inhumation (?)	W–E	–
Grave 88 / ditch 87	180 × 115 × -15 cm	Inhumation	WSW–ENE	1.5–2.5 y.
Nové Zámky – Berek				
Grave 1/55	180 × 80 × -85 cm	Stretched inhumation	NW–SE (?)	♀
Salka I – Zsellér föld				
Grave 181/62	180 × 70 × -195 cm	Scattered cremation	NE–SW	–
*Grave 170/62	60–65 / - / -105–110 cm	Inurned cremation	–	–
Svätý Peter				
Grave 7	230 × 180 × -70 cm	Inhumation	W–E	♀
Grave 9	250 × 170 × -50 cm	Crouched inhumation	NW–SE	–
Grave 16	180 × 90 × -40 cm	Inhumation	E–W	7–12 y.
Grave 20	250 × 110 × -40 cm	Inhumation	WNW–ESE	♂
Grave 21	260 × 200 × -150 cm	Inhumation	NW–SE	♂
Grave 25	160 × 60 × -30 cm	Inhumation	WNW–ESE	–
Radvaň nad Dunajom				
Grave (P2)	285–225 × 150–130 × -50 cm	Inhumation	W–E	♂ (?) 30–40 y.
Vértesszőlős				
Grave 1 / stone wreath VI	–	Stretched inhumation	NW–SE	♀
Grave 3 / stone wreath IV	–	Scattered cremation	–	–
Stone wreath I	–	Symbolic	–	–
Graves (2)	–	Scattered cremation	–	–
Graves (3)	–	Inhumation	–	–

Tab. 4. Characteristics of graves surrounded by circular ditches and stone structures (rings/wreaths) at sites of the Tumulus culture in the Carpathian Basin.

Tab. 4. *Charakteristika hrobů obklopených kruhovými žlaby a kamennými strukturami (kruhy/věnci) na lokalitách mohylové kultury v Karpatské kotlině.*

foothill's territory to the north. Another cluster of cremation graves surrounded by stone rings and wreaths is evident in the wider Danube Bend area (Salka I, Malá nad Hronom, Letkés). Apart from this, in two cases, features interpreted as symbolic graves, i.e. without human remains enclosed by stone circular structures, were also documented (Jobbágyi, Vértesszőlős).

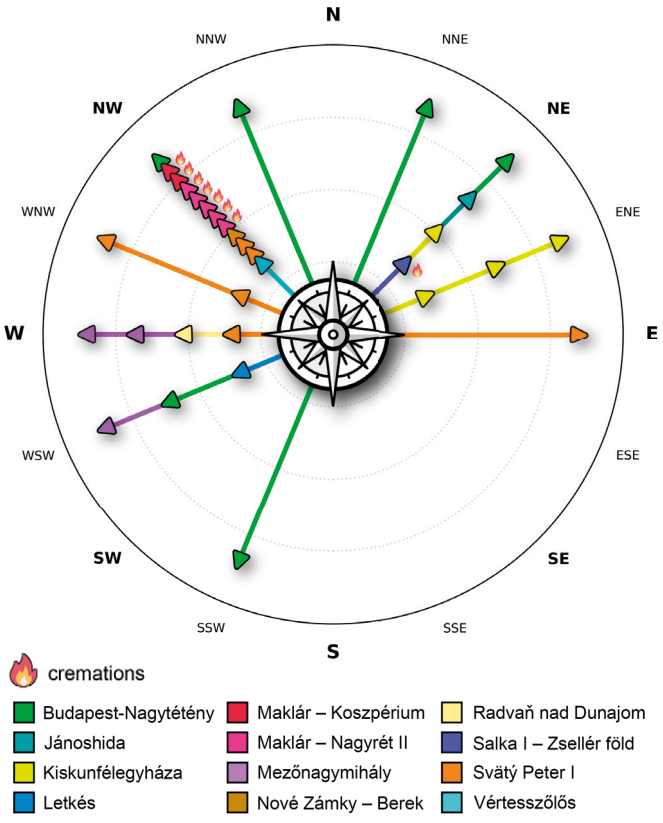
Specific group of graves consists of rarely documented cases, where the central grave pit had a rectangular shape, as if it were for an inhumation, but instead of a skeleton, usually cremation remains either scattered or inurned were discovered. These exceptional features, some of them bounded by sunken or stone circular feature are evidenced at Carpathian Tumulus culture burial sites in the Lower Ipeľ[38] (Salka I, Malá nad Hronom) and in the northern Hungary[39] (Maklár – Koszpérium); even in the milieu of the emerging Piliny culture[40] (Radzovce, Salgótarján-Zagyvapálfalva). The extraordinary phenomenon is interpreted as evidence of reminiscences of the disappearing traditions of the inhumation rite, which was relatively swiftly replaced by biritualism during the Middle Bronze Age and finally by strictly respected cremations (as part of so-called 'Urnfield package') at its final phase (Točík 1964, 59; Furmánek 2006, 22; 2015, 271; Furmánek, Mitáš 2010, 82). These rare features should reflect a relatively

short period, i.e. a transitional time, during which the form of the funerary ritual changed dynamically and some elements characteristic of both inhumations and cremations were transmitted in between (e.g. more Sørensen, Rebay-Salisbury 2009).

It needs to be underlined that the attributes of the burial ritual in the Middle Bronze Age of the Tumulus culture communities spread in different parts of the Carpathian Basin were very diverse and varied from region to region, which is interpreted as result of integrating 'newcomers' groups to the local populations, and subsequent interference of their traditions (see e.g. Kovács 1975, 40–43; Csányi 2017, 202–203; Cavazzuti et al. 2022, 53–55).

8.2. Grave pit orientation and its space

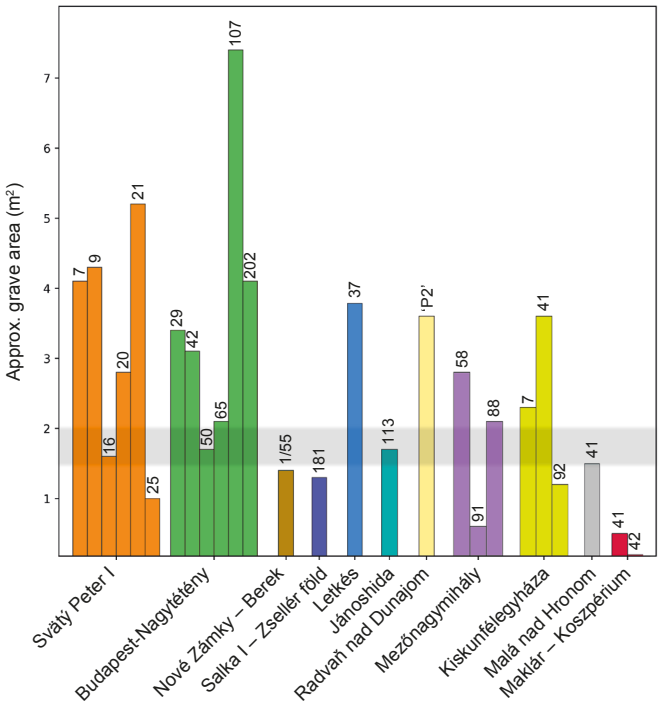
Three basic trends can be observed in the orientation of the – predominantly inhumation – grave pits encircled by ditch or stone rings, i.e. in the deposition (placement) of the body (Graph 3). The first is the grave pits oriented close to the NW–SE (or SE–NW) axis,[41] whose occurrence is concentrated in the northern Middle Danube region (e.g. Svätý Peter, Nové Zámky, Vértesszőlős), as well as northern Hungary (cremations from Maklár burial sites). The second group is defined by the opposite alignment in the NE–SW (or SW–NE) axis[42] and is more documented in the Central Tisza Basin (e.g. Jánoshida, Kiskunfélegyháza) and the Danube Bend area (e.g. Salka, Letkés). The orientation of these graves often corresponds with dominant preference on each individual site (if excavated in larger scale). In this context, the region of the central Hungary could stand out as a 'mixed' zone in which these two trends possibly overlap. This is observable at the Budapest-Nagytétény burial ground, where all the unmarked graves were variously oriented with an apparent inclination towards the N–S or S–N axis (see Szilas 2017, 238). The last group consists of the grave pits linked to W–E (or E–W) axis[43] including slight deviations. These were generally widespread in various sub-regions of the Carpathian Basin during the Tumulus culture period (e.g. Kiskunfélegyháza, Mezőnagymihály, Radvaň and Dunajom, Svätý Peter). In this regard, distinctive attention should be given to the burial ground in Mezőcsát – Hörcsögös, where no circular burial features were found (see Hänsel, Kalicz 1987, 9, Beil. 1), but a strict inhumation burying in above mentioned so-called equatorial orientation was observed. This bipolar placement of the dead[44] was conditioned by the sex (or gender) and largely confirmed by anthropological analyses (Blischke 2002, 160, Abb. 86). Apart from this, grave inventory from this site supports the hypothesis favoured earlier by T. Kovács (1975, 40–42; 1981, 87–88) of the possible physical infiltration of western Tumulus culture groups (i.e. from the eastern Upper Danube periphery, possibly the Vienna Basin) into the northern Alföld[45] region and its subsequent acculturation with the local 'post-Otomani-Füzesabony' or even late Hatvan culture communities (see also Cavazzuti et al. 2022, 74). In this context it is worth pointing out the recent excavation in Bátonyterenye – Aranyhegyi homokbánya, where a burial ground of the Hatvan culture was discovered and within it two unusually richly furnished graves with stone enclosures of about 6–7 m in diameter (see Larsson, Guba 2023, 38–39). Regarding the equatorial orientation of the grave pits some similarities arise when comparing the data about the contemporary funerary rite practised in the regions of Lower Bavaria, Upper Palatinate, and the Lüneburg group, where the burying the dead in the E–W axis strongly predominated during the BB stage (Endrigkeit 2014, 54, 69, 74, Abb. 88, 131, 145). However, an intuitive linking of the presented facts with the occurrence of mound graves in the Carpathian Basin during this period would be unreasonable without a more detailed and complex analysis.[46] Lastly, it should be noted that none of the studied graves was visibly oriented in the N–S (or S–N) axis, with the exception of the ditch graves 29, 50 and 202 in Budapest-Nagytétény[47] (NNE–SSW axis). However, such an orientation was observed, e.g. in the case of the afore mentioned Piliny culture cremation grave 216/69 from Radzovce.



Graph 3. Orientation of the grave pits delimited by ditch or stone ring/wreath in the studied sites. Arrow symbolises the known or suggested head placement within the pit (excluding cremations, where it represents the orientation of the grave pit). Author T. Kondela, J. Godiš.

Graf 3. *Orientace hrobových jam ohraničených žlabem nebo kamenným kruhem/věncem ve sledovaných lokalitách. Šipka symbolizuje známé nebo předpokládané umístění hlavy v jámě (s výjimkou kremací, kde znázorňuje orientaci hrobové jámy). Autor T. Kondela, J. Godiš.*

Another peculiarity of the grave pits surrounded by circular features is that many of them were of superior dimensions, i.e. its length often exceeded 250 cm. Sometimes their groundplan was even twice or more the size[48] of most other 'standard' graves on the burial ground (e.g. Svätý Peter, graves 7, 9, 21; Budapest-Nagytétény, graves 107 and 202; Kiskunfélegyháza, grave 41), where in the case of inhumations a pit was dug just large enough to accommodate the corpse, i.e. its surface area on its bottom was about 1.5–2 m^2 (Graph 4). Attempts to search for the correlation between the dimensions of a grave pit (not an earthen mound) and the 'uniqueness' of the buried would probably be presumptuous given the state of quality and publication state of the existing source material (see Krištuf et al. 2014, 23–35). The depth of the graves analysed here has not been compared, because it is a measure which, unlike other dimensions, is in principle the most distorted, both by the state of preservation of the feature (tillage, terrain adjustments etc.) and by the used excavation methods. It seems that also in this regards some better-preserved graves like in Salka I (grave 181), Letkés (grave 37) or Svätý Peter (grave 21) were sunken deep enough, up to 150–195 cm. As for the unusual arrangement of



Graph 4. Comparison of the grave pit area bounded by circular features in the studies sites. Horizontal grey stripe represents the 'standard-sized' grave pit, i.e. 200/180 × 100/80 cm. Author T. Kondela, J. Godiš.

Graf 4. *Srovnání plochy hrobové jámy ohraničené kruhovými objekty na sledovaných lokalitách. Vodorovný šedý pruh znázorňuje hrobovou jámu „standardní velikosti", tzn. 200/180 × 100/80 cm. Autor T. Kondela, J. Godiš.*

the interior of the pit, the mentioned grave from Letkés is quite a non-standard case (Fig. 7). The opposite walls of the large circular pit were modified into the shape of a vaulted bench, which may have been done purely for pragmatic reasons, to make it easier to enter the grave when treating the body of the deceased and adjusting its furnishings. In addition, it is also possible to consider that pits of these superior dimensions may have had an internal wooden structure, traces of which have not survived (or were not identified). For example, traces of most likely postholes were recognised in grave 41 in Kiskunfelégyháza, although it is questionable whether they were linked to the inner wooden construction of the grave because one of the holes cuts (?) the place where the dead was placed (see Somogyvári 1992, 2. kép; to this see also e.g. Kustár, Wicker 2004, 78–79, 2. ábra, II. tábla). Here it is only rational to conclude that the community put the effort into digging a larger pit for various reasons, but most likely to include offerings made of organic material (textiles and hides, flowers or deboned meat etc.), as well as an adjacent circular ditch wanted to properly emphasize the unique social status[49] of the deceased (see also Jockenhövel 1999, 352). This was either based on their prominent lineage or earned during life through having done important deeds.

8.3. Multiple graves surrounded by a single ditch

Occasionally, at some here studied sites, another grave pit was discovered in the area demarcated by the ditch, i.e. near the central grave. This phenomenon was relatively common in the vast territories of the western Tumulus culture groups, where secondary graves were sunk into the mound mass over time, in relation to which it is usually assumed that these were individuals in a mutually close relationship (Krištuf et al. 2014, 24; Bobek 2016, 46). The situation in the Carpathian region is different, however, as these 'additional' grave pits were, as far as is known, stratigraphically located at approximately the same level as the central grave, suggesting that they may have been burials from the same or very close timeframe. At Mezőnagymihály, a shallow sunken feature 91 of rectangular ground-plan (110 × 50 cm) was discovered, situated about 1.5 m south of the centrally positioned inhumation grave 58 surrounded by a ditch 41, while both features had an identical orientation in the W–E axis (Fig. 12, 13; Fischl, Hajdu 2016, 153, 3. kép: 1; 4.: 8). Osteological material was absent in feature 91, which was interpreted either as a trace of attempt to grave's disturbance, tillage, or the fact that it was a child's grave, where a reduced probability of bone preservation is naturally expected. Lastly, also considered was the option that it could have been a symbolic grave, as similar cases are known from other Tumulus culture sites in the Central Tisza Basin (Fischl, Hajdu 2016, 154). What is much more conclusive is the situation documented in Kiskunfélegyháza, where in the area delineated by the ring ditch (feature 71), another, also similarly oriented grave was discovered alongside the central inhumation grave 41 (Fig. 6). Grave 59 was located about 3 m to the north of it and was heavily disturbed by the digging of later settlement structures (Somogyvári 1992, 16, 1. kép). Their dating appears to be within relatively the same chronological framework, as indicated by the stylistically comparable ceramic offerings (jugs), which in both cases were placed to the lower limbs of individuals buried in a stretched position (Somogyvári 1992, 2., 3. kép). Another case was evidenced in Jánoshida, where three burial features[50] were found within circular feature B – graves 46, 114, 116 (Csányi 1980, 3. kép). Based on the observations in the field M. Csányi (1980, 156) concluded that urn graves 46 and 114 were linked to feature B. It should be added here that it was in the first-place grave 114 that was the closest to the geometrical centre of the area delineated by what was apparently only half of a preserved circular ditch. The direct association of the close inhumation grave 116 to feature B is unlikely due to its displaced position within the area it encloses, then the different burial form and in particular its orientation on a NW–SE axis (Fig. 4). This difference may be of chronological significance, as the nearby inhumation grave 113 with a ring ditch (feature A) had an oppositional orientation in the SW–NE axis. On the question of multiple graves within a circular structure, it is necessary to conclude with a brief comment on the situation already presented for grave 34 in Malá nad Hronom. According to the description of A. Točík (1964, 41) four cremations were identified under the inner stone wreath or cairn (?) – three of them were sunken deeper and dated to the Early Bronze Age. He assigned the fourth burial feature – grave 34/III – to the Carpathian Tumulus culture, as well as based on the terrain observations the adjacent circular stone structure was dated to this.[51] This quite unique burial feature will require further evaluation (Fig. 10). Cremation urn graves inside the area defined by the ditch (and within the ditch itself) were also discovered at the Maklár – Koszpérium site, but in this case, they are of later age, as proved by stratigraphic observations (Fig. 8), i.e. they were not directly related to the building of circular feature (see Szabó 1963b, 299; Mengyán et al. 2024, Fig. 4: B). The last example of another grave found within the defined area, apart from the central burial, was documented in the Vértesszőlős in the case of stone wreath VII. When it was dismantled during the excavation, an intact ceramic vessel, sherds and cremated human remains were found underneath,

which indicates that these features built of rocks delineated the 'funerary area', which could have contained more graves (Pál, Cseh 2013, 10, 4. tábla: 4. kép). To summarize this, within the Carpathian Tumulus culture it was an established tradition that circular features, either sunken or stone were predominantly built around only single grave in its geometric centre. If other individuals were buried there too, it is possible to think of some a kinship relation to the primary burial (e.g. Mezőnagymihály, Kiskunfélegyháza). On the other side, these 'additional' graves were usually of later dating (e.g. Urnfield period, Pre-Scythian Age, Sarmatian period), and were sunken close to the presumed standing mound because it was a visually attractive landscape monument (see Kulcsár 1992, 10).

8.4. Chronology of the central graves

Finally, one of the crucial questions regarding the studied graves is their chronological position, from which the dating of the circular feature itself can be deduced. In several cases, the 'ancientness' of the sunken ring features within the larger burial grounds is evidenced by additional later (mostly) cremation graves, which were found directly in the ditch or were in superposition to it (e.g. Kiskunfélegyháza, Jánoshida, Maklár – Koszpérium, Budapest-Nagytétény). The relative dating of the primary, i.e. centrally positioned graves bounded by ditch or stone ring/wreath, which is based on the typology of the artefacts (regarding other attributes of the burial rite), is strongly impacted by the circumstance that most of these had been disturbed in the past. Therefore, in some cases, their sometimes very exclusive furnishing was either fully absent or only partially preserved, and thus, it does not represent a closed ensemble. Nevertheless, based on the data obtained, it was possible to preliminarily assign the selected – mostly intact – graves from the northern Carpathian Basin to three chronological horizons within the Middle Bronze Age, which were synchronised with periodisation system developed by W. David (1998; 2002).

I. Horizon – After the abandonment of burial ground in Jelšovce at the boundary[52] between the Early to Middle Bronze Age (where ditches around graves 10, 152, 240 and 256 were evidenced), then the earliest circular burial features in southern Slovakia have been documented in Svätý Peter. This is supported by the jugs with chalice-shaped neck and spiked feet on the bottom typical of latest Mad'arovce culture pottery style, which were found in graves 16 and 25 (Dušek 1969, Abb. 7:8; 12:11), as well as the jewellery set of open heart-shaped pendants from grave 7 typical of the Koszider period. Grave 9, furnished with an aesthetic jug decorated with a distinctive Litzen motif, can be

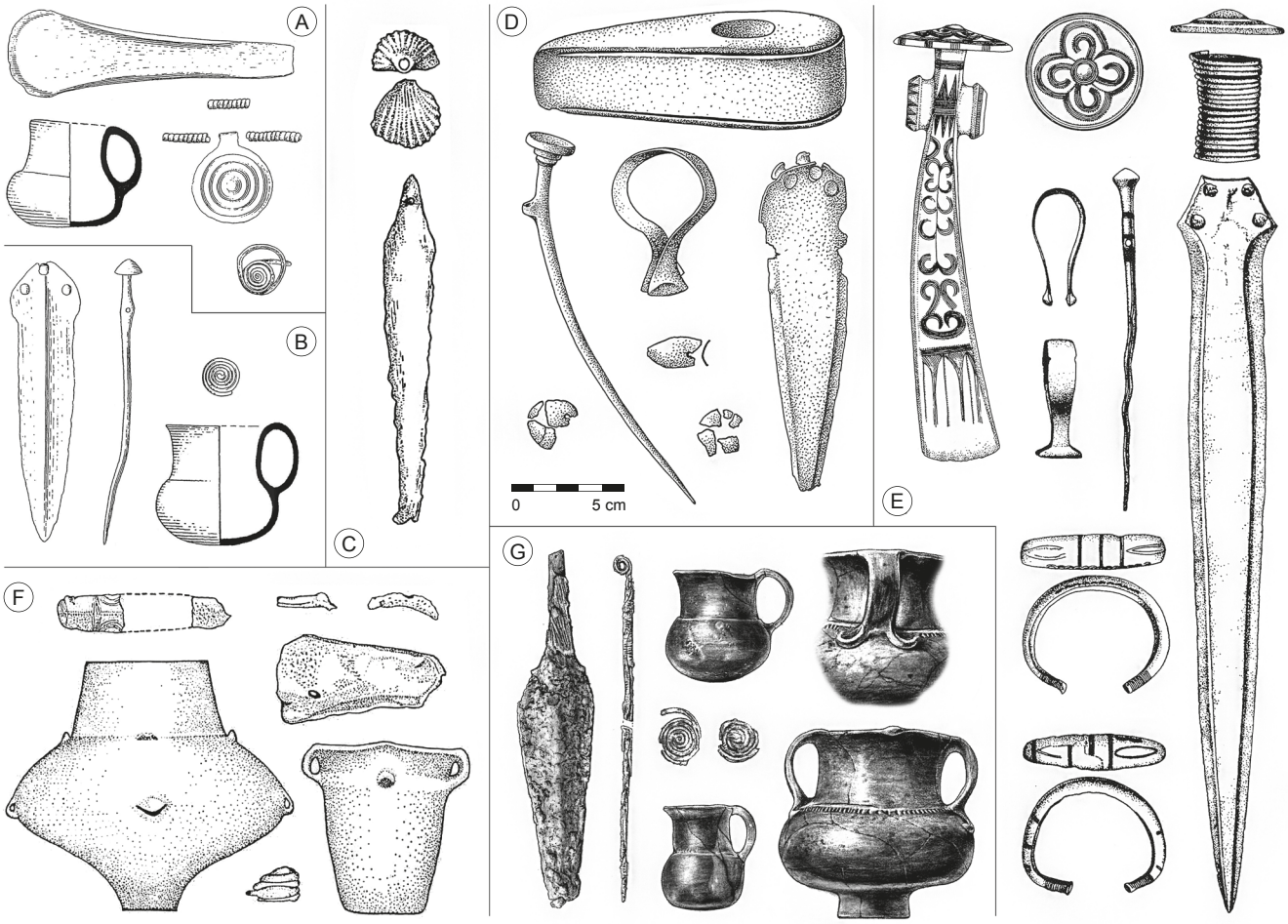


Fig. 26. Inventory of selected Tumulus culture graves surrounded by sunken and stone circular features in the northern Carpathian Basin. A – Svätý Peter, grave 20; B – Svätý Peter, grave 21 (after Dušek 1969, Abb. 10:1–11); C – Budapest-Nagytétény-Érdliget, grave 107 (after Szilas 2017, Fig. 13:5, 6); D – Maklár–Koszpérium, grave 41 (after Mengyán et al. 2024, Fig. 3:B); E – Letkés, grave 37 (after Kovács 1996, Fig. 1b, 2); F – Jánoshida, grave 118 (after Csányi 1980, 8. kép: 1–6); G – Mezőnagymihály, grave 58 (after Fischl, Hajdu 2016, 6.,7. kép: 1). Ceramics approximately in proportional scale.

Obr. 26. *Inventář vybraných hrobů mohylové kultury obklopených zahloubenými a kamennými kruhovými objekty v severní části Karpatské kotliny. A – Svätý Peter, hrob 20; B – Svätý Peter, hrob 21 (podle Dušek 1969, Abb. 10:1–11); C – Budapest-Nagytétény-Érdliget, hrob 107 (podle Szilas 2017, Fig. 13:5, 6); D – Maklár–Koszpérium, hrob 41 (podle Mengyán et al. 2024, Fig. 3:B); E – Letkés, hrob 37 (podle Kovács 1996, Fig. 1b, 2); F – Jánoshida, hrob 118 (podle Csányi 1980, 8. kép: 1–6); G – Mezőnagymihály, hrob 58 (podle Fischl, Hajdu 2016, 6.,7. kép: 1). Keramika přibližně v proporcionálním měřítku.*

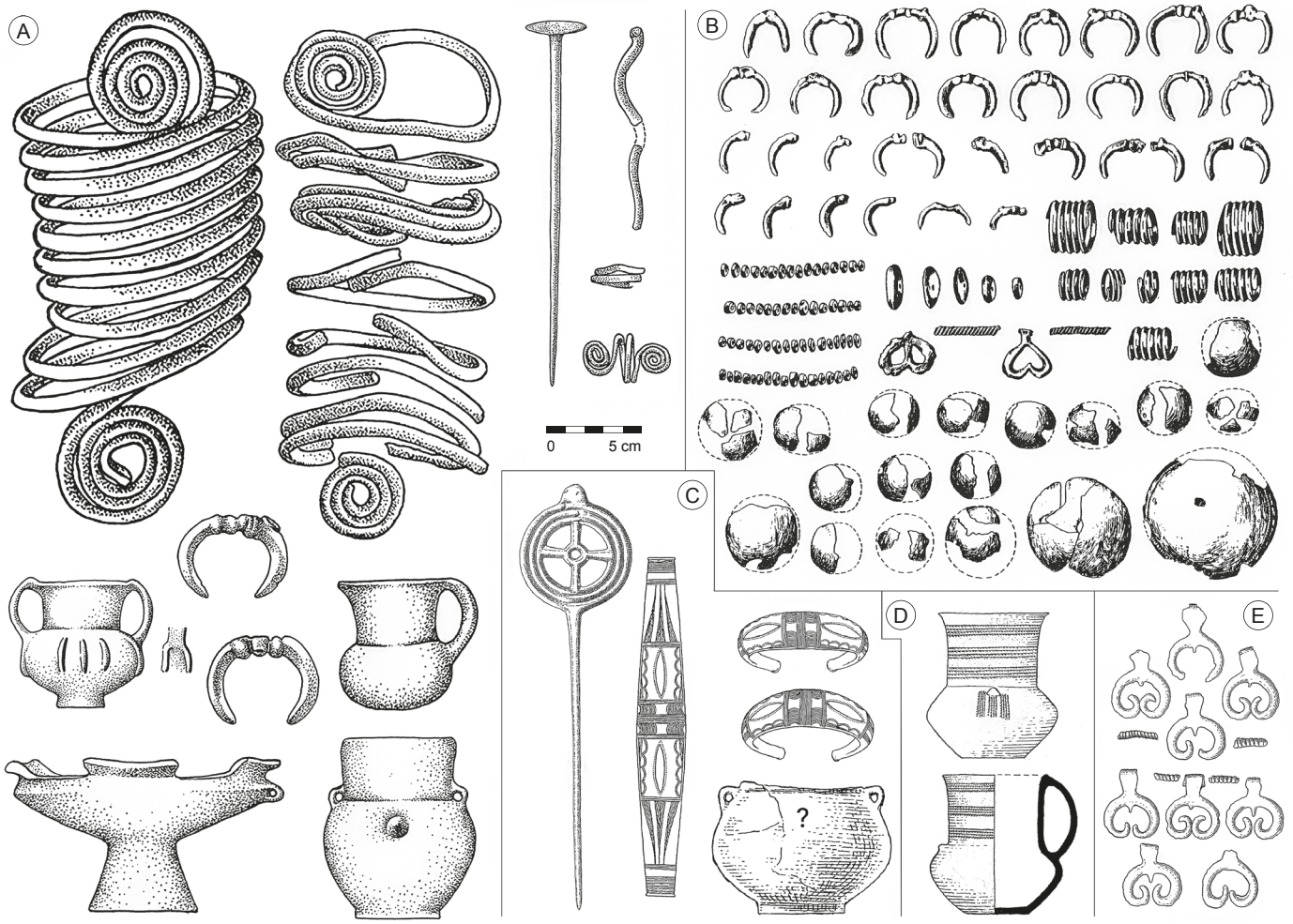


Fig. 27. Inventory of selected Tumulus culture graves surrounded by sunken circular features in the northern Carpathian Basin. A – Maklár–Koszpérium, grave 42 (after Mengyán et al. 2024, Fig. 4:B); B – Jánoshida, grave 113 (after Csányi 2016, 8. kép); C – Nové Zámky–Berek, grave 1/55 (after Točík 1982, obr. 5); D – Svätý Peter, grave 9; E – Svätý Peter, grave 7 (after Dušek 1969, Abb. 6:1–10, 13, 13a). Ceramics approximately in proportional scale.

Obr. 27. *Inventář vybraných hrobů mohylové kultury obklopených zahloubenými a kamennými kruhovými objekty v severní části Karpatské kotliny. A – Maklár–Koszpérium, hrob 42 (podle Mengyán et al. 2024, Fig. 4:B); B – Jánoshida, hrob 113 (podle Csányi 2016, 8. kép); C – Nové Zámky–Berek, hrob 1/55 (podle Točík 1982, obr. 5); D – Svätý Peter, hrob 9; E – Svätý Peter, hrob 7 (podle Dušek 1969, Abb. 6:1–10, 13, 13a). Keramika přibližně v proporcionálním měřítku.*

included in this or the following horizon (see below Fig. 27:D, E). It is very likely that some ditch graves from Budapest-Nagytétény site also could be dated here, but due to the lack of time-sensitive artefacts in them it cannot be confirmed. The first horizon can be synchronised with an early BB stage, i.e. Bz B1 stage (~ David Bz B-älter).

II. Horizon – In the final phase of the Koszider period, when the Carpathian Tumulus culture was fully established, rest of the burials surrounded by ditches (9, 20, 21) most likely took place in Svätý Peter (Fig. 26:A,B). Then it is elite warrior grave 37 bounded by a stone ring in Letkés and probably grave 41 with a ditch in Maklár – Koszpérium (Fig. 26:D,E). The furnishings of these included weapons like axes, daggers and swords, which also served as power insignia. Daggers[53] of a 'post-Koszider' type were then found in grave 107 in Budapest-Nagytétény and in grave 58 at Mezőnagymihály, while these could indicate burials of upper-class members of the Carpathian Tumulus culture communities too (Fig. 26:C, G). Richly furnished grave 42 from Maklár – Koszpérium and partly robbed grave 113 from Jánoshida containing numerous pieces of bronze jewellery including valuable amber necklace can be attributed to this group as well (Fig. 27:A,B), also because of the radiocarbon data, which are similar[54] to the grave 21 in Svätý Peter. Moreover, relative dating of grave group is in several cases supported by presence of conical- and disc- headed pins in its inventory, including grave 1 encircled by stone wreath found in Vértesszőlős. The disturbed grave 1/55 from Nové Zámky – Berek, which held a rare wheel-headed pin, can also be added to this horizon (Fig. 27:C). There is an abundance of relevant evidence, that since this period there may have been increased cross-cultural interaction accelerated with the mobility of the population from the western areas to the Carpathian Basin, especially from the Vienna Basin (e.g. the stone-axe from Maklár). The second horizon can be synchronised with the later BB stage, i.e. Bz B2 stage (~ David Bz B-jünger).

III. Horizon – The tradition of building the circular structures around graves more than few metres wide – apart from small-sized cairns made of piled-up stones – had presumably continued in the milieu of the so-called classical phase of the Carpathian Tumulus culture in the northern Pannonian Plain. Although clear evidence for this, a grave from this region that could be undoubtedly dated to the advanced Middle Bronze Age – to the BC stage, i.e. Bz C1 stage (~ David Bz C1), is apparently lacking or has not yet been published. It should be mentioned in this regard, that the set of bronze jewellery from the destroyed burial site in Üröm indicate that stone wreaths could

be occasionally built even during this period (see Holport 1980, 61–63, 2. kép: 1; 5.: 1, 2). Also, some published time-sensitive artefacts from non-ring ditch (!) grave in Kiskunfélegyháza do not rule out that possibility (see Kulcsár 1992, 10, 1.–3. kép). Nevertheless, thus arranged graves – tumuli – are well-documented in the region of the Middle Danube Tumulus culture (Smolenice, Buková, Pitten etc.). At that time, cremation of the dead became much more widespread in the Carpathian Basin, as part of emerging 'proto-Urnfield tradition' than previously and burial grounds with hundreds of graves were founded. Considering this changes in the funerary rite and ceramic offerings which have stylistic elements of the 'classic' Carpathian Tumulus culture, e.g. grave 46 from Jánoshida could be preliminarily classified to this horizon, even though it was not located in the centre of the inner space delineated by the ditch, which could in fact be much older (Csányi 1980, 8. kép: 13–15). Cremation grave 181 from Salka I and grave 34/III in Malá nad Hronom, which were both surrounded by stone rings, i.e. wreaths (Točík 1964, Taf. XXX: 8–11; XXXV: 4, 6), can be probably dated to this horizon, or rather to the early section of it (Bz B2/C1 stages).

The tradition of burying the dead under mounds persisted into the final Middle Bronze Age to the early Late Bronze Age transition (Bz C2/D1 stages) and then evolved into a building of the monumental barrows of the Middle Danube Urnfield culture (Čaka, Kolta, Očkov, etc.). The origins of this custom have been well-observed on the numerous burial grounds with preserved earthen mounds around Bakony Mountains near Lake Balaton in western Hungary and therefore named as the so-called '*spät- oder weiterlebende Hügelgräberkultur*'. However, discussing this is beyond the scope of this article and apart from that, it has been thoroughly evaluated by other researchers in numerous studies (see e.g. Kőszegi 1988, 19–20; Kemenczei 1990, 225, Abb.1; Jankovits 1992, 4–5; Ilon 2014, 101, Abb. 1, further references there).

9. Ring ditch as indirect evidence of an earthen mound

Traditional interpretation of the circular sunken features around the grave pits as indirect evidence of past earthen mounds' existence, and in particular its generalisation is sometimes rightly criticized in the scientific literature (e.g. Jockenhövel 1999, 351; Turek, Sofaer 2004, 286–305; Trefný, Dobeš 2008, 238; 2010, 329–340; Švejcar et al. 2012, 443, 456; Trefný 2013, 125–133). The aim of this chapter is to discuss this issue in relation to what has been presented here, based on the recent important discoveries in the regions of the northern Carpathian Basin. These are the stratigraphic situations (superpositions) that have been documented at the burial grounds in Mezőnagymihály and Budapest-Nagytétény providing valuable information.

A key argument supporting the possible existence of burials under barrows in the studied area during the Middle Bronze Age is to be found in Mezőnagymihály in northeastern Hungary.[55] In the area of the Tumulus culture necropolis roughly dated to the BB stage, 7 urn graves of late Piliny culture (56, 57, 61, 63, 65, 92) have also been discovered, as evidenced by pottery finds typical of Bz D–Ha A stages. What is crucial is the fact that the two urn graves (57 and 92) were sunk directly in the geometric centre, i.e. in superposition above the two Tumulus culture inhumation graves (58 and 88) encircled by ditches, which cannot be regarded as a coincidental event in this case (Fischl, Hajdu 2016, 3. kép: 5). This strongly support the hypothesis of the real presence of earthen mounds over the Middle Bronze Age graves at this site, which were visually identifiable even after about 200–250 years and then this place for recognised by Urnfield culture communities and chosen to serve as a place to bury the dead during the subsequent Late Bronze Age (Fischl, Hajdu 2016, 156).

The second important site is the Budapest-Nagytétény-Érdliget located in the central Hungary, near the right bank of the Danube. In relation to this, it is necessary to present in more detail the analysis made on the results of its excavation by G. Szilas (2017, 244–246). He discussed in greater detail the possible reconstruction of the six graves with ditches, interpreted as a tumuli, which were documented in the burial ground. Although the author states that direct traces of the earthen mounds were not identified during the excavation, he also points to several relevant arguments, which plausibly prove their past existence. First, he emphasizes that the circular ditches in fact underlined the significance of the space they demarcate. He attributes the incomplete preservation of the circular features associated with the three graves situated in the southern part of the cemetery to the improper excavation method (topsoil level removal by mechanism) regarding their presumably shallow depth (see Szilas 2017, Fig. 3). He assumes that the soil exploited by digging the grave pit and the adjacent ditch was deposited in the centre, thus forming a smaller mound. Moreover, the detailed field observations at the site revealed that the terrain had been landscaped within the burial ground. The prehistoric humus layer was only identified in the inner area bounded by the ditch, while it was completely absent outside the ditch, i.e. in the area between the other 'regular' flat (or unmarked) graves.

Further, there were large stones found in some of the ditches' filling, what indicate that they could have been originally set along the inner side of the ditch, to reinforce the earth embankment around the perimeter and thus also prevented its disintegration (Szilas 2017, 245). Due to erosion and other weathering factors, rocks eventually slumped into the already partially eroded ditch, where they were later discovered during the excavation. The strongest evidence supporting the real existence of the mounds at the site is presented by the analogous situation to that previously described in Mezőnagymihály. Here as well, a superposition of the graves 202A and 29A was documented above the central Middle Bronze Age inhumation graves 29 and 202 bounded by ditches. Those later graves were inhumations too, but without furnishing and oppositional orientation to the Tumulus culture graves under them. These were dated to the beginning of the Iron Age (8th–7th centuries BC) and were sunken directly into the geometric centre of the presumed Bronze Age barrow. This proves that even after more than 800 years, these earthen mounds were still visually recognizable in the landscape, despite the various natural impacts related to their erosion. The perception of these terrain relics, perhaps with sensing some genius loci, undoubtedly prompted the Early Iron Age communities to bury their dead at those specific places. Lastly, G. Szilas reminds that the detailed observations in Pitten in Lower Austria, which is till date the largest and uniquely preserved burial ground (Fig. 28; Hampl et al. 1978–1981; Windl 1988; Urban 2000, 180–182) confirmed that some of the earthen mounds had its outer circumference lined by a ditch. To be precise, this was documented in the cases of real tumulus graves 153a, 165, 181 (Hampl et al. 1978–1981, Taf. 65–67, 84, 88–89; see also Jockenhövel 1999, 340) surrounded by sunken features ranging from 7.4 to 10.5 m in diameter.

Moreover, G. Szilas not only concluded that mounds were erected at Budapest-Nagytétény-Érdliget in the Middle Bronze Age but even attempts to reconstruct their possible height (2017, 246, Fig. 24). His estimate was based on the premise that excavated soil from the ditches as well as from the outer surroundings of the grave (including levelling of the nearby terrain) was deposited above the grave pit. However, he is aware that during the excavation some reduction of the prehistoric cultural layer

Fig. 28. Pitten (Lower Austria). Tumulus 181 at the remarkably well-preserved Middle Bronze Age burial ground excavated in 1967–1973, with more than 221 documented graves. After Windl 1988, Abb. 5.

Obr. 28. *Pitten (Dolní Rakousko). Mohyla 181 na pozoruhodně zachovaném pohřebišti ze střední doby bronzové prozkoumaném v letech 1967–1973, kde bylo zdokumentováno více než 221 hrobů. Podle Windl 1988, Abb. 5.*

by mechanism must be considered, which more or less distorts the documented dimensions of the studied features. Based on this, he estimated that the original depth of the ditch may have been about 50–70 cm and its width ranged between 70–110 cm. To add to this, it should be noted here that the known dimensions of some better-preserved and precisely documented ditches, like in Radvaň nad Dunajom support such estimates. Furthermore, he also took into regard, that the soil[56] was exploited from an area surrounded by a circular ditch with a diameter of 7 m. By processing the data, the volume of hypothetically deduced mass of the earthen mound could have reached 13–15 m^3. It can be also added here that the weight of the soil mainly depends on its density, what means that the mass of the displaced soil (usually Chernozem and Cambisol in this area; ca 1300 kg/m^3) used for building the single mound, can be roughly estimated to about 17.5–19.5 tonnes. The mass of the structure, its shape and dimensions,[57] indicates that the original height of the mounds in Budapest-Nagytetény-Érdliget may have been at least 1–1.5 m. This estimation does not contradict the observations made at burial ground in Pitten, where relatively intact mounds of 1.5–2 m in height have been preserved thanks to tremendously favourable archaeologisation processes (see Hampl et al. 1978–1981, Taf. 67, 88, 158; Windl 1988, 28, Abb. 2–4).

10. Conclusions

Based on the summarised information, which was thoroughly discussed, it can be stated that mainly during the late Koszider period and possibly shortly after that circular ditches and stone rings or wreaths were mostly built around graves of the Tumulus culture in the lowland and foothill areas of the northern Carpathian Basin (Fig. 29). Moreover, stratigraphic observations made at burial grounds in Budapest-Nagytétény-Érdliget and Mezőnagymihály suggests that also in this region earthen mounds most likely were sometimes erected above the inner area encircled by ditch. It seems that all data collected in this paper should justify the legitimacy of the long-established naming of the archaeological entity – Carpathian Tumulus culture – introduced by A. Točík, which was to be understood as the easternmost periphery of the European Tumulus cultural complex. However, the current state of research suggests that the construction of tumuli was not at all as frequent in its settlement territory in comparison with the neighbouring Middle Danube Tumulus culture milieu in western Slovakia, south Moravia and eastern Austria. There are several indications that in the Carpathian-Danube-Tisza area, the circular ditches and stone rings/wreaths around graves were dedicated only to the dozens of male and female individuals who had exceptional social status such as local chieftains, warriors, religious leaders, healers or members of the nobility, which may also explain the burials of children and even toddlers. For the most part, these were single graves and not communal (or family) tombs. Apparently within the studied region, it was not common to build secondary embankments on the tumuli to bury additional persons, presumably blood-relatives, or even use areas delineated by circular ditches or stone rings for this, as is more evidenced in the western Tumulus culture zone. The only exception in this regard was the late Tumulus/early Urnfield culture milieu in the Bakony region in western Hungary, which 'wraps' up this peculiar burial custom on the threshold of the Late Bronze Age at the turn of the 14th/13th centuries BC. Also, during the Tumulus culture period in northern Carpathian Basin these circular features (even as a mounds) were built in burial grounds together within the flat graves and did not form separate groups, while regular graves of the 'common people' mostly respected the demarcated

Fig. 29. Detail of ideo-reconstruction of the early Carpathian Tumulus culture burial rituals. Author M. Horváth; see also Godiš 2020, obr. 1.

Obr. 29. *Detail ideové rekonstrukce pohřebních rituálů starší karpatské mohylové kultury. Autor M. Horváth; viz též Godiš 2020, obr. 1.*

area. Substantial part of the here discussed graves had obviously been robbed in prehistoric times (possibly even years or decades after the funeral), but the furnishings' composition and the character of those that remained intact does indeed support the presumed prominent status of the buried person. This is evidenced by the warrior male graves with ostentatious weapons, noble female graves with valuable metal and amber jewellery or exclusive, aesthetic pottery of foreign provenance. After all, even the deliberate disturbance of these graves suggests that easily recognizable artificial monuments of laboriously piled earth or stacked stones were erected on them, and this was the main reason why they so attracted the attention of the ancient robbers.

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Notes

1 The paper is edited and considerably expanded chapter from author's dissertation thesis '*Carpathian Tumulus culture in the Middle Danube region*' defended in 2019 at Department of Archaeology, Faculty of Arts, Constantine the Philosopher University in Nitra, to which the jubilarian S. Stuchlík was one of the opponents.

2 Narrow circular features, usually made of a single layer of rocks, are referred as 'rings', while wider ones built of multiple layers next to each other are called wreaths. A circle fully covered with stones is called a cairn.

3 In this study, circular burial features dated to Middle Bronze Age from the Moravia and eastern Austria are not included because they are related to a different cultural milieu on the westernmost periphery of the Carpathian Basin and Middle Danube region (see Stagl, Hattermann 2015, Fig. 2; Gaudenyi, Mihajlović 2022a, Fig. 3).

4 This naming was widely accepted in the Slovak archaeological literature, but among Hungarian researchers the term 'Tumulus culture' is now used only in general terms (see Benkovsky-Pivovarová 2015, 77–83).

5 In the paper by E. Jílková from 1961, this archaeological cultural entity had still original name as 'Southeastern Tumulus culture'. Anton Točík later modified this term, which was also reflected in the title of the catalogue work from 1964 '*Die Gräberfelder der Karpatenländischen Hügelgräberkultur*', where he published the excavation results of the Middle Bronze Age burial sites in Salka, Malá nad Hronom and Kamenica nad Hronom.

6 '*Without a detailed publication of the material and a justification of the new name, it would be impossible to continue using it from a Central European point of view, because if this is mainly the earliest stage of the Middle Danube Tumulus culture, which was already recognised by K. Willvonseder in the Mistelbach type, enriched in the course of time by new finds in which Mad'arovce-Věteřov elements were sometimes more, sometimes less predominant, the introduction of the new name would cause confusion in the terminology of the Bronze Age*' (Jílková 1961, 88).

7 For example, when only a small part of the burial site was excavated, or its results were not sufficiently published to be considered representative (e.g. evaluating the ratio of stylistic elements in the pottery).

8 Attempts at obligatory cultural classification can be counterproductive, where they complicate, rather than facilitate, scientific work. Sometimes it is neglected by some that the construct of archaeological culture is supposed to be useful in the classification of archaeological sources and it is still 'only' an auxiliary term.

9 For objective reasons, it is not yet possible to evaluate the ratio of the Piliny and Tumulus culture attributes in material from the sites mentioned above. The issue of cultural classification of the sites from the boundary zones has been commented by K. Pollet (2015, 199) in relation to the cremation graves from Megyaszó – Halom-oldal dűlő.

10 As examples, the burial sites in Detek and Halmaj in the northern Tisza region can be mentioned. Both were published by T. Kemenczei (1968, 159–186) and when discussing the influence between the Zagyvapálfalva and Barca cultural groups, he assigned them to the Carpathian Tumulus culture, which was later seen by others as artificially fabricated act (see Furmánek 1986, 321; Furmánek, Mitáš 2010, 45; to the question of the influences of the Egyek group of Tumulus culture into the milieu of the Piliny culture, see Furmánek, Ožďáni 1990, 132).

11 Cultural classification of the some Koszider period sites can be problematic, since the facies of the emerging Tumulus culture has not yet been fully established in this region (e.g. Bartík 2000, 23; Godiš, Javorek 2024, 125).

12 The site is later in text referred in abbreviated form only as Budapest-Nagytétény. Same goes for Kiskunfélegyháza-Páka and Radvaň nad Žitavou-Žitava sites, which are latter referred without the urban sections (i.e. Páka, Žitava).

13 The chronology of the Hungarian Bronze Age differs from the one applied in this study (P. Reinecke and his followers), shifting the Tumulus period in the region to the Late Bronze Age (see e.g. Kiss et al. 2019, 173–176).

14 In Hungarian literature it is also referred to as the so-called Pre-Scythian period.

15 Unusual feature E representing an oval ditch and post fence bounding graves 124 and 277 was found more than 25 metres from the ring ditches A–D and its relation with the burial ground is not clear (Csányi 1980, 162, 6. kép). It will be relevant to discuss it only after the complete publication of the excavation results.

16 Correct information on the dimensions of the graves and ditches were kindly provided by Á. Somogyvári.

17 The place known as Vízállásjelző (Kertészföldek) was originally part of the Ipolytölgyes cadastre, but during its excavation it was annexed to the neighbouring village of Letkés. Therefore, the latter became the naming of the site, which was introduced into the literature. To maintain clarity, it is referred to here as Letkés (see Torma ed. 1993, 122).

18 The results of the excavation in Letkés, which were processed by T. Kovács, who passed away in 2013 have not been published (Torma ed. 1993, 122). O. Ožďáni met him during his study trip to Hungary in 1978 and 1981 and had the

opportunity to get acquainted with the excavation report. From his notes he kindly provided me with, for which I thank him sincerely, it is apparent that stone rings (of unspecified dimensions) have been found around at least three graves (8, 22, 37). These likely could be the graves mentioned by L. Papp (1965, 232).

19 From the scarce information published by excavation's leader (G. Szabó) there were 142 cremation graves documented. There are discrepancies regarding this number, because the most recent paper mentioning this site refers to only 121 Bronze Age graves (Mengyán et al. 2024, 6) or around 130 (Mengyán, Hrabák 2023, 8).

20 The dimensions of the stone structure are not given in the publication, only a photograph is available (see Točík 1964, Taf. XXXII:3). These have been excerpted here from the unpublished manuscript of A. Točík (1976).

21 The published plan of the excavation gives the impression that the larger ditch 41 was interrupted in the western part in the form of an 'entrance'. However, the leader of the excavation argues that it was in fact closed in the same way as the smaller ditch (feature 87), which was only preserved in segments (Fischl, Hajdu 2016, 141). The possibility of an unpreserved entrance within the ditch (feature 41) is also indicated by the orientation of grave pit 58 (!). It is important to note here, however, that in the hitherto known cases of horseshoe-shaped ditches from the Tumulus period, as far as is known, none has been found with an 'opening' oriented in a westerly direction (see Jockenhövel 1999, 350, Abb. 9).

22 I was unable to find out, from where A. Točík obtained information about the width and the depth of the ditch.

23 The site known as Zsellér föld was introduced in the literature under the name – Salka I, while the second contemporary burial ground located about 1.5 km to the southwest is marked as Salka II (Točík 1964, 3, 37, 38).

24 This was evidenced more recently also at the Jobbágyi burial site (Fülöp 2016, 128). It appears that children did not have fully established social status, which exempted them from the burial canon intended for adults.

25 There were pair of a disc-headed pins in inhumation grave 1 found inside stone wreath VI (see Pál, Cseh 2013, 10, 3. tábla:1., 2. kép; Gyöngyösi et al. 2019, 25, Fig. 4, 7; information kindly provided by J. K. Cseh), which are typical of the early Tumulus culture (Lochham horizon).

26 This value was derived from the available plan and its scale. Only the range of diameters of the circular structures from 5 to 8 m is given in the informative article (see Pál, Cseh 2013, 10).

27 An example is the site Budapest-Nagytétény, where stone structures were most likely above the ditch grave pits, but traces of their existence were evidenced only by rocks found in the filling of the ditches. Instead, at tumulus burial ground in Pitten, several almost intact barrows with stone structures have been discovered (see Windl 1988, Abb. 7).

28 For example, the limestone or travertine stones found in the grave fill in Radvaň nad Dunajom must had been transported across the Danube from the opposite Gerecse Mountains (Hüssen et al. 2018, 71).

29 Although tumulus burials are a typical of the Middle Bronze Age, this tradition continued to prevail in varying intensity, mainly in the mountainous regions of the Lusatian culture in Slovakia (see Fülöp, Váczi 2014, Fig. 4).

30 Here I would like to point out the misinformation, which unintentionally appeared in A. Jockenhövel's study, on the circular ditches dimensions in Svätý Peter (1999, 330, Abb. 8). This was caused by deducing sizes from plans, which have incorrect scale in the original catalogue published by M. Dušek (1969, Abb. 19–25).

31 Only grave 202 in Budapest-Nagytétény with a ditch 203 of maximum diameter of 8.2 m can be mentioned, where a woman aged 50+ years was buried. However, this size is similar to other graves at the same site where younger, but already adult individuals (aged 20+ years) were buried (graves 29, 50). The stone ring diameter of about 4 m surrounding the grave 37 in Letkés is noteworthy too, where a man aged 50–55 years was buried.

32 E.g. Waldlaubersheim (Stümpel 1971, 135); Gießen (Kunter 1976, 88); Edelsberg/Kubach (Jockenhövel, Herrmann 1977, 90, 127); Windenhausen (Küßner 2017, 166, Abb. 2, 3); Salzmünde (Moser et al. 2019, 170, Abb. 2).

33 An analogous way of reinforcing the earthen mound was supposedly documented at excavation of tumulus I at Winklarn (Lower Austria), which was excavated at the end of the 19th century (Heger 1893, 135, Abb. 8, 9).

34 Referred to in German literature as '*Offene Kreisgräben mit Tor*' (see Jockenhövel 1999, 340, 350–351).

35 Neither grave 41 nor the nearby grave 59 matched their orientation to the place where the ditch (feature 71) was interrupted. Therefore, it is difficult to determine if it was a purposeful opening or a secondary disturbance. The orientation to the southeast indicates that it was indeed an 'entrance' (see Kulcsár 1992, 9).

36 Franzhausen II (Neugebauer, Gattringer 1989, 66, Abb. 16:3, 4; Neugebauer et al. 1992, 91, Abb. 45; Neugebauer 1994c, 447, Abb. 37); Pitten (Hampl et al. 1978–1981, Taf. 66); Unterradlberg (Neugebauer et al. 1991, 50, Abb. 33:2); Getzersdorf (Neugebauer, Gattringer 1990, 60, Abb. 30:1, 3, 4); Herzogenburg-Kalkofen (Neugebauer 1981, 29, Taf. 24, 47). It is to be noted that most of the circular ditches from these sites were dated intuitively, based on stray finds (e.g. sickle-shaped pins, conical-head pins with opening in the neck). Some facts point to the possibility of their later age, as is their often quite large diameter, as well as absence of central graves, which more likely were shallow or not even sunken and therefore not preserved. Also, within these excavated sites some graves dated to 'seal-headed pin horizon' were found (Neugebauer 1994b, 158; 1994c, Abb. 38:3, 4). For now, it is not possible to take a position on this from available informative reports.

37 If we exclude the graves of the Tumulus culture, which were found in the enclosure but not in the geometric centre of the space it delimited (as in Kiskunfélegyháza, Jánoshida, Mezőnagymihály), then the number is 41.

38 Salka I – grave 181 with a stone ring, graves 34, 160 (Točík 1964, 10, 32, 36, Taf. II:5, VI:2, VII:5, 6); Malá nad Hronom – grave 41 with a stone ring (Točík 1964, 41, Taf. XXXII:5, 6).

39 Maklár – Koszpérium – graves 41, 42 (Mengyán et al. 2024, Fig. 3, 4).

40 An analogy is known from the Radzovce, where urn grave 216/69 dated to the earliest burial horizon (BB2/BC1 stage) was deposited in a rectangular pit (200 × 80 cm) oriented in the N–S axis (recent radiocarbon dating suggests its later age; see Škvor Jernejčič 2021, 125, Fig. 9). Further parallels to this phenomenon of 'transforming funerary tradition' were documented in the milieu of the Piliny culture also in Salgótarján-Zagyvapálfalva – grave 105 (Guba, Vaday 2008, 18, 6. kép; Furmánek, Mitáš 2010, 82, obr. 12:1, 3; 37).

41 Budapest-Nagytétény – grave 65; Svätý Peter – graves 9, 21; Nové Zámky – grave 1/55; Maklár – Koszpérium – graves 41, 42; Maklár–Nagyrét II; Vértesszőlős – grave 1.

42 Jánoshida – grave 113; Budapest-Nagytétény – grave 42; Kiskunfélegyháza – grave 7; Salka I – grave 181; Letkés – grave 37.

43 Svätý Peter – graves 7, 16, 20, 25; Radvaň nad Dunajom; Mezőnagymihály – graves 58, 91; Kiskunfélegyháza – graves 41, 59, 92.

44 The predominance of similar grave orientation is also evidenced at other burial sites in the region between the Bükk Mountains foothills and the right bank of the River Tisza (Hänsel, Kalicz 1987, 73, Abb. 35).

45 The issue of the burial rite changes has been discussed in more detail by J. Blischke (2002, 189–195), who distinguished a group of graves of the so-called 'orthodox and reformers' at Tiszafüred – Majoroshalom site.

46 On the contrary, diverse or inconsistent trends in the orientation of the body placement are indicated by scarce information from old excavations at burial sites in Upper and Lower Austria (Teschler-Nicola 1985, 129; Gruber 1999, 30) and from Moravia and Bohemia (Praumová 2014, 19, 59, graf 3, 4).

47 The published information on the orientation of grave pit 107 is unclear (cf. Szilas 2017, 230, Fig. 3, 13: 1–4). The grave was in fact oriented in ENE–WSW axis, as G. Szilas confirmed to me.

48 The published dimensions of the ditch graves in Svätý Peter cannot be verified by their plans, as their are not in the excavation report (Dušek 1959a). Looking at the published plan, the size depiction of grave 21, which appears to be smaller than graves 7 and 9, do not correspond with the available metric data (260 × 200 cm to 250/230 × 180/170 cm).

49 Luboš Jiráň (2008, 123–124) concluded that in the funerary rite of the Tumulus culture in Bohemia '*...there was no strict canon and that each social unit (tribe, community, family) performed the funerary ceremony according to its own customs*.' He suggests that the archaeological source does not show visible differences between the burials of exceptional personalities, as no two mounds that were built identically have been reportedly documented so far. On the contrary, this inconsistency according to E. Čujanová-Jílková (1992, 271) was a sign of a certain rule, which encourages the interpretation that the uniqueness of each field monument of this type had a certain, archaeologically unobservable significance.

50 Two cremation graves (148 and 167) were also identified in feature D, but these were located directly within the ditch, indicating their later dating, so most likely they were unrelated to the central grave.

51 What is noteworthy is the information on the 'central grave 34/III', which was found about 50 cm '*from the middle*' of the stone wreath, while it is not clear in which axis – A. Točík (1976, 88) later states that '*under the pressure of the inner stone embankment, there was deformed cremation grave at a depth of 50 cm*'.

52 According to J. Bátora (2000, 542, Abb. 690), his defined horizon VII at the burial site represents the late Mad'arovce culture and can be synchronised with BA3 and BB1 stages (~ Reinecke BB1 / Hänsel MD I and MD II / Ruckdeschel BB). According to him, the BA3 stage matches to the Bühl-Ackenbach hoard horizon in southern Germany ('I. horizon of the Koszider bronzes') and BB1 is parallel to the Lochham-Wetzleinsdorf horizon ('II. horizon of the Koszider bronzes'). Note: The author was using separate BA2c and BA3 (!) stages.

53 Dagger was also found in disturbed grave 41 with a circular ditch in Kiskunfélegyháza (Somogyvári 1992, 16).

54 A study on a series of new radiocarbon data obtained from the Tumulus culture burial features in southwestern Slovakia is currently being prepared by the author and will be published in the foreseeable future.

55 The burial site is located in a micro-region situated between the foothills of the Bükk Mountains and the Tisza River Basin, from which intense settlement of the so-called Egyek group of the Tumulus culture are known – within a radius of about 30 km from the site there are cemeteries as Tiszafüred – Majoroshalom (Kovács 1975), Egyek – Szőlőhegy (Kovács 1966), Mezőcsát – Hörcsögös (Hänsel, Kalicz 1987), Igrici – Matata (Kalicz 1958), Emőd – Istvánmajor (Hellebrandt 2004) or Maklár – Koszpérium (Szabó 1961; 1963a; 1963b) and Maklár – Nagyrét II (Mengyán, Hrabák 2023).

56 The author attributes a standard value of 25% to soil looseness.

57 Excavations of well-preserved mounds in the surrounding regions show that many of them had a standard circular ground-plan. In Pitten, 57% of the excavated mounds (with a diameter of over 3 m) had this form, similar to the burial grounds in Borotice and Buková (see Bobek 2016, 32–33).

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Resumé

Příspěvek se zaměřuje na zhodnocení aktuálního stavu výzkumu kruhových objektů kolem hrobů na lokalitách karpatské mohylové kultury a jejích příbuzných skupin v severní části Karpatské kotliny. Za poslední dvě desetiletí se totiž počet nalezišť, kde byl zaznamenán jejich výskyt, téměř zdvojnásobil. V současnosti se jedná o nejméně 16 lokalit ze střední doby bronzové, situovaných mezi oblastí dolního toku Váhu přes ohyb Dunaje až po střední povodí Tisy (tab. 1). Tyto objekty se pojí s dříve diskutovanou otázkou, zda je vůbec oprávněné této archeologické kultuře přisuzovat přívlastek „mohylová“, a to zejména ve srovnání se situací na pohřebištích západního okruhu mohylových kultur, rozšířeného od oblasti Moravy a východního Rakouska až po Německo a východní Francii. Ve střední době bronzové se kruhové objekty kolem hrobů objevily na území jižního Slovenska a Maďarska ve dvou základních formách: jako koncentrické žlaby nebo kamenné věnce. Z daného kulturně-geografického regionu je známo minimálně 44 hrobů ohraničených žlaby na 9 lokalitách a nejméně 17 hrobů vymezených koncentrickými kamennými strukturami, které se zatím vyskytly na 6 pohřebištích.

Tyto útvary jsou obecně považovány za nepřímé doklady dnes již většinou zaniklých mohylových náspů z hlíny nebo kamene, které z vnější strany hroby ohraničovaly. Stále více se však zdůrazňuje, že tento interpretační model nelze bez výhrad aplikovat na všechny případy – každý takový kruhový pohřební objekt je třeba vyhodnocovat individuálně. V příspěvku je věnována pozornost jejich geografickému rozšíření, hlavním charakteristikám i specifikám, a to ve srovnání s „klasickými“ mohylami západně od Karpatské kotliny.

Hroby obklopené kamennými kruhy, resp. robustnějšími věnci, byly nejčastěji dokumentovány na lokalitách v blízkosti pohoří s lehčí dostupností suroviny, ale existují i případy, kdy byl kámen dopraven z větších vzdáleností. Naopak v zkoumané oblasti převládá spíše výskyt hrobů s kruhovými žlaby (nebo příkopy), které byly zatím nalezeny výhradně v nížinných oblastech (obr. 1). V tomto kontextu je však nutné zvažovat možnost, že některé z nich mohly původně mít i kamenné struktury, které se nedochovaly.

Jak už bylo dříve konstatováno, vnější rozměry těchto struktur v prostředí karpatské mohylové kultury se obvykle pohybují mezi 5,5 až 9 m (graf 1; tab. 2, 3). Rozměry žlabů byly většinou výrazně zredukovány zemědělskou činností, ale lépe zachované případy naznačují šířku nejčastěji mezi 40–80 cm a hloubku až 80–100 cm. Zdá sa, že někdy velikost ohraničení může souviset se sociálním postavením či věkem zemřelého, ale tento jev je spíše specifický pro každé pohřebiště zvlášť, podle zvyku komunity, která tam pohřbívala.

Převaha počtu nálezů kruhových žlabů je nepochybně výrazně zkreslena antropogenní činností (úpravy půdy, druhotné využití kamene), kvůli níž se kamenné konstrukce nemusely dochovat (graf 2). To komplikuje jejich interpretaci i rekonstrukci původního vzhledu, kterou lze často pouze domněle předpokládat. Pozoruhodné jsou zjištěná ohniště v prostoru žlabů (např. Svätý Peter, Mezőnagymihály), které pravděpodobně souvisejí s rituály při pohřbu nebo vzpomínkovými obřady (obr. 24, 25). Další zajímavostí jsou nálezy jam po kůlech či sloupech uvnitř ohraničených areálů (obr. 2, 12), které mohly být pozůstatky nadzemních konstrukcí – možná zpevnění mohylových náspů, nebo stély označující areály pohřebišť.

Analýza dále zohledňuje podobu a výbavu hrobů vymezených těmito kruhovými objekty. V jejich geometrickém středu se zpravidla nacházel jediný hrob, často výrazně větších rozměrů (graf 4), kde bylo tělo uloženo buď nespálené, nebo spálené v keramické urně, případně byl popel rozptýlen v jámě. Dodatečná pohřbení v rámci stejného objektu během doby mohylové jsou poměrně ojedinělá. Specifickým fenoménem jsou otevřené kruhové žlaby, přerušené obvykle na jihovýchodě (obr. 6, 15, 16), což vytvářelo tzv. vstupy (např. Radvaň nad Dunajom, Jánoshida, Maklár–Nagyrét II, Kiskunfélegyháza). Těmto otvorům se přisuzuje zejména paleoastronomický význam (např. východ slunce), ale také praktická funkce pro vstup do rituálního prostoru.

V příspěvku se diskutuje i chronologické zařazení těchto centrálně umístěných hrobů ohrazených příkopy nebo kamennými konstrukcemi. Tento výrazný pohřební rys má totiž širší časový přesah a určitý vývoj. Předběžná analýza dokládá, že kruhové objekty se kolem hrobů stavěly především ve starší fázi střední doby bronzové (stupeň Bz B), přičemž v severozápadní části středodunajského regionu se tato tradice objevila již na konci eneolitu. Podobně tomu bylo, ačkoli za jiných okolností, i východně od řeky Tisy (jámová kultura).

S ohledem na nové detailně dokumentované terénní situace bylo možné v závěru studie připojit poznámky k hrobům ohraničeným kruhovými žlaby, které byly interpretovány jako mohyly. Klíčová naleziště, jako Budapest–Nagytétény nebo Mezőnagymihály, přinesla důkazy o hrobech mladších o několik století, které byly záměrně v superpozici nad staršími centrálními hroby. To podporuje představu, že v severních částech Karpatské kotliny se ve střední době bronzové příležitostně stavěly nad hroby společensky významných lidí skutečné „hliněné pomníky“, které byly v krajině dlouhodobě viditelné. Prominentní status pohřbených mužů, žen a dětí (dokonce i batolat) dokládají případy neporušených hrobů s výbavou zahrnující honosné zbraně, šperky a další prestižní předměty (obr. 26, 27).

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