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## ASPECTS OF THE FUNERARY RITE AND RITUAL IN THE SARMATIAN CEMETERY OF TIMIȘOARA- HLADIK 1 (TIMIȘ COUNTY). PRELIMINARY OBSERVATIONS

**Abstract:** This study, without aiming for comprehensiveness, attempts to present certain aspects of the funerary rite and ritual in the Sarmatian cemetery of Timișoara-Hladik 1 (Timiș county), where a number of 139 inhumations and 16 ditched flat circular funerary enclosures were investigated during 2019–2020 subsequent to the initiation of the Timișoara Sud bypass works. A series of aspects like the location and layout of the examined graves, their type and set-up, orientation and position of the deceased within the graves, funerary rite elements, animal offerings and composition and position of the grave goods were analysed. The ditched flat circular funerary enclosures were also examined within a wider context. One of the goals of this study is to analyse the presence of these aspects in the Timișoara-Hladik 1 cemetery in a wider context and by contrast with the rest of the space inhabited by the Sarmatian during the first centuries AD. A series of aspects of the funerary rite and ritual as well as the preliminary analyses of the grave goods broadly evidence the dating of this grave group grosso modo to the chronological interval comprised between late 2nd century AD and the last decades of the 3rd century AD.

**Keywords:** *the Sarmatian, graves, funerary ritual, orientation of the deceased, grave goods, ditched ritual enclosures, the Pannonian Plain, the Banat, the north-Pontic area.*

### INTRODUCTION

During the last decade, the interpretation and analysis of all sources related to the Sarmatian habitation of the territories south the Lower Mureș (Arad and Timiș counties, Romania) have allowed topical inferences on the issue of Sarmatian settlement in said area, yet also on how they entered the region as well as the dynamics of their relations with the Roman world and the Barbarian environment if this part of Europe<sup>1</sup>. Systemised and detailed analysis of the different classes of archaeological materials<sup>2</sup> as well as of certain

<sup>1</sup> See in this respect BÂRCĂ 2014a; BÂRCĂ 2016a; BÂRCĂ 2022; BÂRCĂ/GRUMEZA 2022a; GRUMEZA 2014; GRUMEZA 2019; GRUMEZA 2019a; GRUMEZA 2021.

<sup>2</sup> See TÂNASE/MARE 2000; BÂRCĂ 2014a, 87–138; BÂRCĂ 2014b; BÂRCĂ 2016a; BÂRCĂ 2016b; BÂRCĂ 2016c; BÂRCĂ 2017; BÂRCĂ 2018; BÂRCĂ 2018a; BÂRCĂ 2019; BÂRCĂ 2021; BÂRCĂ/GRUMEZA 2022b; BEJAN/MĂRUȚIA/TÂNASE 2011; DOMOCOȘ 2014; COCIȘ/BÂRCĂ 2014; DOMOCOȘ 2014; GEORGESCU/BĂLĂRIE 2017; GRUMEZA 2013A; GRUMEZA 2013ab; GRUMEZA 2014a, 55–140; GRUMEZA 2014b; GRUMEZA 2015; GRUMEZA 2016; GRUMEZA 2019; GRUMEZA 2020; GRUMEZA/BÂRCĂ 2020; KAPCSOS 2020.

aspects related to funeraryrite and ritual<sup>3</sup> and its correlation with the rest of the Sarmatian funerary features, mainly from the Pannonian Plain, have facilitated the achievement of a more complete image of the material culture of the Sarmatian in the territories between the Lower Mureş, Tisza and the Danube, as well as the sketch of a picture on certain aspects of their habitation, utilised artefacts and interaction with the Roman and Germanic worlds and contacts with the neighbouring cultural settings.

Over the course of the more recent years, the rescue archaeological excavations have yielded and led to the investigation of new archaeological sites and features ascribed to the Sarmatian culture<sup>4</sup>, with new significant information on the habitation of the Sarmatian tribes during the first centuries AD in the western territories of Romania. Among these finds also counts that of Timișoara-*Hladik 1* (Timiș county)<sup>5</sup> (Fig. 1).

## Aim

The main aim of this paper is to preliminary analyse certain funeraryrite and ritual aspects in the Sarmatian cemetery of Timișoara-*Hladik 1* (Timiș county), where a number of 139 graves were fully investigated during 2019–2020.

There shall be preliminarily discussed a series of aspects like the location and layout of graves, their set-up, funerary ritual elements and ritual set-ups, orientation and position of the deceased in the graves, as well as the composition and position of the grave goods. All these shall be analysed in a wider context and integrated in the archaeological and historical realities of the Pannonian Plain during the first centuries AD.

## The geographical location of the discussed remains and information on site identification

The archaeological site within the range of Timișoara city – *Hladik 1* (Site 6) (Fig. 1), has been known in the academic literature as of 1982, when it was identified by field surveys on the banks of a former river course, today a drainage channel. In the two areas divided by the former watercourse, there were identified a few portions that yielded numerous archaeological artefacts dated to different historical periods<sup>6</sup>. Although closely connected, the identified areas have certain peculiarities which require analyses as distinct sites. Site *Hladik 1*, where the Sarmatian cemetery was discovered as well, covers the southern part of the area, comprising surfaces A, B and C, as delimited in 1982.

The site, located deep into the flatlands (south of the

Romanian Western Plain) is situated in the administrative boundary between Timișoara-*Freidorf* and the Șag commune, in front of km 10, delimited on the south-eastern side by the national road DN 59 Timișoara-Șag. It lies at ca. 3.55 km north the Șag commune town hall, at 4.49 km south-east of the Timișoara West railway station and 4.29 km south-west the Timișoara South railway station, on the southern bank of Nivelda stream<sup>7</sup>.

Good part of the site could be archaeologically investigated as it was crossed by the route of the southern bypass of Timișoara city, between kilometres 5+000–5+400. It was identified and more accurately delimited subsequent to an intrusive archaeological diagnostic performed in the spring of 2019 (Fig. 2/1), when several archaeological materials and features dated to different periods were found, including a Sarmatian burial<sup>8</sup>.

The rescue archaeological excavations conducted during 2019–2020<sup>9</sup> on the route of the future road evidenced the presence within the site's investigated area of three habitations dated to different periods: the Neolithic, the Roman period (Sarmatian settlement and cemetery) and the early medieval period (Fig. 3/1). Four isolate finds also added: two cremations and a pit dated to the late period of the Bronze Age and a feature belonging to the Coțofeni culture (the early Bronze Age).

Subsequent to the 2019–2020 investigations there were identified and examined a number of 139 inhumations pertaining to the Sarmatian<sup>10</sup> (Fig. 2/2; 3). These archaeological excavations succeeded to identify the southern and south-western limit of the cemetery. The fieldwalks carried out within the site's area, outside the limits of the investment project concluded that the cemetery further covered the land past the north-eastern limits of the excavated perimeter and that the nucleus of the settlement related to the Sarmatian cemetery lay to its north and north-west<sup>11</sup>.

All the 139 graves are part of the same inhumation cemetery related to the settlement where the two archaeological campaigns investigated several features as follows: waste pits, trenches, kilns, sunken houses etc.<sup>12</sup>. A first group of features related to the Sarmatian settlement was investigated in 2019 in the north-western part of the project area (Fig. 2/2; 3/1), while the second group located to the north-east of the cemetery was investigated in the 2020 campaign (Fig. 2/2; 3/1).

<sup>7</sup> LAZAROVICI/RESCH/GERMANN 1983, 35. <http://ran.cimec.ro/sel.asp?descript=timișoara-municipiul-timișoara-timis-situl-arheologic-de-la-timișoara---hladik-1-cod-sit-ran-155252.27>; BÂRCĂ/FLORESCU 2023, 224.

<sup>8</sup> BÂRCĂ/FLORESCU 2023, 223–224. Until the summer of 2019 when the rescue archaeological campaigns were initiated, data on this complex site were entirely incomplete, neither its stretch nor its complexity being known for certain. Also, there were no minimal indications on the existence within the identified limits of the Roman date cemetery belonging to the Sarmatian.

<sup>9</sup> BÂRCĂ *et alii* 2022, 513; BÂRCĂ/FLORESCU 2023, 224, note 3. We thank this way our colleagues Liviu Bălan and Raluca Burlacu with the National Museum of the Union in Alba Iulia for kindly allowing us to study and publish information related to the graves investigated in 2020.

<sup>10</sup> BÂRCĂ *et alii* 2022, 513. The 2019 campaign identified and investigated 119 graves, while that of 2020 another 20. The 2019 research was supervised by Cristinel Fântâneau, Cristian Florescu and Anca Mătiș, and those of 2020 by Liviu Bălan and Raluca Burlacu.

<sup>11</sup> BÂRCĂ/FLORESCU 2023, 224.

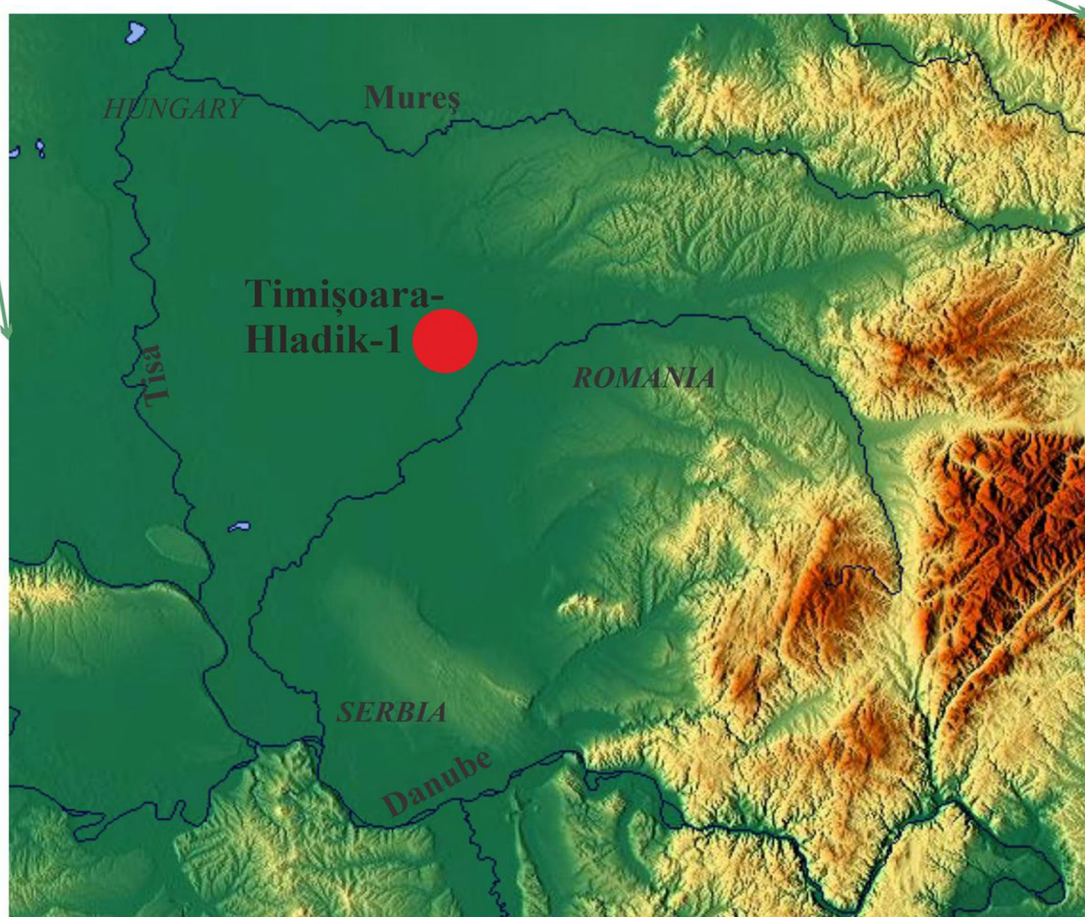
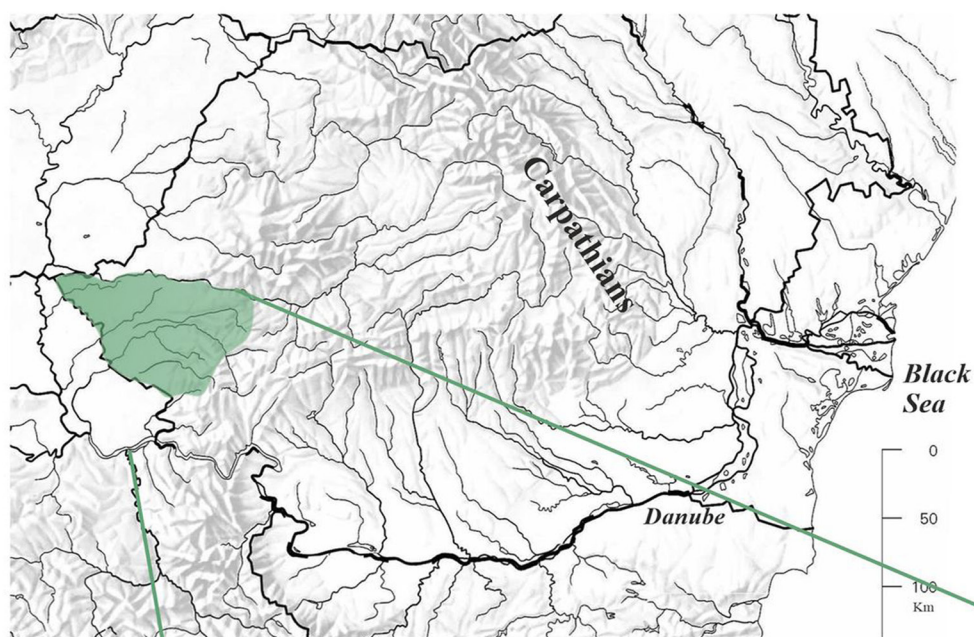
<sup>12</sup> BÂRCĂ *et alii* 2022, 515; BÂRCĂ/FLORESCU 2023, 224.

<sup>3</sup> BÂRCĂ 2014a, 71–85; BÂRCĂ 2015; BÂRCĂ 2020; BÂRCĂ/COCIȘ 2013; GRUMEZA 2012; GRUMEZA 2014a, 37–53; GRUMEZA/URSUȚIU 2016a; GRUMEZA/URSUȚIU 2016b; KAPCSOS 2017.

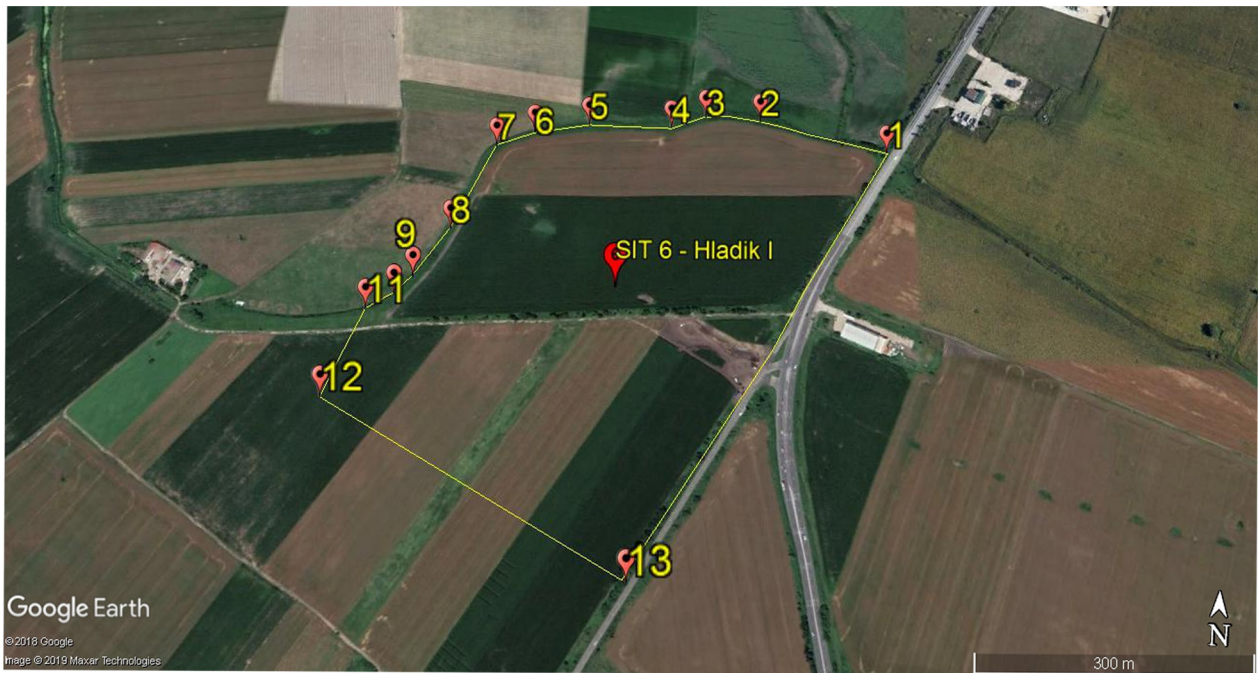
<sup>4</sup> TĂNASE/MARE 2000; MARE *et alii* 2011; BEJAN/MĂRUIA/TĂNASE 2011; GRUMEZA 2011; GRUMEZA/URSUȚIU/COPOS 2013; GRUMEZA/URSUȚIU 2016b; KAPCSOS 2014; KAPCSOS 2017; BÂRCĂ 2014a; BÂRCĂ/GRUMEZA 2022a; STAVILĂ/CRAIOVAN 2020; GINDELE 2023.

<sup>5</sup> BÂRCĂ *et alii* 2022; BÂRCĂ/FLORESCU 2023.

<sup>6</sup> LAZAROVICI/RESCH/GERMANN 1983, 35–36, Fig. 1). Cod RAN 155252.27. <http://ran.cimec.ro/sel.asp?descript=timișoara-municipiul-timișoara-timis-situl-arheologic-de-la-timișoara---hladik-1-cod-sit-ran-155252.27>; BÂRCĂ/FLORESCU 2023, 223.



**Fig. 1.** Map with the location of the Timișoara-Hladik 1 site (after BĂRCĂ 2022a).



1



2

**Fig. 2. 1.** Satellite image of site Timișoara-Hladik 1 perimeter; **2.** Satellite image of the layout of Sarmatian funerary remains within the investigated area of site Timișoara – Hladik 1 (after BÂRCĂ/FLORESCU 2023).

The features discovered in 2020 evidence that the settlement stretched also in the area located to the north-east of the cemetery. The archaeological investigations conducted in 2019–2020 highlighted part of the cemetery layout, orientation of graves, grave pit types, orientation and position of the deceased as well as the presence of many grave goods<sup>13</sup>.

<sup>13</sup> BÂRCĂ *et alii* 2022; BÂRCĂ/FLORESCU 2023.

Subsequent to the rescue excavations carried out in the 2019 campaign there were identified and investigated a number of 16 ditched flat circular funerary enclosures<sup>14</sup> (Fig. 3/2; 9–12). Unfortunately, part of these survived only partially, with significant portions damaged, while a few (Cx 165, Cx

<sup>14</sup> BÂRCĂ *et alii* 2022, 515, Fig. 3/1; 4; BÂRCĂ/FLORESCU 2023, 225, Pl. III/2; IV.

1004, Cx 1032) could not be fully investigated as they lay mainly outside the investment project perimeter.

### Grave location and layout

Although the number of graves investigated at Hladik 1 is significant, it must be mentioned these represent part of the cemetery stretching outside the limits of the investigated area, northwards and north-eastwards (see Fig. 2–3).

The 139 graves and 16 ditched flat circular funerary enclosures clustered within an area approximately 180 m long and up to 45 m wide (Fig. 3). On closer inspection of their location, it may be noted they amassed in the perimeter comprised between km 5+190–5+250 and km 5+265–5+320, in both areas, ditched flat circular funerary enclosures with graves in the internal space being found as well. The two areas were not delimited in-between by trenches or other contemporary structures, the space in-between them being completed by graves set in a row on the NE-SW axis. The two grave clusters evidence the possibility of existing two distinct groups which very likely included the non-investigated graves in the stretch located to the north and north-east limit of the perimeter investigated in 2019–2020<sup>15</sup>. If this is the case, it is then possible we are dealing with a division of the funerary space according to the affiliation to a distinct group within the Sarmatian community of the area. It is not excluded that between the two extant groups there was a chronological gap, which shall be ascertained only after the analysis of all the 139 graves is completed. It must also be noted there were graves set on more or less straight rows. One of these lies in-between the two grave groups, with others in the southern part of each of the groups (Fig. 3/2).

The structure analysis of the Sarmatian cemeteries in the Pannonian Plain has revealed there was no general system that their internal layout followed and that each cemetery exhibited certain specificities resulted from topographical, chronological and ethnographical conditions<sup>16</sup>. Similar circumstances are also noted in the case of the more recent finds from the space between the Lower Mureş, Tisza and the Danube.

In the Sarmatian cemeteries investigated in the Pannonian Plain it has been noted that in many cases, the graves lay on more or less straight rows, occasionally grouped around a central funerary feature or central group composed of a few graves. In some cemeteries, in more or less straight lines are set including the ditched flat circular funerary enclosures and graves in their internal space, while some are surrounded by a larger or smaller grave group. According to available data, it is worth mentioning that three distinct types of funerary space set-ups were identified within the Sarmatian cemeteries of the Pannonian Plain: 1. Cemeteries with a structure where graves cluster without any system around one or several graves; 2. Cemeteries with a grave structure in more or less straight rows; 3. Cemeteries where a combination of both exists<sup>17</sup>. In addition, it must be mentioned that in most investigated cemeteries, there is clear division among grave groups, often with more or less larger areas in-between the

graves<sup>18</sup>. These areas are clearly visible on cemetery plans. Based on the observations related to grave layouts within the Timișoara-Hladik 1 cemetery, it may be concluded there existed two types of funerary space organisation.

A funerary space layout structure upon several grave groups has been recently documented also in the Sarmatian cemeteries of Giarmata (Timiș county) and Hunedoara Timișană (Arad county). In the first, graves were set-up in the form of four groups, with distances from a few tens of meters to more than one hundred meters in-between these groups. Grave groups were delimited ones from the other by trenches<sup>19</sup>. In the Hunedoara Timișană cemetery, discovered graves clustered within an area 80 m long and between 28 and 45 m wide, being set in the form of two groups, with a distance of approximately 30 m in-between. The two grave groups are not delimited in-between by trenches or other contemporary constructions<sup>20</sup>.

Such grave groups, like mentioned above, were also recorded in several Sarmatian cemeteries investigated over the decades in the Pannonian Plain<sup>21</sup>. This division type within Sarmatian cemeteries seems to be, according to the suggested chronology of the Sarmatian environment of the Pannonian Plain<sup>22</sup> specific to the Middle Sarmatian Period, yet especially for that late in the mentioned area.

In the Giarmata cemetery, there is seemingly no chronological or ritual difference among the graves in the first three groups (Ia, Ib and Ic). According to the grave goods and the condition of the skeletal remains, there are differentiations between the first three groups where the skeletal remains were poorly preserved or not at all or the fourth (II) where the skeletal remains survived approximately intact, while grave goods are many and in good condition<sup>23</sup>. Beside the conservation condition of the deceased and quality of the grave goods, there also emerge chronological differences between the first three grave groups and the fourth. The grave goods evidence the first three grave groups (Ia, Ib, Ic) date between the late 2nd century and the third quarter of the 3rd century AD, while the fourth group (II) to the last third of the 3rd century – middle/third quarter of the 4th century and not the last quarter of the 3rd century – late 4th century AD as previously argued<sup>24</sup>. Regarding the graves in the two groups of Hunedoara Timișană, it must be mentioned these date to the same chronological interval (end of the Marcommanic Wars – third quarter of the 3rd century AD (phases C1a – C1b/C2 in the Central-European chronology)<sup>25</sup>.

### Gravepit shapes and sizes

In the Sarmatian environment of the Pannonian Plain, similarly to the rest of the territories inhabited by

<sup>15</sup> The shape of these distinct grave groups was most likely oval or circular.

<sup>16</sup> KULCSÁR 1998, 100, 116.

<sup>17</sup> KULCSÁR 1998, 75, 100, 116.

<sup>18</sup> PARKER PEARSON 2003, 12.

<sup>19</sup> GRUMEZA 2014a, 38, Pl. 21/1; BĂRCĂ/GRUMEZA 2014, 161–162.

<sup>20</sup> BĂRCĂ 2014a, 71, Fig. 3.

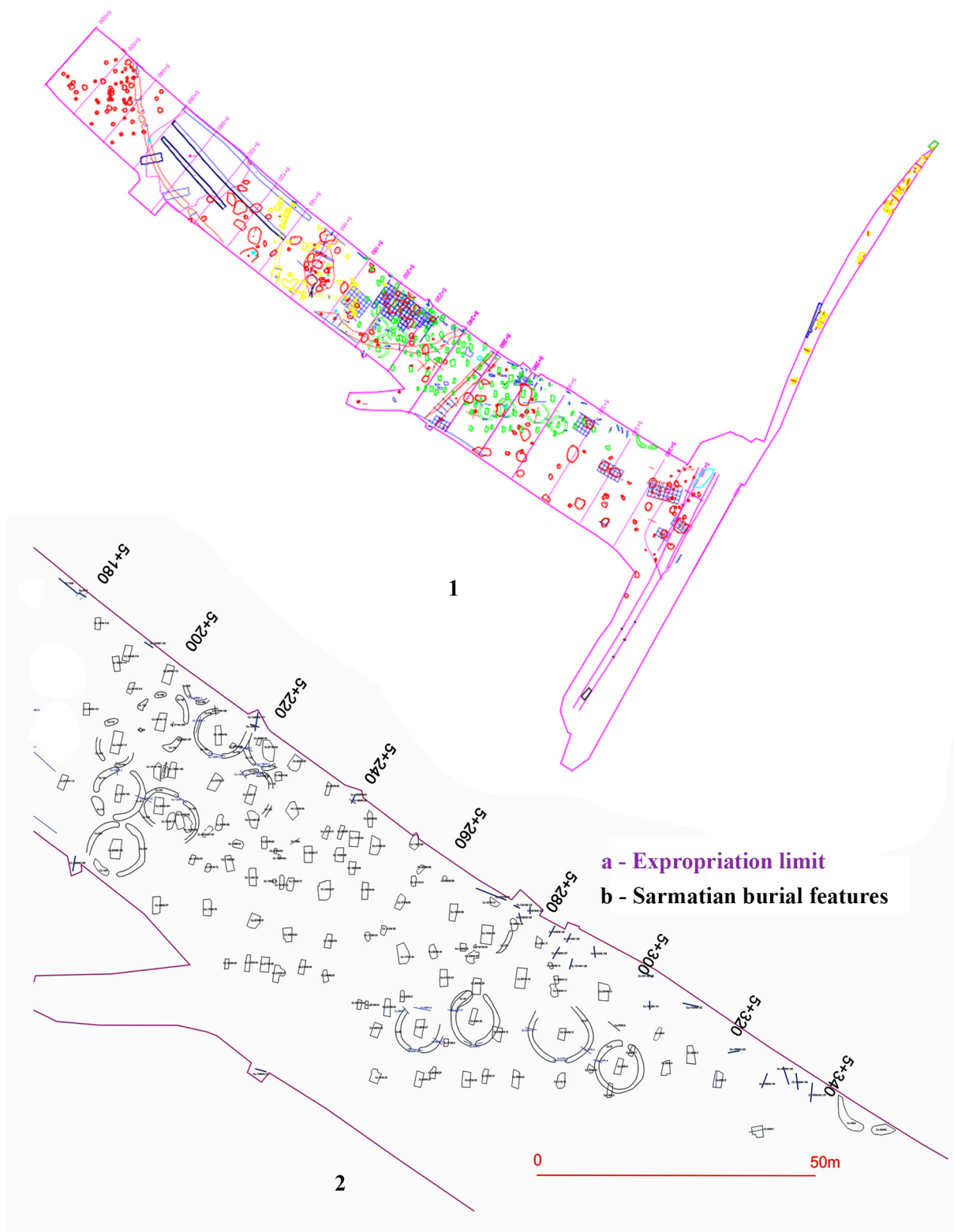
<sup>21</sup> For a series of examples see VADAY/DOMBORÓCZKI 2001, 134, Fig. 2; ÁCS/VADAY 2004, 125; KÓHEGYI/VÖRÖS 2011, 358, Pl. 7; GULYÁS 2014, 70, Tab. I/2; II; GULYÁS/SÓSKUTI 2017, 218, 221, Fig. 2; GRUMEZA 2014a, 38; WALTER/PÓPITY 2020, Pl. 2.

<sup>22</sup> See in this respect VADAY 1989, 205–210; VADAY 1994, 105)

<sup>23</sup> GRUMEZA 2014a, 38, 39; BĂRCĂ/GRUMEZA 2014, 162.

<sup>24</sup> GRUMEZA 2014a, 39; BĂRCĂ 2014a, 72.

<sup>25</sup> BĂRCĂ 2014a.



**Fig. 3. 1.** Developed general plan; **2.** Layout of Sarmatian burial features within the mapped area of the Timișoara-Hladik 1 site; **a** – Expropriation limit; **b** – Sarmatian burial features (after BĂRCĂ *et alii* 2022).

the Sarmatians, several funerary structure types are known based on gravepit shapes<sup>26</sup>. Most diffused gravepit forms in this area are rectangular<sup>27</sup> (often with rounded corners)

<sup>26</sup> KULCSÁR 1998, 23–26, 94, 110.

<sup>27</sup> Rectangular gravepits are specific to the Sarmatian graves from the entire space they inhabited over the course of several centuries (MOSHKOVA 1963, 20; MAKSIMENKO 1983, 52–55; MAKSIMENKO 1998, 91;

and oval, rarely rectangular with side steps<sup>28</sup>. Gravepits with

KOSTENKO 1983; KOSTENKO 1993; GROSU 1990; SKRIPKIN 1990, 179–188; SIMONENKO 1993, 22, 77, 100; SIMONENKO 2004, 135, 140–141, 149–150; MARCHENKO 1996, 95; BĂRCĂ 2006b, 40–41; BĂRCĂ 2006b, 32–33; BĂRCĂ/SYMONENKO 2009, 42–43, 101–102, 206–207), also dominating in the Sarmatian environment of the Pannonian Plain.

<sup>28</sup> KULCSÁR 1998, 23–26, 94, 110; BĂRCĂ 2014a, 73, Pl. 6; 51/1–2.

niche and catacombs are unknown in the Sarmatian environment of the Pannonian Plain, these being frequently found in the Sarmatian environment of the area between the Lower Danube and the Volga<sup>29</sup>. The analysis of the Sarmatian funerary remains in the area between the Lower Mureş, Tisza and the Danube evidences that circumstances in this territory are similar to that in the rest of the Pannonian Plain<sup>30</sup>.

In the Timișoara-*Hladik 1* cemetery, rectangular grave-pits, the majority with rounded corners, dominate the group of 139 funerary features, those oval in shape accounting for almost 10% of the investigated graves during the two campaigns (Fig. 4–8). Similarly to other cemeteries, in this case too grave-pit sizes vary from one grave to another, while their areas have different values. The preliminary analysis indicates that only in a few graves, grave-pit lengths or widths are similar and that in only a few cases, grave-pit areas are identical, although length and width values differ.

Average surface of Sarmatian grave-pits in the Pannonian Plain is of 1.5–2 m<sup>2</sup><sup>31</sup> and values comprised between 1 and 2 m<sup>2</sup> are specific for territories located south the Lower Mureş<sup>32</sup>. Nonetheless, it must be mentioned there are cemeteries where the average area of the graves is somewhat larger<sup>33</sup>. In some Sarmatian cemeteries there are often grave-pits with much more larger sizes. For instance, within the grave group of Hunedoara Timișan, except for Gr. 3, whose grave-pit area was of 3.5 m<sup>2</sup>, the graves where adults and young adults were buried covered areas with values comprised between 1 and 1.9 m<sup>2</sup><sup>34</sup>. In the case of smaller grave-pits, these contained infant burials<sup>35</sup>. Infant graves at Hunedoara Timișană have grave-pit areas below 1 m<sup>2</sup>, except for Gr. 7, Gr. 8, Gr. 10, Gr. 11, Gr. 17 whose area varies between 1.17 m<sup>2</sup> and 1.76 m<sup>2</sup><sup>36</sup>.

Regarding the large grave-pits in the Sarmatian milieu of the Pannonian Plain, it must be mentioned that most often these are found in barrow graves or ditch enclosed graves<sup>37</sup>, however these are also found in not ditch-enclosed graves or barrows<sup>38</sup>, which is also the case at Timișoara-*Hladik 1* (ex. Gr. 3 – 3.05 × 1.85 m; Gr. 13 – 3.10 × 1.75 m; Gr. 26 – 2.90 × 1.10 m; Gr. 35 – 2.54 × 1.25 m; Gr. 37 – 3.14 × 1.80 m; Gr. 40 – 2.80 × 1.55 m; Gr. 42 – 3.10 × 1.23 m; Gr. 49 – 2.98 × 1.27 m; Gr. 65 – 2.94 × 1.10 m; Gr. 87 – 2.50 × 1.40 m; Gr. 93 – 3.70 × 1.05 m; Gr. 97 – 2.80 × 1.75 m; Gr. 115 – 2.80 × 1.65 m; Gr. 119 – 2.40 × 1.84 m).

The large grave-pit sizes of many of the graves enclosed by a ditch are also confirmed by the finds of the last decades on the territory of Hungary<sup>39</sup> and the Western Plain of

<sup>29</sup> See BĂRCĂ 2006a, 40–47; BĂRCĂ 2006b, 32–37; BĂRCĂ/SYMONENKO 2009, 42–43, 101–105, 206–213 with complete bibliography and discussions related to these funerary structures.

<sup>30</sup> GRUMEZA 2014a, 42; BĂRCĂ 2014a, 72–75.

<sup>31</sup> KULCSÁR 1998, 25–26, 94, 110.

<sup>32</sup> GRUMEZA 2014a, 42; BĂRCĂ 2014a, 73.

<sup>33</sup> KÓHEGYI/VÖRÖS 2011, 243–247; GULYÁS 2011, 138–139, 154; HULLÁM 2012, 360.

<sup>34</sup> BĂRCĂ 2014a, 73, 76.

<sup>35</sup> See RADU/SZEREDAI 2014, 80–85; BĂRCĂ 2014a, 73.

<sup>36</sup> BĂRCĂ 2014a, 73.

<sup>37</sup> KULCHAR 1997, 127–128; KULCSÁR 1998, 23–26, 94, 110.

<sup>38</sup> For a series of examples see GULYÁS 2011; HULLÁM 2012; WALTER/PÓPITY 2020 with complete bibliography. For sizes of Sarmatian funerary grave-pits in the north and north-west Pontic area see BĂRCĂ 2006a, 40–43, with complete bibliography; BĂRCĂ/SYMONENKO 2009, 42–43, 101–103, 206–209.

<sup>39</sup> In most cases, in large grave-pits were identified coffin remains or wooden

Romania<sup>40</sup>. The Timișoara-*Hladik 1* cemetery is no exception, as part of the ditched enclosed graves had large grave-pits<sup>41</sup>.

### Grave set-ups

In the Sarmatian environment in the space located south of the Lower Mureş, details related to grave-pit set-ups were identified, similarly to the rest of the territories they inhabited, not very often, and in most part, poorly. This is mainly due to the fact that burials were made at a small depth from barrow surface or topsoil level, their destruction by natural factors or subsequent to human interferences (looting or subsequent interferences) that destroyed or erased their traces. Even so, in many cases, important information was identified and obtained on how graves were set-up, their structure and on funerary ritual elements.

Across the entire period marking the Sarmatian existence, wood was used to set-up the graves<sup>42</sup>. It was especially used to cover the graves, close the niche or catacomb entrance, cover grave-pit bottoms, set-up the entrance into the niche or catacomb graves, as well as of the niches, sometimes to line grave-pit walls. Wood was used for simple coffins, complex coffins made of plaques, wooden frames and beams, sarcophagi, coffins made of hollowed tree trunks and the bier on which the deceased lay etc.

Often though, the grave's set-up made use of tree bark, reed, sedge or other vegetal material. Most often, grave-pit bottoms were covered with grass, reed, tree bark or brushwood. Brushwood, grass, reed and stones were also used to cover the grave. Same materials, to which add stone plinths were used also to close the entrance into catacombs or niches. Occasionally, in some Sarmatian graves, below the skull of the deceased were identified traces of vegetal pillows<sup>43</sup>. All above aspects related to the set-up of graves are so common for the Sarmatian graves that indication of parallels is no

funerary structures.

<sup>40</sup> BĂRCĂ/COCIȘ 2013, 31–34, Fig. 2–3; BĂRCĂ/GRUMEZA 2014, 161–162, Pl. IV–V; GRUMEZA/URSUȚIU 2016a, 195–196, Pl. II–III; BĂRCĂ 2020, 342–343, Fig. 20–21.

<sup>41</sup> For the sizes and area of these graves see below when discussing the ditched circular funerary enclosures.

<sup>42</sup> For a series of examples in the Sarmatian environment of the Pontic steppe see ABRAMOVA 1959, 55; SHILOV 1959, 456; MOSHKOVA 1963, 22–23; KOSTENKO 1983, 46; KOSTENKO 1993, 98–99; DZIGOVSKIY 1982, 85; DZYGOVSKIY 1993, 16; SMIRNOV 1984, 86; KOVPANENKO 1986, 10–11; MIROSHINA/DERZHAVIN 1988, 148, 152–153; ARKHEOLOGIYA SSSR 1989, 172, 179, 192; MEDVEDEV 1990, 158–159; GROSU 1990, 34; SIMONENKO 1981, 56; SIMONENKO 1993, 22–23, 79; SIMONENKO 1994, 106–107; SIMONENKO 1997, 389–390; SIMONENKO 2012, 208; SIMONENKO/MEL'NIK 2004, 269; SIMONENKO/MEL'NIK 2012, 295; SIMONENKO/PODOBED 2012, 227–228; SIMONENKO/LOBAJ 1991, 6–7, 29–30, 36, 37–38; SYMONENKO 1994, 37; PROKHOROVA/GUGUEV 1992, 142; IL'YUKOV/VLASKIN 1992, 183, 235; MORDVINTSEVA/SERGATSKOV 1995, 114; MAKSIMENKO 1998, 93; KASHUBA/KURCHATOV/SHCHERBAKOVA 2001–2002, 10, 228; ZAJTSEV, MORDVINTSEVA 2003, 65; KURCHATOV/BUBULICI 2003, 286; BĂRCĂ 2006a, 47–50; BĂRCĂ 2006b, 37–38; BĂRCĂ/SYMONENKO 2009, 43–44, 106, 213–214; BEZUGLOV/GLEBOV/PARUSIMOV 2009, 48, 66.

<sup>43</sup> For a series of coffin and wooden funerary structures finds in the Sarmatian environment on the Banat territory see GRUMEZA 2012; GRUMEZA 2014a, 43–46; BĂRCĂ/GRUMEZA 2014.

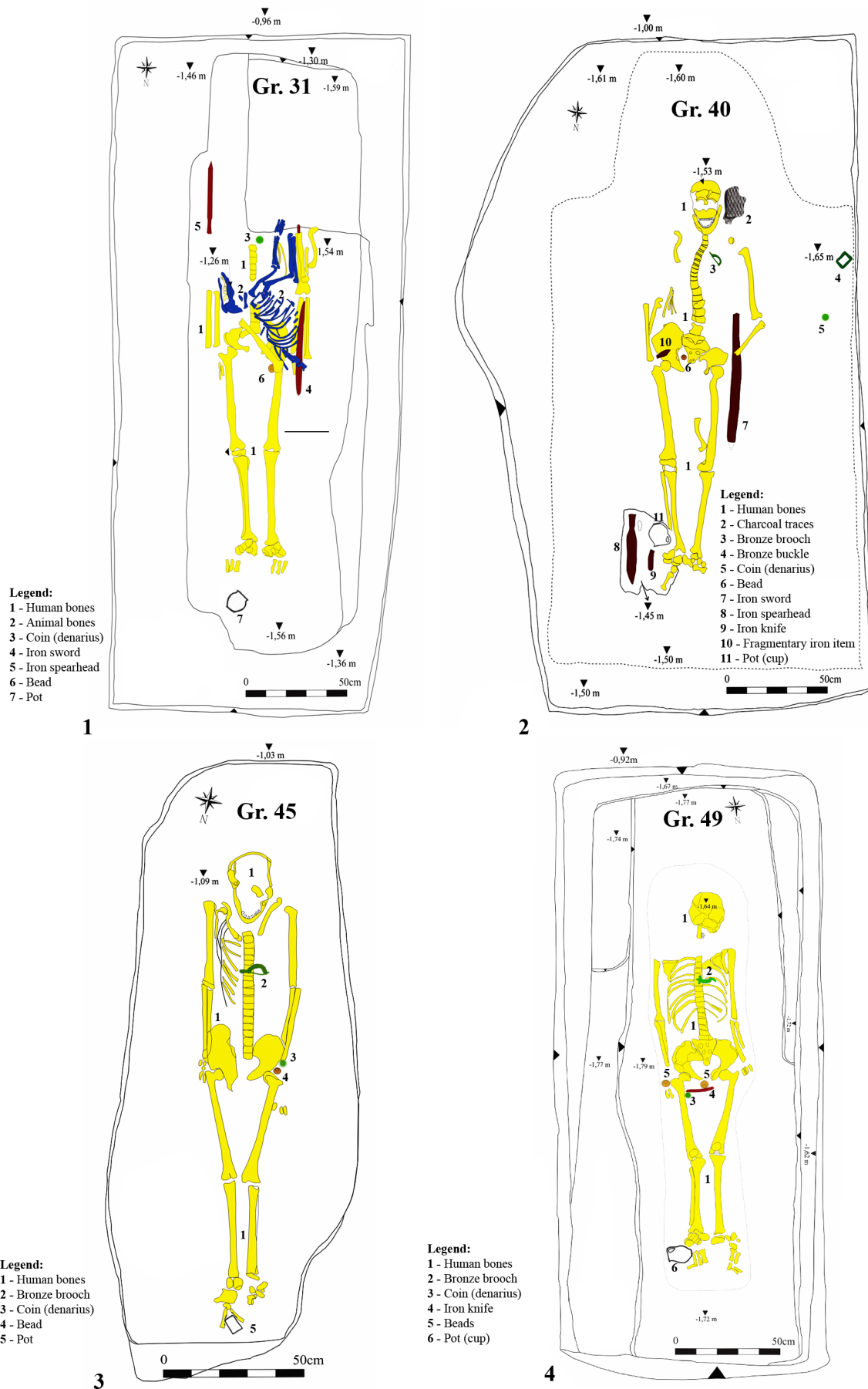


Fig. 4. Plans of graves from Timișoara-Hlădik 1. 1 – Gr. 31; 2 – Gr. 40; 3 – Gr. 45; 4 – Gr. 49.

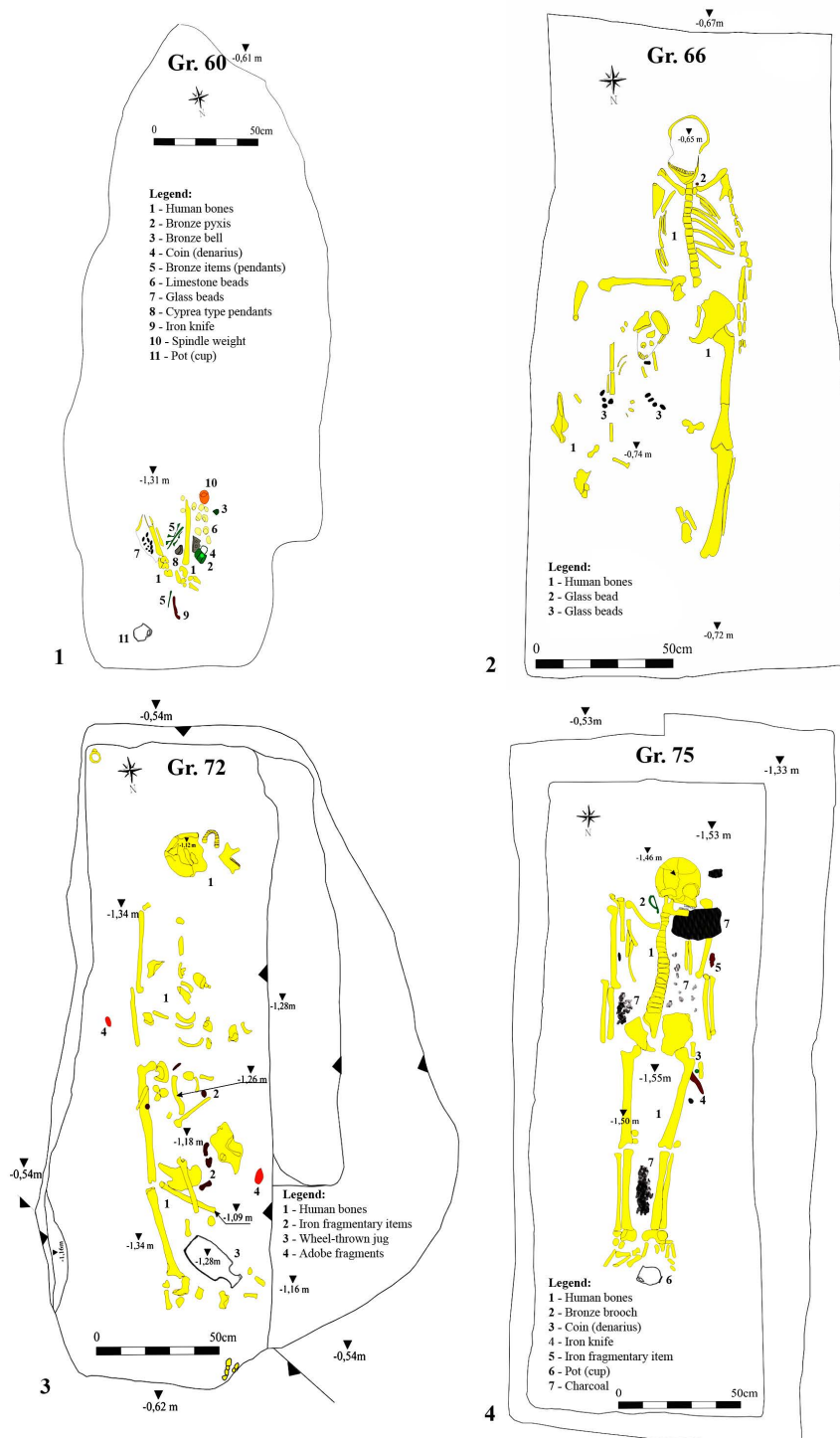


Fig. 5. Plans of graves from Timișoara-Hladik 1. 1 – Gr. 60; 2 – Gr. 66; 3 – Gr. 72; 4 – Gr. 75.

longer necessary<sup>44</sup>. Stone was rarely used compared to wood throughout the space inhabited by the Sarmatian<sup>45</sup>.

A careful examination of the finds yielded by the entire space inhabited by the Sarmatians has shown that grave set-ups were most often made of available material in the area. Thus, the draft of a typology, and from there, of an ethnic or historical differentiation according to grave stone or wood set-ups is useless, unless confirmed by other rite or grave goods details. It may be though argued that most coffin graves and wooden funerary set-ups had belonged to prosperous individuals of the Sarmatian society and were accompanied, unless not looted, by rich grave furnishings. This is also supported by the Sarmatian funerary finds in the Pannonian Plain, yet also in the Western Plain of Romania. An example in this respect is Gr. 3 of Hunedoara Timișană, where elements indicative of a lidded coffin and rich furnishings<sup>46</sup> were identified.

In the Timișoara-*Hladik 1* cemetery, elements indicative of a wooden coffin were discovered in Gr. 95, looted and disturbed from Antiquity, where in the lower part of the grave pit filling were identified thin black earth lenses, as well as traces of peated wood. These wood traces were also identified on one of the side walls of the grave pit, yet also on the grave pit bottom. Because the grave was looted and strongly disturbed from Antiquity, the identified traces do not allow the accurate establishment of the wooden structure type. Most likely, the wood remains vaguely identified in this grave are that of a coffin. In fact, it must be mentioned that the surviving skeletal remains contained only a few bones and the skull, while the grave goods consisted only a few potshards. In Gr. 2, also looted and destroyed from Antiquity, on small portions in the grave pit bottom area were identified thin brownish-black earth lenses, as well as small traces of peated wood. Brown wooden traces were also identified on the eastern wall of the grave pit. These elements indicate that a wooden structure likely existed in this grave. In the northern part of the grave pit, in the feet area, were found remains of charred wood (Fig. 6/1).

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Coffin and other wooden structure use within graves is a funerary custom frequently found in both the Ancient and the Migrations periods<sup>47</sup>. For the Sarmatian environment of the Pannonian Plain, a coffin typology was suggested by Zsolt Gallina<sup>48</sup>. In the first type were included tree bark coffins, hollowed, represented by three variations: 1/a. Attached with two clasps (one in the upper part, and the second in the lower part of the coffin); 1/b. attached with four clasps (two in the upper part, two in the lower part of

the coffin); 1/c. attached with three clasps (two in the upper part, one in the lower part of the coffin). To the second type were ascribed the wooden box type coffins, and to the third type, exemplars made of a tree trunk, with external surface, still in wood<sup>49</sup>.

At the level of 1998, in the Sarmatian environment of the Pannonian Plain it was noted that coffins were present in 45 of the cemeteries (22.8%) and 142 graves where coffin traces<sup>50</sup> were present. The rescue archaeological investigations of the last two decades have yet considerably increased their number<sup>51</sup>. These are recorded either by wooden remains or iron clasps in "S" or "C" shape. For instance, in the Madaras-*Halmok* cemetery, iron clasps were discovered in 50 graves, ten of which being barrow graves<sup>52</sup>. In the area comprised between the Lower Mureș, Tisza and the Danube, coffin iron clasps were discovered in several graves<sup>53</sup>, while among recent finds count those in Gr. 3 at Hunedoara Timișană (Arad county) and Gr. 6 at Foeni-*Cimitirul Ortodox* (Timiș county)<sup>54</sup>. In connection with the iron clasps, one must argue these evidence the presence of a coffin made of a hollowed tree trunk provided with a lid, both trunk frames (the upper and lower parts), being often attached by clasps<sup>55</sup>. Other suggested versions based on finds are coffins made of wooden planks/beam, of box or chamber type<sup>56</sup>, occasionally provided with a frame/bier for transport<sup>57</sup>. A series of finds indicative of such biers or beds used to carry the deceased (with or without attached coffin) were documented in a series of Sarmatian graves from the Pannonian Plain<sup>58</sup>, including the Western Plain of Romania<sup>59</sup>.

In the territories south of the Lower Mureș, coffin or other structure types and wooden funerary set-up traces are recorded in many Sarmatian graves, including some finds yielded during the last decades<sup>60</sup>.

The number of coffins and other wooden structures was surely much higher, yet due to environmental conditions,

<sup>49</sup> GALLINA 1999, 11–12.

<sup>50</sup> KULCSÁR 1998, 28.

<sup>51</sup> For a series of examples see GULYÁS 2011; GULYÁS 2014; HULLÁM 2012; KUJÁNI 2014; TUTKOVICS 2015; WALTER/PÓPITY 2020.

<sup>52</sup> KÓHEGYI/VÖRÖS 2011, 254.

<sup>53</sup> GRUMEZA 2012; GRUMEZA 2014a, 44–45; BÂRCĂ 2014a, 78 and note 572; BÂRCĂ/GRUMEZA 2014, 166.

<sup>54</sup> GRUMEZA 2011, 183–184, 191, Pl. V/1; GRUMEZA 2012, 101; GRUMEZA 2014a, 45, 180, Pl. 17/1; 108/2–3; BÂRCĂ 2014a, 78, 149, Pl. 6/7; 8/3–5; 52/1; BÂRCĂ/GRUMEZA 2014, 159–160, 163–164, 167, Pl. I/7; III; X.

<sup>55</sup> For a series of reconstructions see Dinnyés 1975, 77; VÖRÖS 1988, 121; VÖRÖS 2002, Fig. 8–9; KULCSÁR 1998, Fig. 8; KÓHEGYI/VÖRÖS 2011, 256, Fig. 251; GRUMEZA 2012, Pl. VIII.

<sup>56</sup> See GALLINA 1999, 21, Fig. 14; VÖRÖS 2002, 176, Fig. 9 (wooden funerary chambers with coffins inside); KÓHEGYI/VÖRÖS 2011, 260, Fig. 254.

<sup>57</sup> HULLÁM 2012, 361–363; GALLINA 1999, 11–12.

<sup>58</sup> Kóhegyi 1971, 213–214; KÓHEGYI/VÖRÖS 2011, 198; GULYÁS 2011, 141; HULLÁM 2012, 381, 382, Pl. 4/5; 5/7; WALTER/PÓPITY 2020, 152, 153, 156, Pl. 6–9; 11–13.

<sup>59</sup> GRUMEZA 2012, 100, 102; GRUMEZA 2014a, 44, Pl. 24. BÂRCĂ/GRUMEZA 2014, 160–161, 163, Pl. IV–V; VIII. Funerary biers are recorded in both funerary rituals of the Roman empire and the Barbarian world, being easy to make wooden structures and of multiple functionalities, their use being mentioned by the Latin authors as well (see GRUMEZA 2012, 102).

<sup>60</sup> TÂNASE/MARE 2000, 197; GRUMEZA 2011, 183, 191, Pl. V/1; GRUMEZA 2012; GRUMEZA 2014a, 44–45; BÂRCĂ/GRUMEZA 2014; BÂRCĂ 2014a, 76–79.

<sup>44</sup> For a series of examples with elements of internal set-ups of the Sarmatian graves in the north and north-west Pontic area with complete bibliography see BÂRCĂ 2006a, 47–50; BÂRCĂ/SYMONENKO 2009, 43–44, 106, 213–214.

<sup>45</sup> For such finds in the north and north-west Pontic space see SIMONENKO 1977, 221–222; SIMONENKO 1993, 14, 20; SIMONENKO 1994, 113, 114; SIMONENKO 2004, 135, 140–141, BÂRCĂ 2006a, 50; BÂRCĂ 2006b, 38; BÂRCĂ/SYMONENKO 2009, 44, 106, 213.

<sup>46</sup> BÂRCĂ 2014a, 76, 148–150, Pl. 6–14; 51–52; 72/3–5; 73/3–4; 74/5–11.

<sup>47</sup> For coffin types used during the Migrations period on the territory of Eurasia see (FEJÉR 1991).

<sup>48</sup> GALLINA 1999.

grave looting and incomplete documenting of several older archaeological excavations, information on this aspect is gapped. For instance, in the Madaras-*Halmok* cemetery there were identified looting traces in 80–90% of the graves<sup>61</sup>, in that of Szeged-*Tápé* in 83% of the cases<sup>62</sup> and in the Kiszács, Vajszka, Hortobágy cemeteries I, VII, VIII all graves were looted<sup>63</sup>. In a proportion of 78%, were looted the graves in the Pančevo-*Vojlovica*<sup>64</sup> cemetery and in 81% those at Bükkábrány-*Bánya*, site XI/A<sup>65</sup>. The circumstances in the Timișoara-*Hladik 1* cemetery are no exception in this regard, as the preliminary observations evidence that ca. 70% of the 139 investigated graves were looted. In fact, the archaeological excavations conducted over the course of time revealed that most Sarmatian graves of the Pannonian Plain where coffin and wooden structure remains had been identified, were looted and destroyed from Antiquity, which is a major hindrance for their objective study.

The strong deterioration of the skeletal remains by disarticulation and bone displacement of the entire body, their scattering throughout the gravepits, lack of bones or lack of body together with most grave goods in the case of the Timișoara-*Hladik 1* graves, evidence that interferences subsequent to funerary primarily aimed to steal the valuable objects inside the grave. Preliminary observations on the situation in the Sarmatian environment of the Pannonian Plain show that such human interferences likely occurred either shortly after burial, in the case of looted graves, yet with undisturbed skeletal remains and in anatomical location, or few years later, after decomposition/complete skeletonisation of the deceased.

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As mentioned above, the Sarmatian graves set-up made also use of a series of vegetal origin materials. In the Timișoara-*Hladik 1* cemetery small traces of vegetal rot were identified under the skeletal remains in ca. 10% of the graves. The soil in the portion where these traces were noted was somewhat darker, vague vegetal material fibres being noticeable here and there. Graves where such traces were noted are either not looted or were disturbed to a smaller extent at the time of looting. Also, in a few cases, below the skull of the deceased, the soil was much darker, possible from decaying plants placed under the skull as pillows. In a few cases vegetal rot was noted both under the skull and skeleton. The set-up of the graves at Timișoara-*Hladik 1* with vegetal materials is reminiscent of the Sarmatian world of the steppes in the north and north-west of the Black Sea where gravepit bottoms lined with such materials are constantly present<sup>66</sup>. South of the Lower Mureș, traces of vegetal pillows were recently discovered below the skull of the deceased in Gr. 30 in the Giarmata cemetery<sup>67</sup>. In the grave group of Hunedoara Timișană, small traces of vegetal rot

were found in Gr. 8 and Gr. 15<sup>68</sup>. It must also be mentioned that below the head of deceased in Gr. 1 and Gr. 10 the soil was very dark, possibly from decaying plants placed below the head as pillows<sup>69</sup>. In the case of Gr. 10, vegetal rot traces were found under the skeleton too. From previous research, in the area between the Lower Mureș, Tisza and the Danube we mention the bed made of woven vegetal materials (mat) in Gr. 112 in the Kiszombor-*B* cemetery<sup>70</sup>. Cases similar to that in Gr. 112 were also identified in the Sarmatian graves of the Pannonian Plain, of which we mention those in graves 7, 8, 13 and 15 in the Tápé-*Malajdok-Freidhof A* cemetery<sup>71</sup>. Without further details, we only mention these vegetal rugs lining grave bottoms, identified underneath the deceased, might have possibly fulfilled the role of a coffin as well. The same may be argued in the case when the deceased were wrapped in a leather or fabric shroud<sup>72</sup>, cases unidentified yet archeologically on the territory of Banat.

### Funerary ritual elements

The presence and deposition within the graves of white minerals (chalk, white clay, white sand, plaster stone, shells), of different red (ochre, realgar) or yellow hue materials (sulphur) is found in the Sarmatian environment of the entire space they inhabited<sup>73</sup>. Such minerals extant in the Sarmatian graves over the course of time, which were mainly cultic in nature, evidence the sacred symbol of above mentioned colours.

Most common in Sarmatian graves of all periods is the custom to scatter chalk in powder form on gravepit or coffin bottoms. Chalk and its substitutes are also found in graves in the form of small pieces – white clay, limestone, plaster stone, shells, similar in structure with chalk<sup>74</sup>. In some of the barrows built by the Sarmatian were also identified cases when the entire area beneath the mound was scattered with white sterile<sup>75</sup>.

White colour was the symbol of purity, being also related to the ritual of body cleansing<sup>76</sup>. Nevertheless, such cleansing was not always carried out with these minerals as both chalk and its substitutes are not found in all graves.

Red minerals (ochre, realgar) are rarely found, commonly in the form of pieces and mainly in more richly furnished graves<sup>77</sup>. It was believed that realgar was the symbol of blood animation and bloody sacrifices<sup>78</sup>, while the ritual impor-

<sup>61</sup> KŐHEGYI 1994, 280.

<sup>62</sup> VÖRÖS 1996, 134.

<sup>63</sup> SZEKERES 1999, 507.

<sup>64</sup> BATISTIĆ-POPADIĆ 1984–1985, 51–67; KULCSÁR 1998, 83.

<sup>65</sup> TUTKOVICS 2015, 244.

<sup>66</sup> For a series of examples see BÂRCĂ 2006a, 48–49, BÂRCĂ 2006b, 37; BÂRCĂ/SYMONENKO 2009, 44.

<sup>67</sup> GRUMEZA 2014a, 44, 45–46.

<sup>68</sup> BÂRCĂ 2014a, 78–79, 154, 159.

<sup>69</sup> BÂRCĂ 2014a, 78–79, 148, 156.

<sup>70</sup> PÁRDUCZ 1950, 142; GRUMEZA 2014a, 45, 217.

<sup>71</sup> PÁRDUCZ 1950, 222.

<sup>72</sup> KULCSÁR 1998, 30.

<sup>73</sup> See in this respect MOSHKOVA 1963, 23–24; SMIRNOV 1964, 94–96; SHILOV 1975, 114, 133; MAKSIMENKO 1983, 59; ARKHEOLOGIYA USSR 1986, 190–195; ARKHEOLOGIYA SSSR 1989, 172, 179, 192–193; SUBBOTIN/DZIGOVSKIJ 1990, 20; DZYGOVS'KYJ 1993, 19–20; GROSU 1990, 34–35; GROSU 1995, 150; KOSTENKO 1993, 99–100. KULCSÁR 1998, 27, 94, 110; BÂRCĂ 2006a, 53–56; BÂRCĂ 2006b, 40–41; BÂRCĂ/SYMONENKO 2009, 45–46.

<sup>74</sup> BÂRCĂ 2006a, 54–55; BÂRCĂ/SYMONENKO 2009, 45.

<sup>75</sup> Cf. KOSTENKO 1979, 126.

<sup>76</sup> SMIRNOV 1964, 94.

<sup>77</sup> For such finds in the north-west Pontic area see BÂRCĂ 2006a, 55, Tab 5.

<sup>78</sup> GRAKOV 1947, 109.

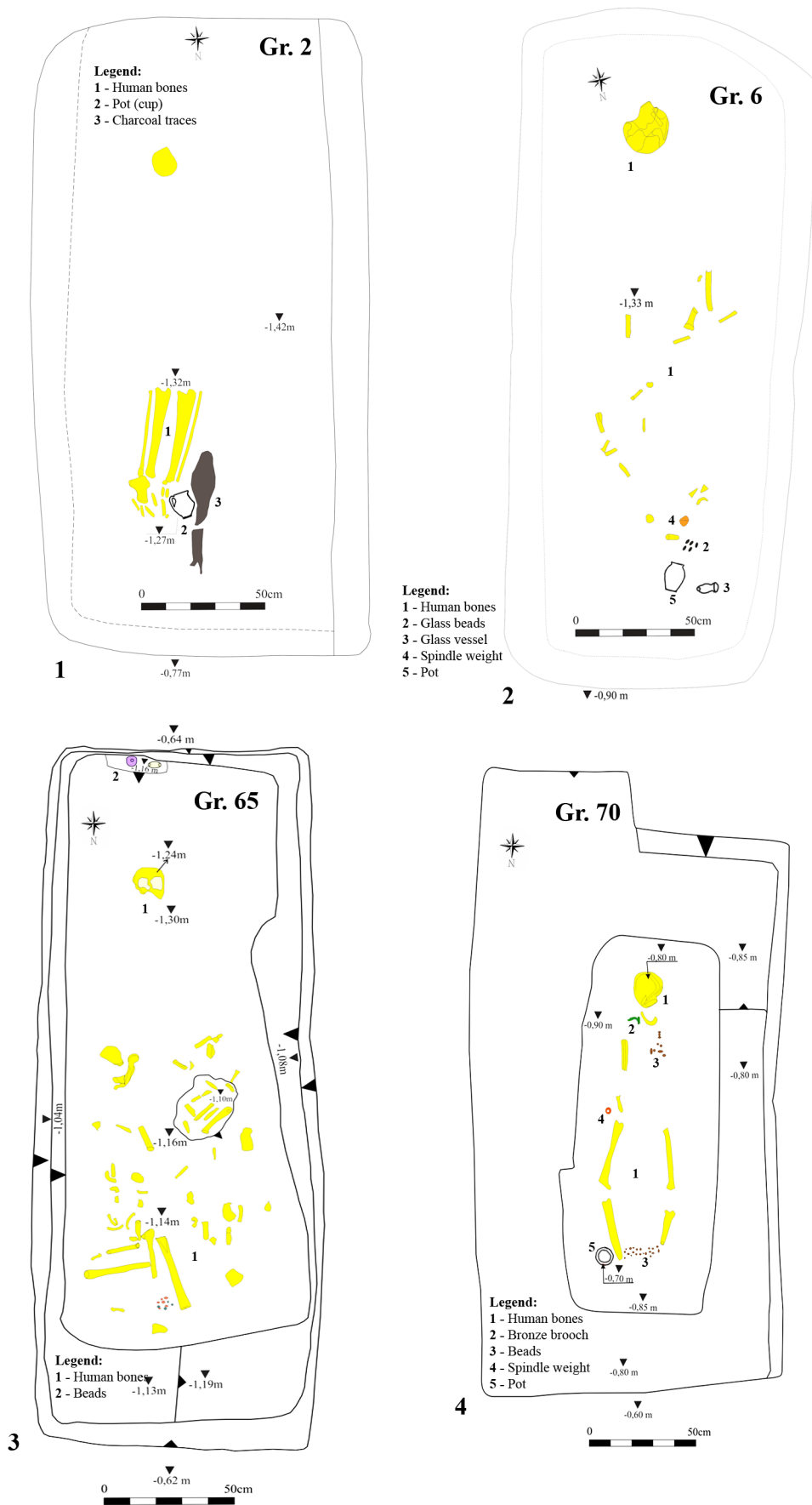


Fig. 6. Plans of graves from Timișoara-Hlădik 1. 1 – Gr. 2; 2 – Gr. 6; 3 – Gr. 65; 4 – Gr. 70.

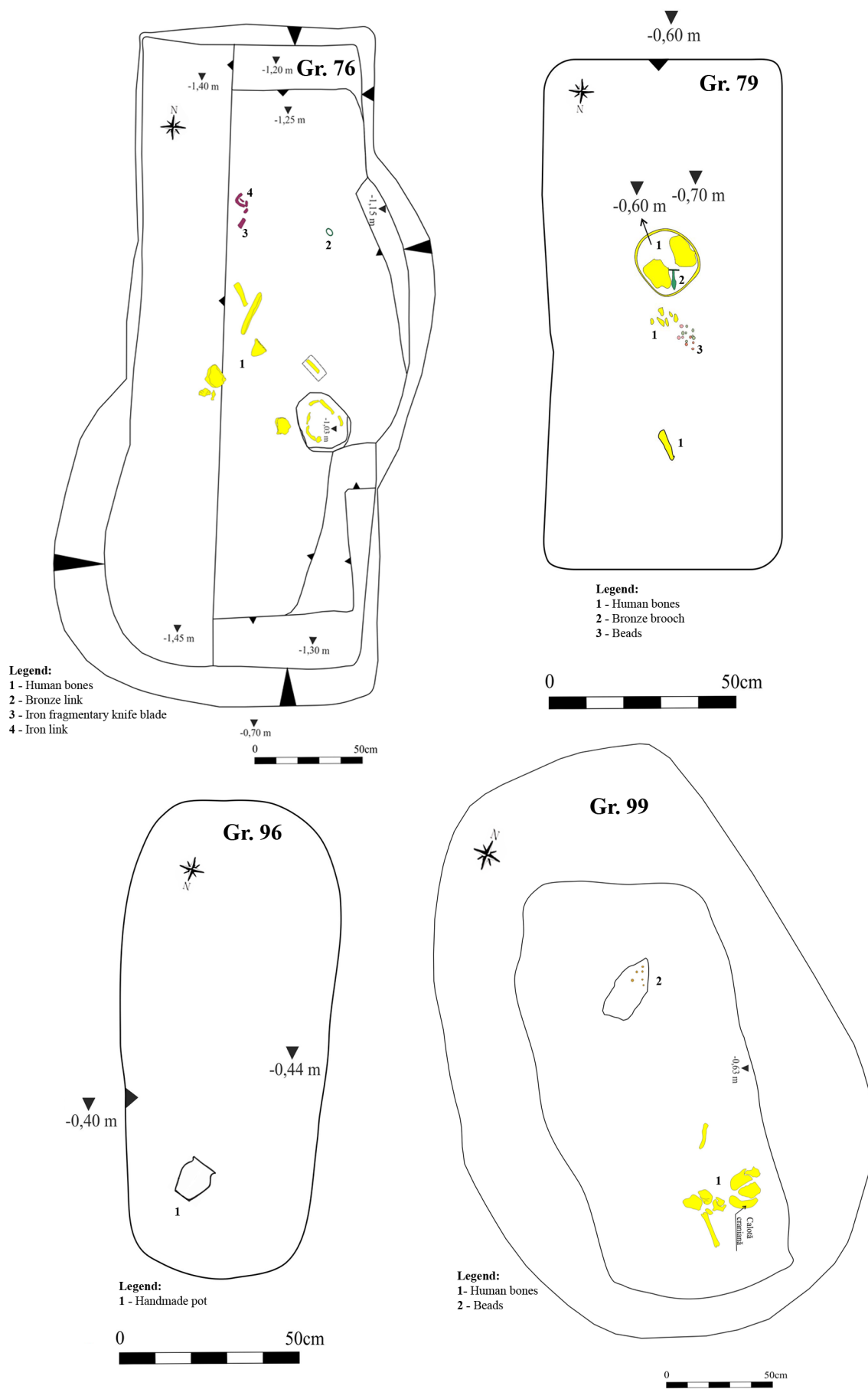


Fig. 7. Plans of graves from Timișoara-Hlădik 1. 1 – Gr. 76; 2 – Gr. 79; 3 – Gr. 96; 4 – Gr. 99.

tance of the realgar is related to the Sarmatian imaginary and fire cult.

Among the yellow minerals stands out the yellow ochre, extremely rare, as well as the sulphur. The latter, discovered in the form of pieces, is likely a symbol of the fire cult, as it lights easily<sup>79</sup>.

In the Timișoara-*Hladik 1* cemetery, the presence of ritual elements, like deposition of solid substances was identified in the form of small solid white matter pieces (limestone/chalk) in graves 22, 49, 60, 62, 110 and 139.

In the western territories of Romania south of the Lower Mureș, the presence of ritual elements like the deposition of solid substances has been recently discovered in grave 7 at Hunedoara Timișană. Its bottom was scattered with small pieces of solid white matter (limestone/chalk)<sup>80</sup>. Among previous research in the area between the Lower Mureș, Tisza and the Danube we mention the finds from graves 73 and 74 in the Kiszombor-*B* cemetery, where the deceased buried in coffins were placed on a limestone bed<sup>81</sup>. A limestone layer was also identified under the deceased in Gr. 119 in the same cemetery<sup>82</sup>.

Beside said ritual elements, in some Sarmatian graves from the entire space they inhabited there are small piles of charred wood and ash, symbolising fire. Usually, these small piles lay in the feet area and occasionally near the head. There are cases when the pit filling contained a large quantity of charred wood together with burnt earth. These reached the graves from the fires lit by the edge of the freshly excavated pit or not far from it. Therefore, sometimes, beneath the mantle of the Sarmatian barrows are visible stains of burnt earth together with charred wood and ash. Rarely are also found cases when the fire was lit on top of the grave or when it covered the grave and the deceased were burnt<sup>83</sup>. In the eastern space there are many cases when not very great fires were lit near the grave or not far from it also for the completion of the funeral banquet. Traces of these funerary banquets are seen near the places where fires were lit in the mantle of the Sarmatian barrows in the form of fragmentary or complete vessels as well as animal bones and skulls<sup>84</sup>.

In the Timișoara-*Hladik 1* cemetery, traces of charred wood and ash were identified in graves 2, 40, 56 and 75. In the first (Gr. 2), the remains of charred wood were found in the lower part of the gravepit, parallel to the ankle and left foot and near the wheel-thrown cup (Fig. 8/1), while in the second (Gr. 40), the charred wood remains and ash were

discovered to the left of the skull (Fig. 4/2). In Gr. 56, charred wood remains were found in the upper part of the gravepit, to the right of the deceased, while in Gr. 75 these were found between the bones of the lower limbs, in the lower part of the right hand, to the left of the skull and on the bones of the left shoulder (Fig. 5/4).

In the Sarmatian graves of the area between the Lower Mureș, Tisza and the Danube, certain rituals connected to fire: burning, purification, deposition of carbonate rocks or fire traces (ash or charred wood) were discovered in a few graves.

For instance, below the deceased in Gr. 103 in the Kiszombor-*B* cemetery was identified an ash layer, yet also fabric traces<sup>85</sup>, while the filling of Gr. 5 at Hunedoara Timișană contained both charred wood and charred seeds<sup>86</sup>. Certain elements related to fire were discovered in graves 1, 11 and 17 in the Banatski Despotovac (Ernőháza)-*Kollingerkertek*<sup>87</sup> cemetery. In the first, the bones exhibited fire traces, while in the second, remains of matters burnt in the lower limbs areas were identified, while in the third were found ash traces in the skull area.

Rituals connected to fire are rarely found in the Sarmatian environment of the Pannonian Plain. When elements connected to fire were identified, these mainly lay in the lower limb area or in the deceased head's area, similarly to the graves at Timișoara-*Hladik 1*. Even if the graves with such finds were looted, the surviving grave goods indicate that these were richly furnished, observation also supported by the two graves of Timișoara-*Hladik 1*. Subsequent to the investigation of the Madaras-*Halmok* cemetery<sup>88</sup>, it was established that a series of funerary ritual elements and gravepit purifying rituals were always associated with the construction of funerary chambers, animal sacrifices and silver and gold adornment objects, which indicates these were specific to certain social class of the Sarmatian world<sup>89</sup>.

It is certain that the present custom of depositing materials symbolising fire in the Sarmatian graves of the Pannonian Plain evidences the fire cult, similarly to the eastern territories inhabited by the Sarmatian. Subsequent to the analysis it was noted these rituals connected to the fire cult are found in both female and male graves from mainly the southern part of the Pannonian Plain<sup>90</sup>.

## Ritual enclosures

The 2019–2020 research in the Hladik 1 project area also led to the identification and complete or partial research of 16 flat circular ditches of which 13 with related graves in the internal space. Some of these ditched circular enclosures survived only partially, with significant parts damaged (Fig. 3/2; 9–12). Because most part of the three ditched enclosures (Cx 165, Cx 1004 and Cx 1032) lay outside the investment project perimeter, we do not know for certain if these had

<sup>79</sup> Realgar, chalk and ochre of different colours could be used also in female makeup (Cf. SMIRNOV 1964, 95–96).

<sup>80</sup> BĂRCĂ 2014a, 79, 152.

<sup>81</sup> PĂRDUCZ 1950, 139–140; KULCSÁR 1998, 27; GRUMEZA 2014a, 43, 213.

<sup>82</sup> PĂRDUCZ 1950, 141; KULCSÁR 1998, 27; GRUMEZA 2014a, 43, 217.

<sup>83</sup> See VYAZ'MITINA 1954, 222; MOSHKOVA 1963, 23; SMIRNOV 1964, 96 sqq.; MAKSIMENKO 1983, 59 sqq.; KOSTENKO 1980, 83–86; KOSTENKO 1983; KOSTENKO 1986; KOSTENKO 1993, 99–100; ARKHEOLOGIIYA SSSR 1989, 172, 179; GROSU 1990, 34–35; GROSU 1995, 150; DZYGOWSKYJ 1993, 19; MAKSIMENKO 1998, 90; BĂRCĂ 2006a, 54–55; BĂRCĂ 2006b, 41.

<sup>84</sup> For these yet also other ritual habits with the Sarmatian in the north and north-Pontic area see RAEV 1986, 44–46, 47–48, 51–52, 53; BESPALYJ 1985, 163–172; BESPALYJ 1992, 175–191; MUKHOPAD 1986, 139; MAKSIMENKO 1998, 90; BĂRCĂ 2006a, 54–55; BĂRCĂ/SYMONENKO 2009, 107–108, 215–218.

<sup>85</sup> PĂRDUCZ 1950, 141; GRUMEZA 2014a, 46, 216.

<sup>86</sup> BĂRCĂ 2014a, 151.

<sup>87</sup> PĂRDUCZ 1940, 262, 263; GRUMEZA 2014a, 43, 160, 162, 163.

<sup>88</sup> KÓHEGYI/VÖRÖS 2011.

<sup>89</sup> KÓHEGYI/VÖRÖS 2011, 362.

<sup>90</sup> KULCSÁR 1998, 27, 94, 110.

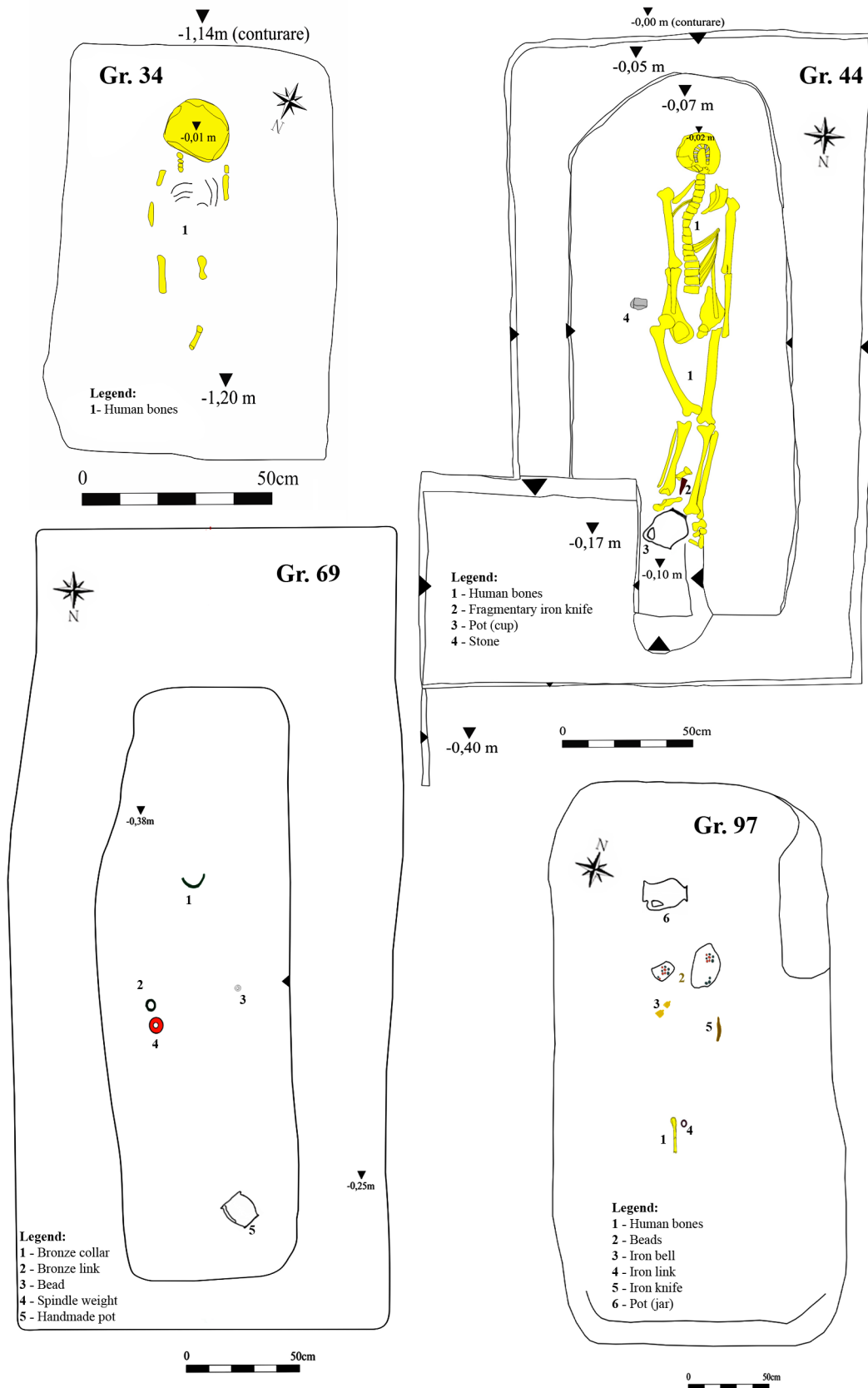


Fig. 8. Plans of graves from Timișoara-Hladik 1. 1 – Gr. 34; 2 – Gr. 44; 3 – Gr. 69; 4 – Gr. 97.

graves inside. Ditch enclosed graves in the investigated area form two groups, being surrounded by graves without ditches (Fig. 3/2).

In the internal space of nine of the investigated enclosures, there was only one funerary feature (features 25, 27, 44, 89, 133, 141, 142, 188, 200), in three cases (Cx 138, Cx 139 and Cx 158) being two each, and in one four (Cx 124) (Fig. 3/2; 9–12). All these ditched-funerary structures from Timișoara-Hladik 1 were circular in shape and provided, similarly to the rest of the Sarmatae world<sup>91</sup>, with access area to the interior. Their diameters are comprised between 7 and 11.8 mand ditch widths range between 0.7 and 1.2 m. In the case of Cx 124 its ovoid shape sized 10.8 × 7.3 m is noticeable.

In the graves from Timișoara-Hladik 1 it may be noted, similarly to many Sarmatian cemeteries of the Pannonian Plain<sup>92</sup>, that only some graves were ditch enclosed, and that in the interior, these enclosures had only a funerary feature each. Several graves or double burials inside the interior space are rare throughout the Sarmatian Iazygian milieu. In the investigated perimeter at Hladik 1 such cases were identified in the ditched enclosures Cx 124 (Fig. 11/1), 138 (Fig. 12/2) 139 (Fig. 10/3) and 158 (Fig. 12/3). Inside Cx 124 there were four graves (98, 99, 100 and 101) and in the other three, two each (Cx 138 – Gr. 93, Gr. 94; Cx 139 – Gr. 95, Gr. 96; Cx 158 – Gr. 109, Gr. 110). The main funerary features located in the central part of the ditched enclosures Cx 138, 139 and 158 are graves 93, 95, and respectively 110, the remaining being secondary burials in the interior space. In Cx 124, grave 100 is the most central located, although a series of elements evidence the possibility that Gr. 101 was the main burial, especially since the structure's shape is ovoid (Fig. 11/1). It is possible that in these cases, graves present in the same interior space of the enclosures are indicative of a closer relation between the deceased, possibly a family relation.

The research concluded that the graves inside the ditched enclosures lay at a depth somewhat greater than their structure surface, while their gravepits were much larger than of graves without ditch.

Gravepit sizes of ditch enclosed graves of Timișoara-Hladik 1 vary from one grave to another<sup>93</sup>. The smallest gravepit was recorded in the case of Gr. 27 and the largest in the case of Gr. 102<sup>94</sup>. In one case each, the gravepit area varied between under 1 m<sup>2</sup> and between 1 and 2 m<sup>2</sup>. In five cases, grave area values ranged between 2 and 3 m<sup>2</sup>, in six graves between 3 and 4 m<sup>2</sup> and in one case each, over 4 and respectively 5 m<sup>2</sup>. For the lack of bone analyses of the skeletal remains in the ditch enclosed graves of Hladik 1 it is impossible to ascertain the gender and age of the deceased buried in these graves.

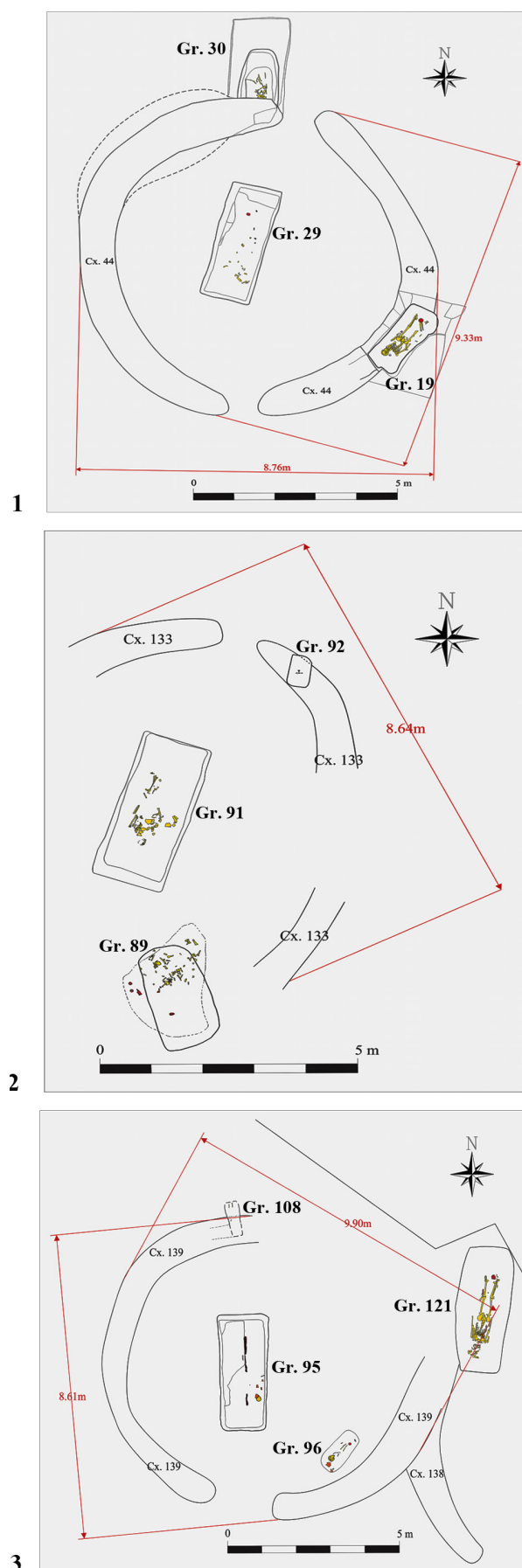
Graves with ditched enclosures of different flat shapes, with or without graves inside, discovered below singular Sarmatian barrows or within barrow or flat cemeteries (according to some scholars) began to be known in certain territories inhabited by the Sarmatian (mainly in the Prut-Dniester interflow, the Lower and Middle Don region and the Pannonian Plain) only more than six decades ago.

<sup>91</sup> See BĂRCĂ 2015, 103–118; BĂRCĂ 2020, 334–345.

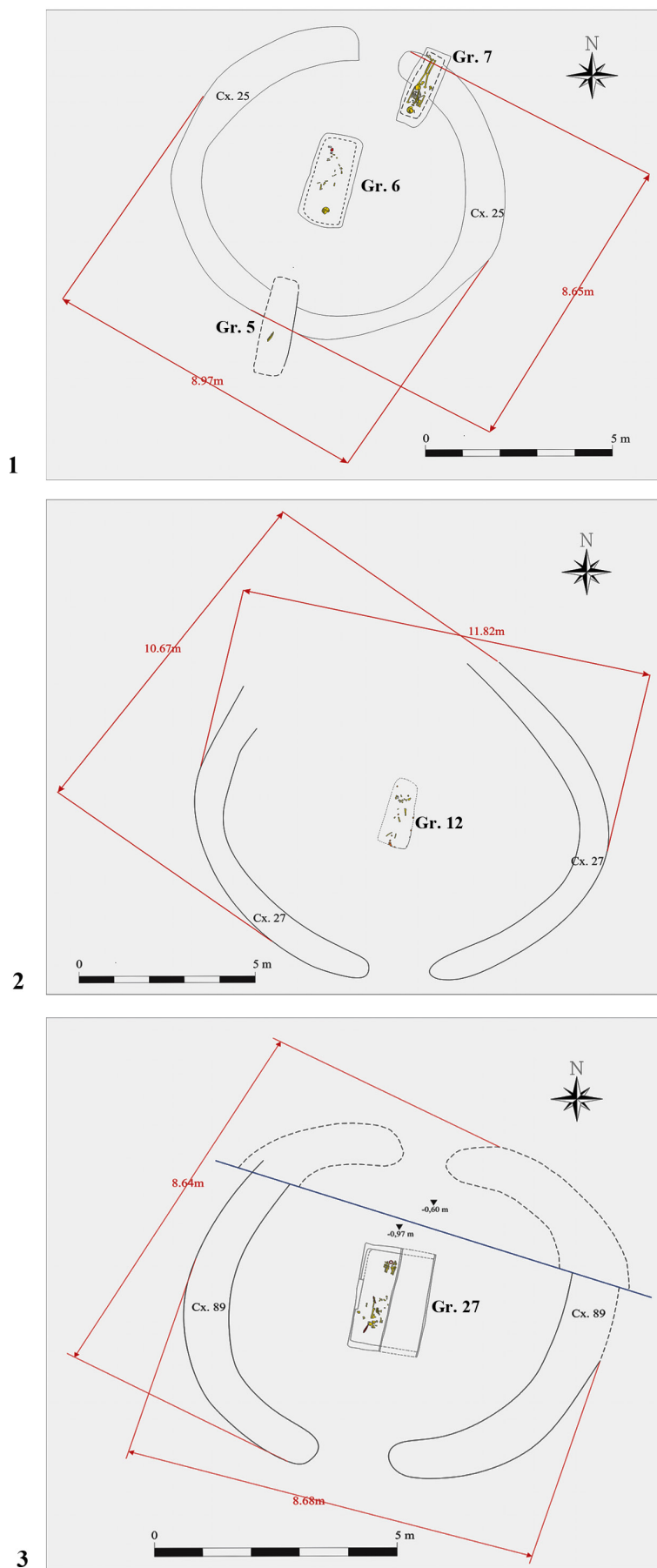
<sup>92</sup> For a series of examples with references see BĂRCĂ 2020, 344, notes 256–257.

<sup>93</sup> Ditched enclosed graves of Timișoara-Hladik 1 have the following sizes: Gr. 6 – 2.75 × 1.25 m; Gr. 12 – 2.34 × 1.25 m; Gr. 27 – 2.38 × 0.70 m; Gr. 29 – 3.00 × 1.15 m; Gr. 91 – 2.95 × 1.25 m; Gr. 95 – 3.05 × 1.23 m; Gr. 96 – 1.25 × 0.60 m; Gr. 98 – 2.36 × 1.00 m; Gr. 99 – 2.20 × 1.00 m; Gr. 100 – 2.55 × 1.00 m; Gr. 101 – 2.30 × 1.25 m; Gr. 102 – 3.31 × 1.71 m; Gr. 103 – 2.90 × 1.20 m; Gr. 110 – 3.05 × 1.35 m; Gr. 111 – 2.90 × 1.10 m. In the case of Gr. 109 the gravepit could not be delimited.

<sup>94</sup> The area of the gravepits enclosed by a ditch of Timișoara-Hladik 1 has the following values: Gr. 6 – 2.43 m<sup>2</sup>; Gr. 12 – 2.92 m<sup>2</sup>; Gr. 27 – 1.66 m<sup>2</sup>; Gr. 29 – 3.45 m<sup>2</sup>; Gr. 91 – 3.68 m<sup>2</sup>; Gr. 95 – 3.75 m<sup>2</sup>; Gr. 96 – 0.75 m<sup>2</sup>; Gr. 98 – 3.36 m<sup>2</sup>; Gr. 99 – 2.2 m<sup>2</sup>; Gr. 100 – 2.55 m<sup>2</sup>; Gr. 101 – 2.87 m<sup>2</sup>; Gr. 102 – 5.66 m<sup>2</sup>; Gr. 103 – 3.48 m<sup>2</sup>; Gr. 110 – 4.11 m<sup>2</sup>; Gr. 111 – 3.19 m<sup>2</sup>.



**Fig. 9.** Burial structures with circular ditch and graves in the interior from the Timișoara-Hladik 1 cemetery.



**Fig. 10.** Burial structures with circular ditch and graves in the interior from the *Timișoara-Hladik 1* cemetery.

Until present, in the Sarmatian milieu were identified flat circular, square, rectangular or trapezoid ditch enclosures. Most often these had graves inside, yet there are cases when these are missing<sup>95</sup>.

The 16 circular ditch enclosures in this cemetery join the other few discovered in the last decade in the south-western territories of Romania subsequent to rescue archaeological excavations performed following the construction of the Nădlac-Arad Motorway, the Nădlac-Pecica section, sites 1M<sup>96</sup>, 3M Nord and 4M<sup>97</sup>. It is worth mentioning that the flat circular ditches from site 4M lack graves in their interior space. Recently, such circular ditched funerary enclosures with graves inside, even though in small numbers, were discovered subsequent to the rescue archaeological excavations conducted in Bihor county territory, in Sarmatian cemeteries from the site nearby Borș commune, conventionally termed Site V<sup>98</sup> and the site within the range of Biharea commune, following the 2023 excavations<sup>99</sup>.

Other such circular ditched funerary enclosures, with or without graves inside, from the Western Plain of Romania, from north (Crișana) and south (Banat) the Lower Mureș are not currently known. This is due mainly to the lack of large scale archaeological investigations like those of the last three decades conducted in Hungary, where their number is very high<sup>100</sup>. In fact, any attempt to sketch a diffusion territory of this funerary custom in the Pannonian Plain, like that of scholars C. Balogh and M. Heipl<sup>101</sup>, is we believe speculative. Confirmation in this respect are the more recent investigations that led to the find of a series of ditch enclosed graves in territories located outside the area established by the two mentioned authors, like for instance in north-eastern Hungary at Onga<sup>102</sup> and Bükkábrány-Bánya, site XI/A<sup>103</sup>, Kótaj-Verba-tanya and Nyíregyháza-Felsősima<sup>104</sup>, to

<sup>95</sup> See BĂRCĂ 2015; BĂRCĂ 2020 with complete bibliography.

<sup>96</sup> BĂRCĂ/COCIȘ 2013, 31–50; BĂRCĂ/GRUMEZA 2014, 160–161, 168–171, Pl. IV–V; BĂRCĂ 2020, 342–343, Fig. 20.

<sup>97</sup> GRUMEZA/URSUȚIU 2016a, 195–213; GRUMEZA/URSUȚIU 2016b, 283–232; BĂRCĂ 2020, 343, Fig. 21.

<sup>98</sup> The site, with an area of 2.58 ha, excavated in 2022, lay south the A3 motorway route, approximately 1 km east the centre of Borș commune, investigated following the construction of the connection road Girația Sântandrei A3 Motorway, between kilometres 11+700 și 12+100. Amicable information Dr. Adrian Ursuțiu – site supervisor, whom we thank this way for reporting to us this find.

<sup>99</sup> Site area is 0.81 ha, excavated in 2023, lies between Biharia and Satu Nou, yet within the administrative boundary of Biharea commune, in the 20 m protection area from DN 19 Oradea-Satu Mare located westwards, on the east terrace of Cetății street, respectively A3 motorway, section Biharia-Chiribiș, to the south. The area excavated in 2023 following the implementation of the investment project Industrial Park Nervia is part of the site identified in 2012, under code RAN: 27445.04 (Archaeological site Cetății street – Transylvania motorway, section 3 C, km. 59+450–59+700). Amicable information Dr. Adrian Ursuțiu – site supervisor.

<sup>100</sup> BĂRCĂ 2020, 343.

<sup>101</sup> BALOGH/HEIPL 2010, 153–154, 158.

<sup>102</sup> TÓTH/SZABÓ/HOMOKI 2015.

<sup>103</sup> TUTKOVICS 2015, 225–226, 228, 236–237, 259, Fig. 3–5.

<sup>104</sup> GRUMEZA/URSUȚIU 2016a, 198; ISTVÁNOVITS/KULCSÁR 2017, 277, Fig. 184.

which one may add those from south-eastern Hungary at *Óföldsék-Ürmös II, Site 10*<sup>105</sup> or the more recent in the Western Plain of Romania in sites 1M, 3M Nord and 4M at Nădlac (Arad county) and *Timișoara-Hladik 1* (Timiș county)<sup>106</sup>.

Most ditched enclosures in the Sarmatian Iazygian environment are flat circular, though oval, square, rectangular bur also even hexagonal or octagonal<sup>107</sup> may be found. Access to their interior is most often located, similarly to those in the north and north-west of the Black Sea<sup>108</sup>, in the southern, south-eastern and south-western parts<sup>109</sup>. There are cases when there existed even two or three access areas inside where the grave lay<sup>110</sup>. The span of these access areas is mainly comprised between 0.6 and 1.1 m, yet there are also cases when sizes are slightly larger. The circular ditch diameter varies between 5 and 13 m<sup>111</sup>, yet there are cases when it is larger, like in the cemetery at Pócspetri<sup>112</sup>. There are also cases when ditches are not provided with access area inside, these being discontinuous.

Similarly to the eastern Sarmatian environment in that of the Pannonian Plain as well it may be noted that only some graves were ditch enclosed and that inside these, there mainly lay just one funerary feature. For instance, in the Madaras-*Halmok* cemetery, where 666 graves were investigated, out of which 151 barrow graves, 102 barrows were enclosed by a circular or square ditch<sup>113</sup>. In the Pócspetri cemetery, 16 of the 19 graves were surrounded by a circular ditch<sup>114</sup>, in that of Subotica-*Verušić* 17 out of 67<sup>115</sup>, at *Orosházi-tanyá, Máv-Sandgrube* only 3 of 23<sup>116</sup> and at *Makó-Járandórol* 32 of 157<sup>117</sup>. In site BP 002-003, investigated subsequent to the construction works of the Budapest bypass (M0), only 28 out of the 79 investigated graves are ditch enclosed<sup>118</sup>, while in that of Kiskundorozsma-*Subasa* (site 26/78) only 16 out of the 60 graves<sup>119</sup>. At *Sanádpalota-Országátár* (M43 motorway, site 56) out of 53 graves only 11 were ditch enclosed<sup>120</sup>, in the *Apátfalva-Nagyút-dűlő* site (M43) motorway only 6 out of the 47 graves<sup>121</sup>, while out of the 27 investigated graves at *Bükkábrány-Bánya*, site XI/A only five were ditch enclosed, of which three were flat square<sup>122</sup>.

<sup>105</sup> GULYÁS 2014.

<sup>106</sup> Currently, the southernmost point in the Pannonian Plain where several circular ditch-enclosed graves were discovered is at Subotica-*Verušić* (SZEKERES/SZEKERES 1996; SZEKERES 1998).

<sup>107</sup> For finds on the territory of Hungary with complete bibliography see BÂRCĂ 2020.

<sup>108</sup> See in this respect BÂRCĂ 2015; BÂRCĂ 2020.

<sup>109</sup> KULCSÁR 1998, Fig. 18–24, 26a, 26b, 27, 31–32.

<sup>110</sup> KULCSÁR 1998, Fig. 24; VÁRADÍ 1997, 119.

<sup>111</sup> KULCHAR 1997, 127; KULCSÁR 1998, 35–36; WALTER 2020, 15.

<sup>112</sup> HULLÁM 2012.

<sup>113</sup> KÓHEGYI/VÖRÖS 2011, 235, 239, 361, 362, Map 1.

<sup>114</sup> HULLÁM 2012, 363–365, 380, Pl. 3.

<sup>115</sup> SZEKERES 1998, 107–147.

<sup>116</sup> NAGY 2005, Fig. 3.

<sup>117</sup> HERENDI/SÓSKUTI 2016, 31–32, 36, Fig. 5.

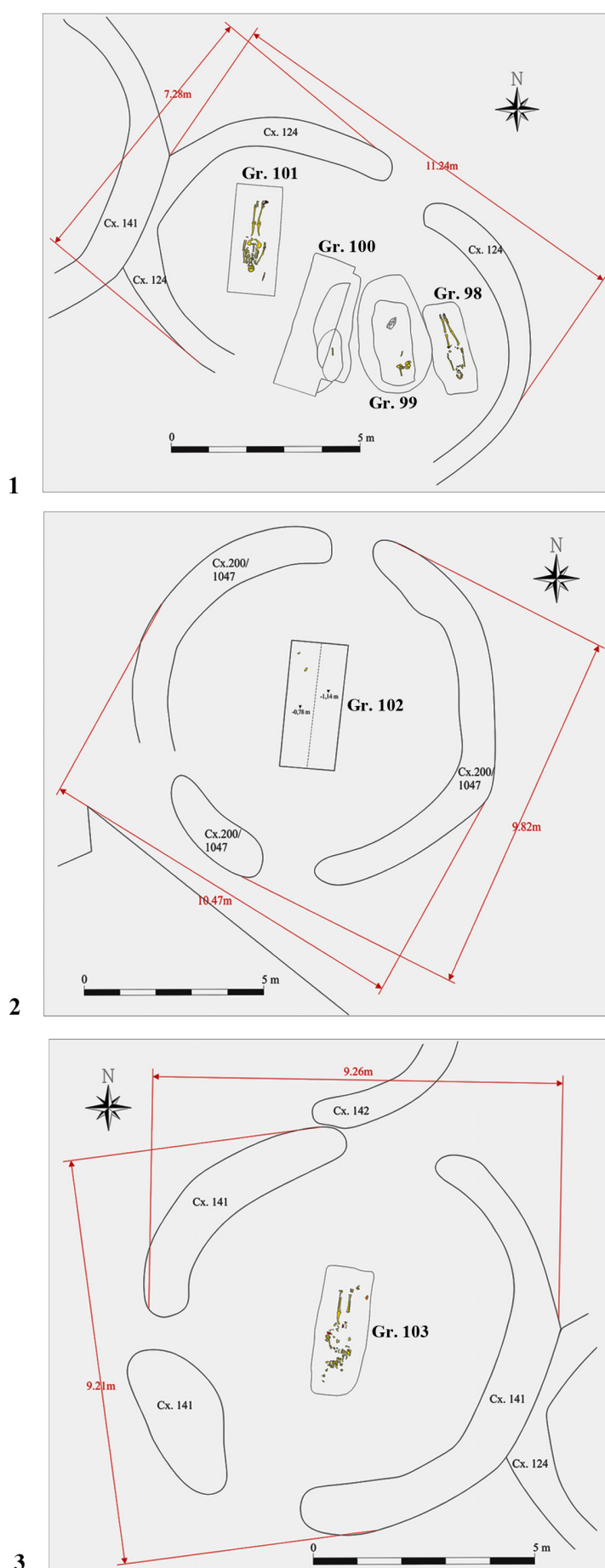
<sup>118</sup> KOROM/SZILAS/TEREI 2010, 129–130, Fig. 1.

<sup>119</sup> BOZSIK 2003, 97, 106, Fig. 1.

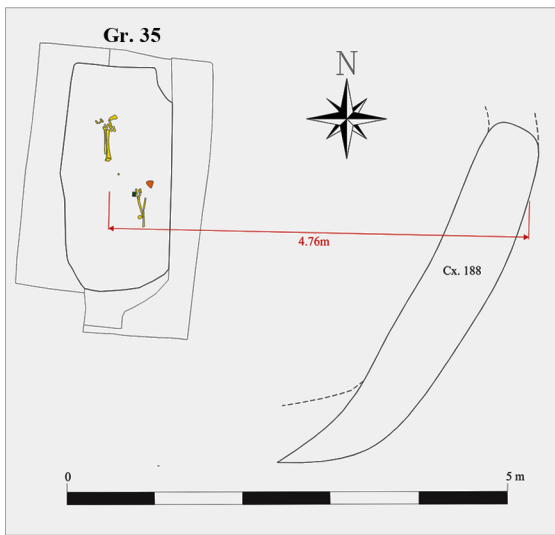
<sup>120</sup> WALTER 2020, 14, Fig. 3.

<sup>121</sup> KUJÁNI 2014, 106, Pl. 4/3.

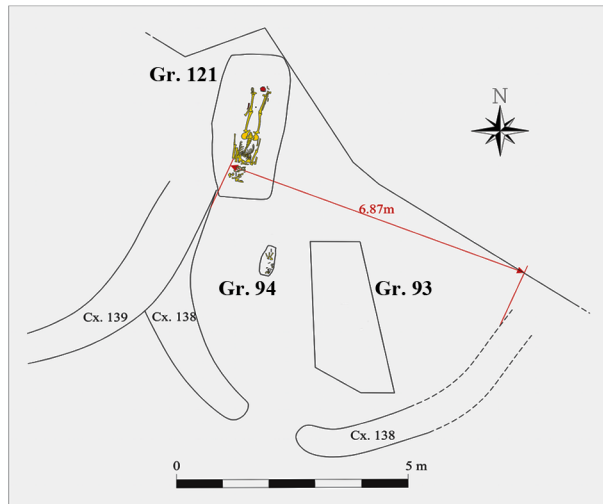
<sup>122</sup> TUTKOVICS 2015, 225–226, 228, 236, 241, Fig. 3–5.



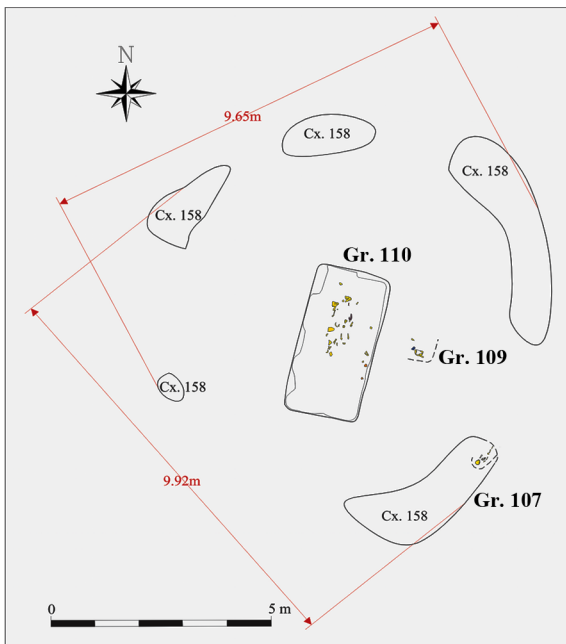
**Fig. 11.** Burial structures with circular ditch and graves in the interior from the *Timișoara-Hladik 1* cemetery.



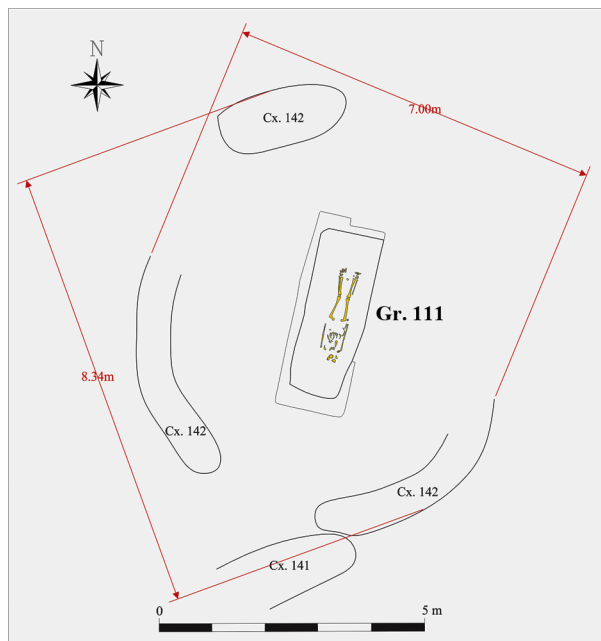
1



2



3



4

**Fig. 12.** Burial structures with circular ditch and graves in the interior from the Timișoara-Hlădik 1 cemetery.

Occasionally, in some Sarmatian cemeteries from the mentioned geographical area, there are, similarly to Timișoara-*Hladik 1* (Fig. 10/3; 11/1;12/2–3), cases when inside there were two and rarely several graves or double graves<sup>123</sup>.

Although in the Pannonian Plain numerous Sarmatian cemeteries have been investigated to date, it may be noted that most often there was no rule in the layout of the ditched enclosed graves. In several cemeteries, it may be noted that ditched graves group at the centre of the cemetery or form compact groups in a certain part of the cemetery. In this respect, we mention site BP 002-003, investigated on the M0 motorway route (bypass of Budapest), where the 20 rectangular ditched enclosures lay in the west and north-west part of the cemetery, while six of the circular ditched enclosures grouped in the east and south-east<sup>124</sup>. In both cases, it was noted that around these graves lay graves without a ditch, case also found in several cemeteries.

In some cemeteries (Törökszentmiklós-Surján-*Újtelep*<sup>125</sup> and Endrőd-*Szujókereszt*<sup>126</sup>) some of the graves were set in a row, being located at a somewhat distance from both ditch enclosed graves and the graves grouped around the first<sup>127</sup>. In the Lajosmizse-*Kónya major* cemetery<sup>128</sup> it was noted that female and male graves are located in separate parts of the cemetery<sup>129</sup>, while in that of Sándorfalva-*Eperjer*<sup>130</sup>, male and young male graves occurred in the central part of the small cemetery, while females and lower rank community members were buried around these<sup>131</sup>. There are cases when ditched enclosed graves were set on rows (for instance Sándorfalva-*Eperjes*<sup>132</sup>) or separately from the rest of the funerary features (for instance Tiszakürt-*Homokos*<sup>133</sup>). Separate location is also noted in site 3M Nord at Nădlac (Arad county, Romania) where the two graves enclosed by a circular ditch lay by the northern and southern limit of the Sarmatian cemetery, while the eight flat circular ditches lay in site 4M eastern limit<sup>134</sup>.

Occasionally, in certain cemeteries, similarly to the north and north-west of the Black Sea<sup>135</sup>, there were discovered both flat circular ditch enclosures as well as square and rectangular<sup>136</sup>. Most flat square ditched funerary enclosures on the current territory of Hungary have graves in their

interior space, yet there were cases when these were missing (Madaras-*Halmok*<sup>137</sup>, Sándorfalva-*Eperjer*<sup>138</sup>).

In the ditches of funerary enclosures (with and without graves in the interior) from the Sarmatian environment on the current territory of Hungary, similarly to those in the north and north-west Pontic area<sup>139</sup>, there were found animal bones (cattle, dog, horse), rarely animal skeletons or remains of it, skulls and their fragments, yet also potshards or broken vessels<sup>140</sup>. Over the course of time, there were also recorded more particular cases like at Hajdúszoboszló-*Bocskai TSz*, where in the ditch enclosing the grave the skeletal remains of a newborn were found<sup>141</sup>. A male adult was found buried in the ditch enclosing Gr. 18 at Hajdúdorog-*Csárdadomb*<sup>142</sup>. Deceased individuals were also discovered in the ditches of the circular funerary enclosures from the Budapest cemetery, XVII. Rákoscsaba, Péceliúti<sup>143</sup>. Traces of possible funeral banquets were archaeologically identified in the ditches of the recently discovered funerary enclosures from the Western Plain of Romania, in the sites at Nădlac (Arad county). Thus, in site 1 M, the circular ditches enclosing graves 1 and 2 contained pottery fragments<sup>144</sup>, while in sites 3M Nord and 4M pottery fragments and animal bones (among which also horse skulls)<sup>145</sup>. Animal bones and atypical pottery fragments were found in the circular ditches enclosing the graves of Timișoara-*Hladik 1* as well.

The gravepits of ditched enclosures in the Sarmatian Iazygian environment of the Pannonian Plain are dominantly rectangular, those rectangular with side steps along the long sides being rare, while those provided with niches or catacombs are missing<sup>146</sup>.

In the same space, it was noted that gravepits are much larger than the majority of non-ditch enclosed graves and that the graves inside the ditched enclosures lay at a larger depth than the enclosure surface<sup>147</sup>, which is further confirmed by the finds of the last two decades, including from the Western Plain of Romania<sup>148</sup>. Often, in these gravepits were discovered wood structures (box type coffins made of planks/beams/frames)<sup>149</sup>. The great majority of the graves inside these ditched enclosures from the Sarmatian environment of the Pannonian Plain were looted and desecrated from

<sup>123</sup> For a series of cases see among the finds at Sándorfalva-*Eperjes* (VÖRÖS 1985, 136–140, Fig. 2; VÖRÖS 2005, Fig. 7), Kiskundorozsma-*Nagyszék II* (SZALONTAI/TÓTH 2003, 74), Balástya, Sospál-halom (BALOGH/HEIPL 2010, 150–153), site BP 002-003 investigated on the Budapest bypass route, M0 motorway (KOROM//SZILAS/TEREI 2010, 138, Fig. 10), Sanádpalota-*Országhatár* (M43 motorway, site 56) (WALTER 2020, 14, Fig. 3) or Apátfalva-*Nagyút-dűlő* (M43 motorway) (KUJÁNI 2014, 106, Pl. 4/3).

<sup>124</sup> For more details related to the ditched enclosures in this site see Korom/SZILAS/TEREI 2010, 130–132.

<sup>125</sup> VADAY 1985, Fig. 2; KULCSÁR 1998, 82–83, Fig. 27.

<sup>126</sup> VADAY/SZÖKE 1983, Fig. 26; KULCSÁR 1998, Fig. 18.

<sup>127</sup> ISTVÁNOVITS/KULCSÁR 2003, 273.

<sup>128</sup> KULCSÁR 1998, 79, 129–132, Fig. 21a–21b.

<sup>129</sup> ISTVÁNOVITS/KULCSÁR 2003, 273.

<sup>130</sup> VÖRÖS 1985, 129–172; KULCSÁR 1998, 80, Fig. 23.

<sup>131</sup> ISTVÁNOVITS/KULCSÁR 2003, 273.

<sup>132</sup> VÖRÖS 1985, Fig. 2; KULCSÁR 1998, Fig. 23.

<sup>133</sup> VADAY/KISZELY 1986, 109.

<sup>134</sup> GRUMEZA/URSUȚIU 2016a, Pl. II, IV.

<sup>135</sup> See BĂRCĂ 2015; BĂRCĂ 2020.

<sup>136</sup> An example in this respect is offered by the cemeteries of Endrőd-*Szujókereszt* (VADAY/SZÖKE 1983, 103, Fig. 26; KULCSÁR 1998, Fig. 18), Makó, Járándoról (HERENDI/SÓSKUTI 2016, 32, 36, Fig. 6/2), Bükkábrány-*Bánya*, site XI/A (TUTKOVICS 2015, 225–226, 228, 236–237, 241,

259, Fig. 3–5) or that in site BP 002-003, investigated on the M0 motorway route (Budapest bypass) (KOROM/SZILAS/TEREI 2010, 130–131, Fig. 1).

<sup>137</sup> KÖHEGYI 1971, 211–212; KÖHEGYI/VÖRÖS 2011, Map 1; KULCSÁR 1998, 39.

<sup>138</sup> VÖRÖS 1981, 26; KULCSÁR 1998, 39.

<sup>139</sup> See for the finds in this area BĂRCĂ 2020.

<sup>140</sup> KULCSÁR 1990, 32; KULCSÁR 1998, 39, 72–73, 100, 116; KULCHAR 1997, 129; FODOR 1997, 110, 113; KÜRTI 2005, 92; NAGY 2005, 18; NAGY 2018, 102, 106–107, Tab. 23; KOROM/SZILAS/TEREI 2010, 132, FIG. 2; GULYÁS 2011, 140; GULYÁS 2014, 40; HULLÁM 2012, 364, 394, tab. 4; KUJÁNI 2014, 105; TUTKOVICS 2015, 228, 244; WALTER 2020, p. 16–17, 28.

<sup>141</sup> KULCHAR 1997, 129; KULCSÁR 1998, 39.

<sup>142</sup> FODOR 1997, 110, 113.

<sup>143</sup> NAGY 2018, 102, 106–107, Tab. 23.

<sup>144</sup> BĂRCĂ/COCIȘ 2013, 32, 34, Fig. 2–3; BĂRCĂ 2020, 342–343.

<sup>145</sup> GRUMEZA/URSUȚIU 2016a, 195–197, 200.

<sup>146</sup> Rectangular gravepits with side steps along the long sides, with niche, as well as catacombs are frequent in the ditched funerary enclosures in the Sarmatian world of the Pontic steppes (see BĂRCĂ 2020).

<sup>147</sup> KULCHAR 1997, 127–128.

<sup>148</sup> BĂRCĂ/COCIȘ 2013; BĂRCĂ 2020, 342–343; GRUMEZA/URSUȚIU 2016; GRUMEZA/URSUȚIU 2016a.

<sup>149</sup> See BĂRCĂ 2020.

Antiquity, hence the lack of grave goods often hindered their accurate dating<sup>150</sup>. The looting evidences they were richly furnished, and together with other aspects (enclosing ditch, wooden funerary structures, funeral banquets and other ritual actions) evidence that the graves inside these ditched enclosures contained individuals buried from amongst the wealthy of the Sarmatian society<sup>151</sup>. Nevertheless, it must be mentioned that in the Sarmatian milieu of the Pannonian Plain, similarly to that in the north and north-west of the Black Sea, there are cases without notable differences between the graves surrounded by a ditch and some of the graves unmarked by a ditch from the same cemetery. The Timișoara-*Hladik 1* cemetery makes no exception.

In connection with the custom of surrounding the graves with a ditch, it was argued it would have reached the Pannonian Plain subsequent to the displacement in this space of a group of Sarmatian from the Budjak during the 2nd century AD, as well as that it was used until the disappearance of the Sarmatian from the historical arena of the Carpathian Basin<sup>152</sup>. In addition, it was argued that the custom of enclosing the graves with circular or rectangular ditches would have emerged simultaneously in the Budjak regions<sup>153</sup> and the Pannonian Plain in the last third of the 2nd century AD<sup>154</sup>. Given the archaeological and historical realities we believe this ritual custom, together with other new elements and funerary features<sup>155</sup>, was carried to the Pannonian Plain, as mentioned with other occasions as well<sup>156</sup>, by the Sarmatian arriving in this space from the north-west of the Black Sea in the Marcomannic Wars's aftermath. This is supported by numerous grave finds surrounded by ditch in the Pannonian Plain whose dating is no earlier than the late 2nd century AD. The statement that ditched funerary enclosures emerged in Budjak and Alföld simultaneously cannot be supported given that in the Prut-Dniester interflow, different flat shapes of ditches, with or without graves inside, emerge, similarly to other areas in the north-Pontic region as early as the Middle Sarmatian period (1st century – first half of the 2nd century AD)<sup>157</sup>. The largest part of the finds from the mentioned territories date mainly to the second half of the 2nd century – first half of the 3rd century AD (first phase of the Late Sarmatian period), yet

are also found in the second half of the 3rd century – early/first half of the 4th century AD<sup>158</sup>.

It is certain that in the current state of research it may be argued that in the Sarmatian environment of the Pannonian Plain, territory where the Timișoara-*Hladik 1* cemetery also lies, these ditched funerary enclosures were carried by immigrants arriving from the north-west Pontic steppes by late 2nd century AD (just after the Marcomannic wars) and would be present in this area until the disappearance of the Sarmatian from the Carpathian Basin. In their great majority, ditches are circular, yet there are also oval, square and even with six or eight corners. The flat square funerary enclosures in the Pannonian Plain are different from those in the north and north-west Pontic area as the great majority contain graves inside.

Given all facts, it was concluded that the ditched enclosures with different flat shapes, with or without graves inside, fulfilled the role of a stage for ritual actions connected to the funeral banquet and other elements of the cult of the dead<sup>159</sup>. In those with graves inside, ditches most likely played the role to disconnect the deceased from the external world, while the area of these ditched funerary enclosures was the stage for ritual actions occurring after the funerary of the deceased<sup>160</sup>. These ditches likely also had the role to defend the ritual actions performed inside by the influence of evil spirits<sup>161</sup>.

The genesis of these funerary enclosure types was debated over time by several scholars, and it was not even today entirely clarified<sup>162</sup>. Nevertheless, we wish to mention that the eastern origin of the ditched enclosures (with or without graves inside) for the Sarmatian world is the most plausible.

In the north and north-western Pontic territory, ditched enclosures of any type are closely connected to the barrows, although their form is independent of the barrow mound<sup>163</sup>. In above mentioned territory, it may be argued that such graves emerge mainly in the context of the barrow funerary ritual, although there are cases when these are also present in cemeteries deemed flat<sup>164</sup>.

### Orientation and position of the deceased in the graves

Similarly to other nomad populations, inhumation was also specific as funerary rite to the Sarmatians, and as key feature, the orientation of the deceased within the graves. The latter is representative chronologically for certain phases of the Sarmatian culture. Orientation of the deceased in the grave is defining for certain regions inhabited by the

<sup>150</sup> Sometimes, the chronological framing of these graves is established with approximation, yet also depending on the chronological framing of non-looted graves, yet which were set around the ditched funerary enclosures.

<sup>151</sup> BĂRCĂ 2020, 341. It is believed that graves in the spaces surrounded by ditch belonged to *pater familias* of some families or to high ranking families in the group hierarchy (KULCHAR 1997, 128; ISTVÁNOVITS/KULCSÁR 2003, 273).

<sup>152</sup> KULCHAR 1997, 131; KULCSÁR 1998, 95; ISTVÁNOVITS/KULCSÁR, 1993, 29.

<sup>153</sup> Territory from today's Ukraine located south the Republic of Moldova, between the border of this state, the Danube and the Black Sea.

<sup>154</sup> DZIGOVSKIJ 2013, 622.

<sup>155</sup> See in this respect KULCSÁR 1998, 95, 96, 102. Amongst counted: barrow constructions, horse depositions inside, ditch marking of graves, gravepit purifying with white materials (chalk or limestone), present fire traces inside the graves, coffin use etc.

<sup>156</sup> BĂRCĂ/COCIȘ 2013, 44; BĂRCĂ 2015, 115; BĂRCĂ 2015a, 51; BĂRCĂ 2020, 346.

<sup>157</sup> For the emergence of the different flat shape ditches with or without graves inside, in some barrow cemeteries and beneath some singular Sarmatian barrows from the north-Pontic area see BĂRCĂ 2015; BĂRCĂ 2015a, 50 sqq.; BĂRCĂ 2020.

<sup>158</sup> For the analysis and dating of the finds in the north and north-west of the Black Sea see BĂRCĂ 2020 with complete bibliography

<sup>159</sup> KULCHAR 1997, 131; KULCSÁR 1998, 39, 96, 111; BĂRCĂ 2015, 116; BĂRCĂ 2020, 348.

<sup>160</sup> KULCHAR 1997, 129–131; KULCSÁR 1998, 36–40, 96; BĂRCĂ/COCIȘ 2013, 44; BĂRCĂ 2015, 115.

<sup>161</sup> BĂRCĂ 2015, 115; BĂRCĂ/COCIȘ 2013, 44; BĂRCĂ 2020.

<sup>162</sup> For all views and theories expressed in this respect see BĂRCĂ 2020, 346–348, with complete bibliography.

<sup>163</sup> See BĂRCĂ 2020.

<sup>164</sup> For views expressed in connection with ascribing the ditched funerary enclosures of the Pannonian Plain to barrow or flat graves funerary ritual see BĂRCĂ 2020, 343–344.

Sarmatian during a particular chronological interval, yet also for certain Sarmatian groups/tribes in the vast space they inhabited over the time. Thus, out of the 139 graves at Timișoara-*Hladik 1*, 79 had the deceased placed in the grave with head oriented towards S<sup>165</sup>, SE<sup>166</sup>, SSE<sup>167</sup>, SW<sup>168</sup> and SSW<sup>169</sup>, in one case to NNE (M 1) and WSW (Gr. 81). With the head northwards seems to have been buried, according to the skull position, the deceased in Gr. 65. Because the graves were looted in Antiquity and the bone remains were scattered throughout the gravepit, in 57 cases the orientation of the deceased could not be established, although it is very possible these had mainly the deceased placed with the head towards south.

Thus, in the graves at Timișoara-*Hladik 1* predominates the orientation of the deceased to south-north (with head towards S, SE, SV, SSE and SSW), this orientation being a peculiarity dominating in the Sarmatian environment of the Pannonian Plain throughout their inhabitancy of the area. Following the analysis of the Sarmatian funerary rite in the Carpathian Basin, it was noted that the southern orientation represents the most common tradition of the Sarmatian in the Carpathian Basin, prevailing in most part of the territories inhabited by the Sarmatian in the Pannonian Plain<sup>170</sup>. Subsequent to the analysis of the orientation in 1183 Sarmatian graves from the mentioned space, it was noted that in 65% the deceased were buried head southwards<sup>171</sup>. These graves with southern orientation come, according to the same scholar, from 68.5% of the sites with Sarmatian funerary finds<sup>172</sup>. The dominance of the southern orientation with the Sarmatian of the Pannonian Plain is confirmed by the rescue archaeological research of the last two decades conducted on the territory of Hungary, which revealed new cemeteries where the southern orientation of the deceased dominated. The southern orientation is also specific to the Sarmatian graves discovered in the plain south of the Lower Mureș<sup>173</sup>. Even in the Sarmatian cemeteries investigated during the last two decades on the territory of Banat dominate the southern oriented graves<sup>174</sup>, being found on this entire territory where are documented both cemeteries with deceased buried with head southwards in all graves, as well as cemeteries where, beside the southern orientation, emerge also graves with northern, eastern or western orientation<sup>175</sup>.

The current state of research evidences that the southern orientation was dominant in the Pannonian Plain throughout the Sarmatian inhabitancy of the space. The new Sarmatian groups arriving from the east (the north and north-west Pontic region), bearers of different traditions,

could not change this habit, which allows us to speak of this tradition as the most constant feature of the Sarmatian culture in this area.

Subsequent to the analysis of the southern diffusion in the Sarmatian environment and the archaeological realities, it was concluded that the Sarmatian Iazyges settling the Pannonian Plain once with mid 1st century AD<sup>176</sup>, are, according to the traditions which they carried, the exponents of the early Sarmatian culture, still burying their dead with the head southwards<sup>177</sup>. The dominant southern orientation in this space also evidences that this custom was partially adopted by the new Sarmatian groups entering over the time the Pannonian Plain.

Although cemeteries with only southern orientation of the deceased dominate in the Pannonian Plain, there are many cases when some cemeteries contain graves oriented to the north, east or west<sup>178</sup>. A similar case may also be noted in several cemeteries from the Banat, including those recently investigated<sup>179</sup>. In the Timișoara-*Hladik 1* cemetery, deposition with head northwards of the deceased was noted in Gr. 1 (NNE) and Gr. 65 (N), while that towards west in Gr. 81 (WSW).

In the Sarmatian environment of the Pannonian Plain are known cemeteries where graves with northern orientation dominate, but also with southern orientation, like that of Hunedoara Timișană<sup>180</sup>, eastern or western graves. In this area, cemeteries where all graves are oriented north-south are rare, these being also present in the southern part of the territory located between the Lower Mureș, Tisza and the Danube<sup>181</sup>.

Deposition of the deceased with head northwards is much rarely found in the Sarmatian cemeteries of the Pannonian Plain<sup>182</sup>, while graves with northern orientation in this geographical area stand out of the general context neither by rite nor by grave goods. Geographically, it was noted they cluster somewhat more in the Criș-Mureș-Tisza area and along the northern frontier of the Sarmatian *Barbaricum*, the earthen ramparts area<sup>183</sup>. In the latter region, northern orientation graves are part of 2nd – 3rd century AD warrior barrow graves group<sup>184</sup>. The northern orientation of the deceased is scarce in the space located south of the Lower Mureș<sup>185</sup> as well, where it emerges sometime by late 2nd – early 3rd century AD<sup>186</sup>, being mainly found in late

<sup>176</sup> See in this respect BĂRCĂ 2013; BĂRCĂ 2014a, 36–69; BĂRCĂ 2018a; BĂRCĂ 2022.

<sup>177</sup> The Sarmatian groups settling the Pannonian Plain during the second half of the 1st century AD bring with them yet also a series of elements specific to the Middle Sarmatian period.

<sup>178</sup> Cf. KULCSÁR 1998, 16–22.

<sup>179</sup> See for such finds TĂNASE/MARE 2000; GRUMEZA 2011; GRUMEZA 2014a, 49–52; BĂRCĂ 2014a, 80.

<sup>180</sup> BĂRCĂ 2014a, 80.

<sup>181</sup> Cf. GRUMEZA 2014a, 50–51.

<sup>182</sup> Cf. KULCSÁR 1998, 16–17, 18–20, 93, 109.

<sup>183</sup> KULCSÁR 1998, 16–17, 18–19, 93, 109.

<sup>184</sup> KULCSÁR 1998, 16, 93, 109.

<sup>185</sup> GRUMEZA 2014a, 50–51.

<sup>186</sup> BĂRCĂ 2014a, 82. Almost five decades ago, M. Párducz argued that graves with deceased placed with the head to the north belonged to the Roxolani, entering the Pannonian Plain in the Marcomannic Wars' aftermath, mainly in the 3rd century AD (PÁRDU CZ 1960, 74). V. Kulcsár explains the presence of the northern orientation of the deceased in the Pannonian Plain graves by constant inflow of new migrants, arriving from the east

<sup>165</sup> Graves 10, 31, 40, 41, 50, 61, 62, 64, 66, 73, 75, 101, 113, 118, 123.

<sup>166</sup> Graves 36, 39, 84.

<sup>167</sup> Graves 16, 25, 45, 52, 85, 88, 98, 117.

<sup>168</sup> Graves 7, 9, 34, 63, 96, 107, 126, 127.

<sup>169</sup> Graves 2, 6, 8, 11, 15, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 32, 35, 38, 43, 44, 47, 48, 49, 53, 55, 56, 60, 67, 69, 70, 72, 78, 91, 94, 103, 104, 106, 111, 112, 116, 119, 128, 139.

<sup>170</sup> Cf. KULCSÁR 1998, 16–18, 93, 109.

<sup>171</sup> KULCSÁR 1998, 16, 93, 109.

<sup>172</sup> KULCSÁR 1998, 16, 93, 109.

<sup>173</sup> Cf. GRUMEZA 2014a, 48–49.

<sup>174</sup> For finds on the territory of Romanian Banat see TĂNASE/MARE 2000; BEJAN/MĂRUIA/TĂNASE 2011; GRUMEZA 2011; GRUMEZA 2014a, 48–50; STAVILĂ/CRAIOVAN 2020.

<sup>175</sup> GRUMEZA 2014a, 46–53.

Sarmatian period graves, specifically in the southern part of this region<sup>187</sup>. Interesting is the fact that deposition of the deceased with head northwards is also found in the barrow graves on the territory south the Lower Mureş, like those of Vizejdia, Dudeştii Vechi, Nerău<sup>188</sup>.

The Sarmatian barrow graves of the Pannonian Plain are a distinct cultural horizon dated by late 2nd century – first half of the 3rd century AD<sup>189</sup>, characterised by burials in large barrows, yet in small cemeteries of a few graves. These small barrow cemeteries are in their great majority located by the border of the *Barbaricum*, while the deceased were buried according to nomad customs – alongside weapons, harness items, horse skulls or limb bones, occasionally with dogs<sup>190</sup>.

It is certain that the north-south orientation graves diffuse in the entire space inhabited by the Sarmatian in the Pannonian Plain, yet not as many like in areas mentioned above<sup>191</sup>. The single area from where northern orientation graves are missing is around Szeged and Mureş river mouths<sup>192</sup>, although the region contains a large cluster of Sarmatian remains.

The eastern and western orientation graves emerge sporadically in the Sarmatian funerary environment of the Pannonian Plain and diffuse in the entire mentioned territory<sup>193</sup>. They are specific mainly to the southern part of the Sarmatian *Barbaricum*, clustering in the Szeged area and certain regions of Bačka and Banat<sup>194</sup>.

Graves with eastward orientation of the deceased emerge only in cemeteries dated by late 2nd – first half of the 3rd century AD, while those with western orientation emerge in a more extended chronological interval, over the entire 2nd – 4th century AD<sup>195</sup>. E. Istvánovits and V. Kulcsár believe this eastern head placement of the deceased, limited to a restricted period of time, characterises a certain generation of newcomers by late 2nd century AD<sup>196</sup>.

The components and nature of grave furnishings in latitude oriented graves frame in the general context of the Sarmatian graves of the Pannonian Plain<sup>197</sup>.

In terms of the deceased position within the graves, their placing on the back, with extended legs and hands at the side

dominated in the entire Sarmatian world<sup>198</sup>. Nevertheless, during the entire existence period of the Sarmatian culture, there are many cases when the skeletons had uncommon positions of the upper and lower limbs, yet also cases when the deceased were found in a crouching position or even unusual<sup>199</sup>. Such cases are also found in the Sarmatian graves of the Pannonian Plain<sup>200</sup>, the Banat territory included<sup>201</sup>.

Regarding the position of the deceased in the Timișoara-*Hladik 1* graves, it must be argued that out of the 139 graves, 98 were looted from Antiquity, while the skeletons were destroyed or disturbed significantly. Where this was not case, it could be noted that the deceased were placed mainly with hands and legs stretched forward (Fig. 4–8). In a series of graves it could be though noted that some skeletons had various positions of the arms and hands, cases also found in other graves from the territory of historical Banat<sup>202</sup>.

It is certain that overall, in the Timișoara-*Hladik 1* cemetery, the position of the deceased does not differ from the rest of the space inhabited by the Sarmatian over the time.

### Grave goods: components and position within the graves<sup>203</sup>

The grave goods of the 139 investigated graves at Timișoara-*Hladik 1* include the ensemble of objects placed in the grave: body objects, domestic and household objects, ornaments and dress items, toiletries, weapons, coins, pottery etc. which in part, are common to the Sarmatian graves in the vast expanse they inhabited. The grave goods mirror in some cases the lifestyle of the deceased, existing social differences, the fact they were warlike and mainly cattle breeders. Furthermore, the grave goods offer a view on how the Sarmatian regarded Afterlife.

Similarly to the rest of the Sarmatian world, in the Timișoara-*Hladik 1* graves it could be noted that grave goods differ from female to male graves. Occasionally though, in male graves, in the entire space inhabited by the Sarmatian, are also found objects specific to female graves (ornaments), yet there are cases when female graves include items specific to males (weaponry). A series of items are common in graves, regardless the gender or age of the deceased. Amongst count pottery, some ornaments and dress items (for instance brooches, pendants), metal or glass vessels, certain household and domestic use objects (for instance knives).

Pottery was discovered in 67 graves, pots being either handmade or wheel-thrown. Handmade pots were discovered in 21<sup>204</sup> graves and those wheel-thrown in 46<sup>205</sup> among funerary features with pottery artefacts in composition. In

(KULCSÁR 1998, 93, 109). A similar point of view with that of M. Párducz was expressed by A. V. Simonenko, who believed that the emergence in the Pannonian Plain of the northern orientation beside other funerary customs (main graves beneath barrows, ditched enclosed graves) and dress elements are an indication of the entry of the Roxolani in this area, in the period after the Marcomannic Wars (SIMONENKO 1993, 63; SIMONENKO 2001, 117, 122).

<sup>187</sup> GRUMEZA 2014a, 50–51.

<sup>188</sup> GRUMEZA 2014a, 51.

<sup>189</sup> ISTVÁNOVITS/KULCSÁR 2003, 238.

<sup>190</sup> KULCSÁR 1998, 87, 102, 117; ISTVÁNOVITS/KULCSÁR 2003, 238; GRUMEZA 2014a, 51.

<sup>191</sup> Cf. KULCSÁR 1998, 17–19.

<sup>192</sup> KULCSÁR 1998, 93, 109.

<sup>193</sup> For the Sarmatian graves with western and eastern orientation of the deceased in the north-Pontic steppes see BĂRCĂ 2006a, 51–52, with complete bibliography; BĂRCĂ 2006b, 39; BĂRCĂ/SYMONENKO 2009, 45, 107, 214.

<sup>194</sup> KULCSÁR 1998, 20–22, 93–94, 109–110, Fig. 3–4.

<sup>195</sup> ISTVÁNOVITS/KULCSÁR 1993, 28; KULCSÁR 1998, 20–22, 94, 109, 117.

<sup>196</sup> ISTVÁNOVITS/KULCSÁR 1993, 28.

<sup>197</sup> KULCSÁR 1998, 94, 110. For the Banat territory see GRUMEZA 2014a, 51–52.

<sup>198</sup> This position of the deceased is dominant also in the case of the Sarmatian graves of the Pannonian Plain, including those on the territory comprised between the Mureş, Tisza and the Danube.

<sup>199</sup> For such cases found in the Sarmatian environment of the north and north-west Pontic area see BĂRCĂ 2006a, 52–53 BĂRCĂ 2006b, 39–40; BĂRCĂ/SYMONENKO 2009, 45, 107, 214–215.

<sup>200</sup> KULCSÁR 1998, 31–34, 95, 111.

<sup>201</sup> GRUMEZA 2014a, 47–48.

<sup>202</sup> GRUMEZA 2014a, 47–48.

<sup>203</sup> For more preliminary information on artefact classes in the Timișoara-*Hladik 1* cemetery see BĂRCĂ/FLORESCU 2023, 227–237, Pl. VII–XIX.

<sup>204</sup> Graves 17, 23, 24, 36, 39, 45, 50, 53, 55, 59, 61, 63, 69, 70, 80, 84, 88, 96, 104, 125, 128.

<sup>205</sup> Graves 2, 6, 10, 11, 13, 15, 16, 18, 19, 20, 21, 22, 27, 29, 31, 32, 38, 40,

only one case (Gr. 61) were found two handmade vessels, both in the northern part of the grave-pit, in the feet area. It is possible that in some of the looted graves and entirely destroyed, pottery was also placed.

Wheel-thrown vessels are represented by shallow bowls, deep bowls, cups, beakers, mugs, vessel imitating the *kantharos*, jugs etc. These are made of fine and semifine fabric and are of mainly gray fabric of different hues, yet there is a series of vessels made of yellowish-red or orange fabric. Functionally, predominate drinking vessels and vessels for the storage and pouring of liquids, followed at great distance by those designed for eating.

The fabric of the handmade vessels is coarse, the majority being fired in reduced atmosphere. Dominating colours are brownish-gray, light-brown, dark-brown almost black and rarely yellow, even then with a brown hint. Some vessels in this class, exhibit traces of secondary firing due mainly to long use on open fire. Functionally, cooking wares dominate. Regarding the pottery position in the Timișoara-*Hladik 1* graves, the majority were found in the northern part of the funerary pits, mainly in the feet area (see Fig. 4/1-4; 5/1, 3-4; 6/1-2, 4; 8/2-4), similarly to most Sarmatian graves of the Pannonian Plain<sup>206</sup>. Cases when two or several pots were placed are rare, while the presence in some graves of pots in the upper body part, near the hand or in the head area, is deemed anomaly<sup>207</sup>. In the area between the Lower Mureș, Tisza and the Danube it was noted that placed pots are in single exemplars, by the feet of the deceased, yet there are also grave groups where pots emerge in the upper body part of the deceased, mainly in the head area<sup>208</sup>.

A careful analysis of the Sarmatian funerary features in the Pannonian Plain evidences that pots were placed in both adult and infant graves, regardless of the age or social standing of the dead<sup>209</sup>. This may also be noted in the funerary features at Timișoara-*Hladik 1*.

Household and domestic objects are represented by spindle weights and iron knives. The first were discovered in 17 graves<sup>210</sup>, while intact or fragmentary knives in 27 cases<sup>211</sup>. Spindle weights, discovered mainly midway the graves, in the pelvis area, are biconical in shape and truncated cone, being modelled of clay and fired in oxidising or reduced atmosphere. In looted and disturbed graves, spindle weights were found on the entire area of the grave-pit.

Toiletries, a peculiarity specific to female grave goods in the Sarmatian milieu, are not many in the Timișoara-*Hladik 1* cemetery. These stand out by a fragmentary mirror, disk shaped, provided with attached handle (Gr. 61) and two bronze pyxides (Gr. 60 and Gr. 24). The pyxis in Gr. 24 was found near the left hand bones, while that in Gr. 60 in secondary location, in the northern part of the grave-pit, near the shank of the left leg, beside other artefact classes. The

mirror in Gr. 61 was found in the northern part of the grave-pit, at a small distance from the feet, near the knife and the second pot.

Ornaments and dress items are by far the most numerous artefact category<sup>212</sup>. These were found, except the looted and entirely destroyed graves, in most graves where still survived some of the grave goods, being represented by collars, bracelets, earrings, loops, buckles and belt fittings, pendants, bells, brooches and beads.

It may be noted that some classes are varied typologically (beads, brooches), some of these being generally diffused in the Sarmatian world of the Pannonian Plain during the 2nd – 3rd/4th century AD. Nevertheless, the analysed graves also contain ornament and dress items classes that are not of high typological variety or were not generally diffused in the Sarmatian environment. Regarding the ornaments and dress items, it must be mentioned that most were imports from adjacent cultural areas, mainly from Roman and Germanic milieus.

In the Timișoara-*Hladik 1* cemetery among ornament and dress items, most numerous are beads, present in 67 of the graves, in four being discovered only a few small fragments indicating they were present. The total number of beads surviving intact is of ca. 14.000 to which add other few thousand fragments. In three of the graves the number of beads is of more than 1000 pieces, plus numerous fragments, while in other 16 a number of a few hundred beads in each grave. Typologically, there are ten types of monochrome glass (with other tens of subvariants), five polychrome glass bead types (also with varied subvariants), to which adds a significant number of amber, carnelian, coral, limestone, chalcedony and agate beads. Beads are followed by brooches discovered intact or fragmentary in 39 graves<sup>213</sup>. In six of these graves are present two exemplars each (Gr. 11, Gr. 20, Gr. 62, Gr. 95, Gr. 104 and Gr. 129). Chronologically, the brooches belong to distinct development phases, which correspond to Roman imperial periods. Bracelets, slightly more numerous, come from among the grave goods of 13 graves<sup>214</sup>, in five (Gr. 24, Gr. 30, Gr. 36, Gr. 101 and Gr. 129), these being represented by two specimens each. Buckles, belt ends and fittings, not very numerous either, come from graves 13, 22, 35, 36, 40, 67, 103, 113, 132 and 139, while collars made of silver and bronze were discovered in seven cases (graves 16, 21, 30, 69, 83, 90 and 129). In only five graves (Gr. 19, Gr. 24, Gr. 89, Gr. 113 and Gr. 129) were discovered earrings, of which stand out exemplars with an end bent in the form of a hook and the other bent in the form of a loop wrapped on the body. The hoops, slightly more numerous are represented by simple items, some with loose ends, slightly distanced (graves 46, 47, 62, 69, 76, 82 and 97) or exemplars with overlapping wound ends (graves 30, 46, 76, 82, 87 and 104), while bells by a bronze exemplar (Gr. 60) and three in iron, one in Gr. 129 and two in Gr. 97. Worth mention is the presence in

41, 42, 43, 47, 49, 52, 56, 60, 62, 67, 72, 73, 75, 78, 82, 87, 97, 98, 101, 103, 112, 119, 121, 122, 123, 129, 132, 139.

<sup>206</sup> KULCSÁR 1998, 66–70, 99, 115.

<sup>207</sup> KULCSÁR 1998, 66–70, 99, 115.

<sup>208</sup> GRUMEZA 2014a, 128.

<sup>209</sup> KULCSÁR 1998, 67–70.

<sup>210</sup> Graves 6, 8, 19, 21, 24, 26, 39, 47, 55, 60, 63, 69, 70, 73, 82, 89, 104.

<sup>211</sup> Graves 18, 22, 36, 40, 44, 49, 52, 56, 60, 61, 62, 64, 67, 73, 75, 76, 87, 89, 93, 97, 101, 106, 110, 121, 128, 134, 139. Out of the knives stands out the exemplar in Gr. 139, 22.5 cm long.

<sup>212</sup> For a series of parallels of these artefact categories in the area between the Lower Mureș, Tisza and the Danube see GRUMEZA 2014a, 55–104; BĂRCĂ 2014a, 94–132.

<sup>213</sup> Graves 11, 16, 18, 20, 21, 22, 23, 24, 30, 36, 38, 39, 40, 45, 47, 49, 53, 55, 56, 62, 63, 70, 73, 75, 79, 83, 95, 98, 101, 103, 104, 116, 118, 121, 122, 123, 125, 129, 139.

<sup>214</sup> Graves 21, 24, 29, 30, 36, 53, 67, 88, 94, 101, 125, 126 and 129.

graves Gr. 18 and Gr. 60 of *Cypraeate* pendants<sup>215</sup>. These are provided each with a bronze link with overlapping ends wound on one of the extremities, evidencing these were worn as pendants in a string around the neck beside other pendants, beads or amulets. Out of the discovered pendants stands out the lunula shaped pendant from Gr. 104 and that in silver, in the shape of a volute from Gr. 89.

The beads' find location in the graves at Timișoara-*Hladik 1* indicates these were part of necklaces, bracelets or dress items (sewn onto apparel in the neck area, in the lower part of the coat or were part of braids, together with pendants). In some cases these were found in the lower part of the feet and emerge predominantly on one leg and on the other, divided. In looted and disturbed graves it is impossible to specify the original location of the beads or to accurately reconstruct how these were worn. The beading custom of the lower coat area in the Sarmatian environment of the Pannonian Plain develops on a larger scale after the Marcommanic Wars<sup>216</sup>, which is also noted in the Sarmatian setting of the Western plain of Romania<sup>217</sup>.

In looted and disturbed graves brooches were found in the shoulder region, near the clavicles, in the neck area or on the chest, sometimes close to other ornaments and dress items (beads, earrings, collars). Interestingly, these were discovered in 28% of the investigated graves at Timișoara-*Hladik 1*. In the Sarmatian funerary features of the Pannonian Plain, analysed by V. Kulcsár, brooches were found in a third part<sup>218</sup>, which is also supported by more recent finds. In graves 11, 20, 62, 95, 104 and 129 were discovered two brooches each, specific to more than 10% of the Sarmatian graves in the Pannonian Plain, including those on the territory of Banat<sup>219</sup>. Brooches from Gr. 11 and Gr. 62 are bronze-made, while those in Gr. 20 in bronze are iron respectively. With a piece each in bronze and one in silver were identified in graves 95, 104 and 129. The two bronze brooches in Gr. 11 belong to the same type, similarly to those in Gr. 20, even though these are bronze, respectively, iron-made.

The ornaments and dress items discovered in the Timișoara-*Hladik 1* cemetery indicate a larger choice for beads, brooches and bracelets, while collars, earrings, metal pendants and belt components seem to have been used to a lesser extent. A series of ornaments and dress items like rings, foot rings or dress appliques are missing from the grave goods. Nevertheless, since ca. 70% of the 139 graves were looted, their number was most certainly much higher.

Coins are also present in the analysed funerary features. These were discovered in 20 of the investigated graves<sup>220</sup>,

<sup>215</sup> Pendants of *Cypraea* type emerge in the Sarmatian environment of the Pannonian Plain once with the last third of the 2nd century AD, being present until the second half of the 3rd century AD when they disappear, yet re-emerge in the last third of the 4th century AD (KOVÁCS/VADAY 1999, 259), likely carried by new Iranian groups.

<sup>216</sup> The diffusion of this custom is related to the arrival of a new wave of Sarmatian from the east by late 2nd century – early 3rd century AD (Cf. KULCSÁR 1998, 48–51, 97, 112).

<sup>217</sup> See in this respect GRUMEZA 2013a; GRUMEZA 2014a, 93–104; GRUMEZA 2020; GRUMEZA/BÂRCĂ/RUMEGĂ-IRIMUȘ 2014, 120–133; GRUMEZA/BÂRCĂ 2020; BÂRCĂ/GRUMEZA 2022b.

<sup>218</sup> Cf. KULCSÁR 1998, 51–55, 97, 113.

<sup>219</sup> Cf. GRUMEZA 2014a, 63.

<sup>220</sup> Graves 6, 13, 20, 22, 31, 35, 40, 45, 49, 56, 60, 62, 75, 87, 98, 110, 117, 121, 134, 139.

being Roman denarii struck during the reigning years of emperors Vespasian, Titus, Trajan, Hadrian, Antoninus Pius, Marcus Aurelius and Septimius Severus<sup>221</sup>. In the non-looted, yet disturbed graves these were found in the chest area, the pelvis bones or midway the grave pit. Their deposition is an adopted custom, most likely under Roman influence, being found with the Sarmatian of the Pannonian Plain once with late 2nd century – early 3rd century AD<sup>222</sup>. Roman coins are also documented in the Sarmatian graves on the territory comprised between the Lower Mureș, Tisza and the Danube<sup>223</sup>.

Beside these artefact classes, in five of the 139 graves were also discovered weapons. These are part of male grave goods and are represented by lanceheads (Gr. 27, Gr. 31, Gr. 40, Gr. 101 and Gr. 112) and swords (Gr. 31 and Gr. 40). In two cases, the two weapon classes were found in the same grave (Gr. 31 and Gr. 40). In Gr. 40 there were two lanceheads, of which one survived fragmentarily.

Swords from Gr. 31 and Gr. 40 were found placed to the left side of the deceased parallel to the hip bone of the pelvis and the left femur (Fig. 4/1–2). The lancehead surviving intact in Gr. 40 was discovered with tip northwards to the right of the right foot, near the iron knife and pot, while that fragmentary on the right hip bone of the pelvis (Fig. 4/1). In Gr. 31, the lancehead was discovered to the right side of the deceased, parallel to the area where the skull that did not survive must have been located (Fig. 4/2).

Lastly, it is worth mentioning that in only one case (Gr. 6) the grave goods contained a glass vessel (beaker decorated with applied wire), and that the 139 graves did not contain metal vessels, amphorae, arrowheads or harness items.

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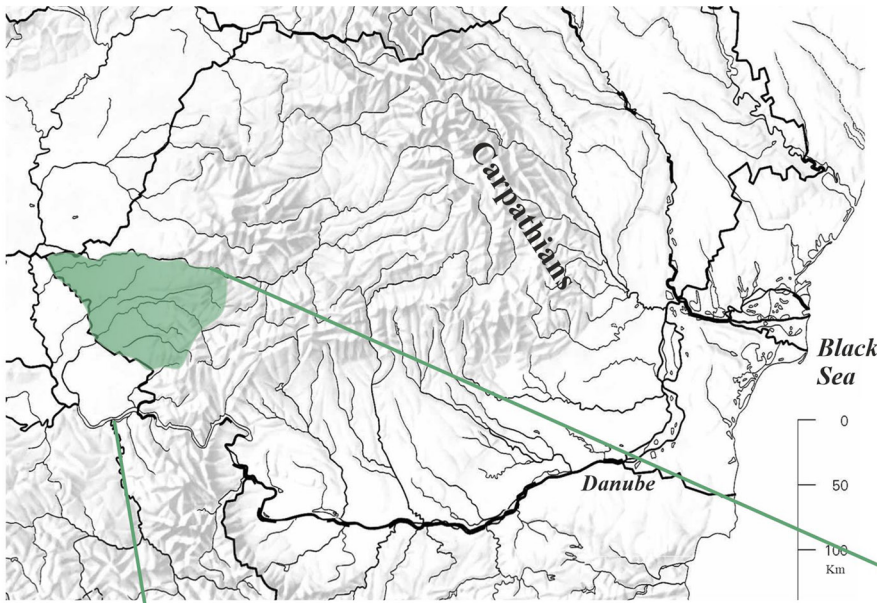
It may be concluded that most artefacts identified in Timișoara-*Hladik 1* graves, similarly to other cases in the area comprised between the Lower Mureș, Tisza and the Danube, are imports from the Roman and Germanic environments. Roman origin objects reached the Sarmatian in the region, similarly to those in the rest of the Pannonian Plain, mainly via trade with the Romans<sup>224</sup>. Roman product markets, alike their starting points towards the Barbarian

<sup>221</sup> Coins in the graves at Timișoara-*Hladik 1* do not represent an absolute dating criterion for the latter, since Roman coins in silver, minted in the 1st – 2nd century AD, remained in use and emerge in graves still at 150–200 years from issue date.

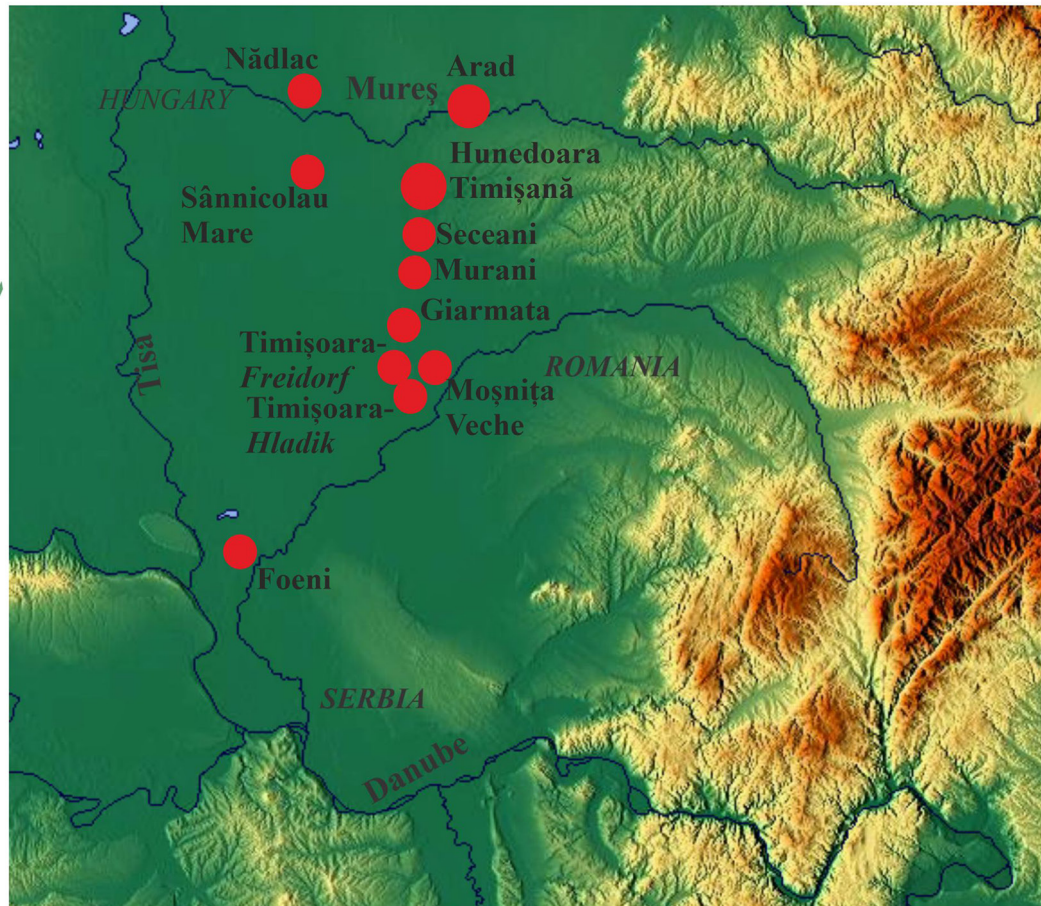
<sup>222</sup> VADAY 2002, 221. In the monograph study of 1998 V. Kulcsár argued this custom emerges not earlier than the 2nd century AD (KULCSÁR 1998, 57–59, 98, 114). It must be mentioned that coins are neither present in all Sarmatian cemeteries investigated to date in the Pannonian Plain nor in all graves of such cemeteries. In fact, there are many cases where within larger or smaller cemeteries coins were not discovered in any grave. Cemeteries where coins were identified in graves, they are a few. The coins in the Sarmatian funerary features of the Pannonian Plain evidence that in 2nd – 3rd century AD graves a single coin was found in graves and that only starting with late 3rd century AD there are graves with two or several coins placed.

<sup>223</sup> See in this respect GRUMEZA 2013b; GRUMEZA 2014a, 109–114. Domocoș 2014.

<sup>224</sup> During the Principate, the Roman borders were mainly interaction areas and less division lines, as the economy of the Roman empire depended to a large extent on the trade relations with the neighbouring populations. This is in fact confirmed by the ancient literary texts, which underline the important role that both the imperial borders and neighbouring populations had in the political ideology of the empire.



1a



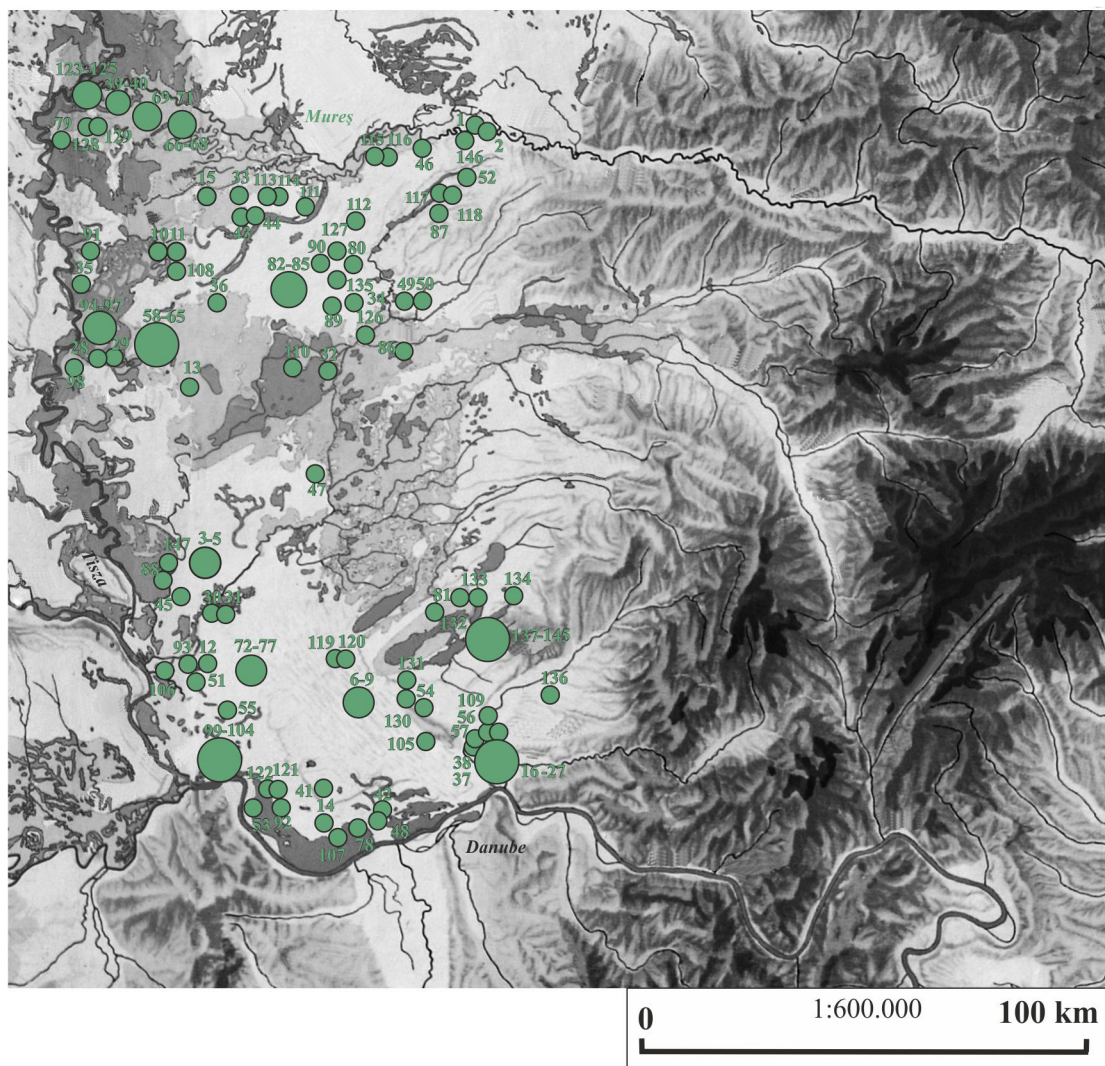
1b

**Fig. 13.** Map of recent Sarmatian grave and cemetery finds in the area south and north of Lower Mureș.

world, including the Sarmatian, lay in the settlements on the *limes*<sup>225</sup>, specific trading locations being established mainly by the Romans or subsequent to negotiations. On the other

hand, it must be mentioned that it is very likely that some of the Roman artefacts in the Sarmatian world had been made by travelling artisans active in the economic interaction area nearby the *limes*, yet also within territories inhabited by the Sarmatian. It is certain that border trade developed as a vital

<sup>225</sup> VADAY 1989, 189.



**Fig. 14.** Map with layout of Sarmatian burial finds in the area comprised between the Lower Mureș, Tisza and the Danube, and the ancient geographical landscape of the area, deeply floodable (after BĂRCĂ/GRUMEZA 2022).

necessity for the Sarmatian world, alike the case of other Barbarian populations, yet it was important and profitable both economically and politically for the Romans as well. Artefacts within funerary features and Sarmatian settlements in the Banat Plain support the strong Roman influence on their material culture, which is confirmed by the recent finds, including those of *Timișoara-Hladik 1*.

Regarding the Germanic origin artefacts from the analysed graves, these evidence the good relations between the Sarmatian and the Germanic world, from whom the first took over the time several artefact categories. Confirmation of the good relations between the Sarmatian in the Pannonian Plain and the Germanic tribes is also reported by Ammianus Marcellinus<sup>226</sup>.

It must be mentioned that most graves at *Timișoara-Hladik 1* date to the maximum intensity period of the trade between the Sarmatian of the Pannonian Plain and the Romans, placed widely to the 2nd century – first half of the 3rd century AD. For the space between the Lower Mureș, Tisza and the Danube, this is established on the basis of archaeological finds to the chronological interval comprised between late

2nd century AD (sometime after the Marcomannic Wars) and the first half of the 2nd century AD<sup>227</sup>. Once with the second half of the 3rd century AD, we witness a diminished flow of Roman artefacts in the Sarmatian environment of the Pannonian Plain, including the flatlands south of the Lower Mureș.

The preliminary research of the funerary remains of *Hladik 1* indicates these date *grosso modo* to the chronological interval comprised between late 2nd century – last decades of the 3rd century AD<sup>228</sup>, although the detailed analysis of the grave goods could be indicative of a slight extension of the dating.

The results of the archaeological excavations conducted at *Timișoara-Hladik 1* supply a multitude of data concerning the interaction between the Sarmatian with the Roman and Germanic worlds and represent, beside other recent finds (*Arad, Foeni, Giarmata, Hunedora Timișană, Moșnița Veche, Murani, Nădlac, Seceani, Timișoara-Freidorf* etc.) (Fig. 13) evidence that the Sarmatian settled the territory south of the Lower Mureș in the Marcomannic Wars' aftermath. In

<sup>226</sup> Ammianus Marcellinus XVII, 12.

<sup>227</sup> Cf. GRUMEZA 2014, 148.

<sup>228</sup> BĂRCĂ/FLORESCU 2023, 237.

this context, the examination of the archaeological information leads to the conclusion that during the period until the end of the Marcomannic Wars, the Romans did not allow the Sarmatian to settle the Banat flatlands<sup>229</sup>.

It is certain that the remains at Timișoara-*Hladik 1*, together with other Sarmatian finds (cemeteries, settlements) in the area between the Lower Mureș, Tisza and the Danube (Fig. 14), evidence that the flatlands were not incorporated in the province of Dacia, but lay outside its south-western border, located at a not very large distance from the last forts westwards along the road Lederata-Berzobis-Tibiscum. Concurrently, it is obvious that this territory, otherwise under Roman control, lay, as previously argued, *extra provinciam*<sup>230</sup>.

## REFERENCES

- ABRAMOVA 1959  
Abramova, M. P., Sarmatskaya kul'tura I v. do n. e. – II v. n. e. (po materialam Nizhnego Povolzh'ya. Suslovskij etap), *Sovetskaya Arkheologiya* 1, 52–71.
- ÁCS/VADAY 2004  
Ács, C./Vaday, A., Kismari-fenek. Késő-császárkori – koránépvándorláskori temetőrészlet II, *Agria* 40, 105–136.
- ARKHEOLOGIYA SSSR 1989  
Arkheologiya SSSR. *Stepi evropejskoj chasti SSSR v skifo-sarmatskoe vremya* (Moskva: Nauka).
- ARKHEOLOGIYA USSR 1986  
Arkheologiya USSR. *Skifo-sarmatskaya i antichnaya arkheologiya II* (Kiev: Naukova dumka).
- BALOGH/HEIPL 2010  
Balogh, C./Heipl, M., Szarmata temetőrészlet Balástya, Sospál-Halom mellett. Új adatok a Dél-Alföld árokkeretes szarmata temetőihez és a rendellenes temetkezéseihez. In: *Lőrinczy, G. (ed.), Pusztaszertől Algyőig. Régészeti lelőhelyek és leletek egy gázvezeték nyomvonalának Csongrád megyei szakaszán. A Móra Ferenc Múzeum Évkönyvei. Monumenta Archeologica II* (Szeged), 149–170.
- BATISTIĆ-POPADIĆ 1984–1985  
Batistić-Popadić, D., Sarmatska nekropola Vojlovica-Pančevo, *Rad vojvođanskih muzeja* 29, 59–83.
- BÂRCĂ 2006a  
Bârcă, V., *Istorie și civilizație. Sarmati în spațiul est-carpatic (sec. I a. Chr. – începutul sec. II p. Chr.)* (Cluj-Napoca: Argonaut).
- BÂRCĂ 2006b  
Bârcă, V., *NOMAZI AI STEPelor. SARMAȚII TIMPURII ÎN SPAȚIUL NORD-PONTIC (SEC. II-I A. CHR.)* (CLUJ-NAPOCA: ARGONAUT).
- BÂRCĂ 2013  
Bârcă, V., Nomads of the steppes by the Danube frontier of the Roman Empire in the 1<sup>st</sup> C CE. Historical sketch and chronological remarks, *Dacia N. S.* 57, 99–125.
- BÂRCĂ 2014a  
Bârcă, V., *Sarmatian Vestiges Discovered South of the Lower Mures River. The Graves from Hunedoara Timișană and Arad* (Cluj-Napoca: Mega Publishing House).
- BÂRCĂ 2014b  
Bârcă, V., Returned foot exterior chord brooches made of a single metal piece (Type Almgren 158) recently discovered in the Western Plain of Romania. Notes on origin and chronology, *Journal of Ancient History and Archaeology* 1/2, 21–39. DOI:10.14795/j.v1i2.50.
- BÂRCĂ 2015  
Bârcă, V., A few notes on the emergence and distribution in the Sarmatian environment of variously shaped ditched enclosures, with or without graves inside. In: Kogălniceanu, R./Gligor, M./Curcă, R. G./Stratton, S. (eds.), *Homines, Funera, Astra 2. The Archaeology of Death in Ancient Times (Romanian Case Studies). Proceedings of the International Symposium on Funerary Anthropology, 23–26 September 2012, 1 Decembrie 1918 University (Alba Iulia, Romania)* (Oxford: Archaeopress), 103–118.
- BÂRCĂ 2015a  
Bârcă, V., The reinterpretation of the Sarmatian finds from the Romanian Plain (I), *Journal of Ancient History and Archaeology* 2/1, 35–71. DOI: 10.14795/j.v2i1.105.
- BÂRCĂ 2016a  
Bârcă, V., The dating of the Sarmatian grave at Sânnicolau Mare – Seliște (Timis county, Romania) and the issue of the early Sarmatian entry and settlement of the Pannonian Plain, *Ephemeris Napocensis* 26, 7–66.
- BÂRCĂ 2016b  
Bârcă, V., Disc brooches of box/capsule type (Dosenfibel/Kapselbibel) in the Sarmatian environment of the Great Hungarian Plain. A few notes on their dating and origin. In: Bârcă, V., (ed.), *Orbis Romanus and Barbaricum. The Barbarians around the Province of Dacia and Their Relations with the Roman Empire* (Cluj-Napoca: Mega Publishing House), 251–282.
- BÂRCĂ 2016c  
Bârcă, V., A disk mirror recently discovered South the Lower Mureș, *Journal of Ancient History and Archaeology* 3/3, 55–61. DOI: 10.14795/j.v3i3.198.
- BÂRCĂ 2017  
Bârcă, V., Notes on the metal pyxides recently discovered in the Sarmatian environment south the Lower Mureș River, *Plural. History-Culture-Society* 5/2, 101–123. DOI: doi.org/10.37710/plural.v5i2\_4.
- BÂRCĂ 2018  
Bârcă, V., Notes on the use, dating and origin of the bucket-shaped pendants from the Sarmatian environment of the Great Hungarian Plain. *Journal of Ancient History and Archaeology* 5/2, 37–63. DOI: 10.14795/j.v5i2.325.
- BÂRCĂ 2018a  
Bârcă, V., A few notes on the tamgas from the golden plaque in the Sarmatian grave at Dunaharaszti (Hungary), *Journal of Ancient History and Archaeology* 5/4, 41–65. DOI: 10.14795/j.v5i4.354.
- BÂRCĂ 2019  
Bârcă, V., Notes on a clay mould for brooch casting recently discovered in the Great Hungarian Plain, *Journal of Ancient History and Archaeology* 6/3, 119–133. DOI: 10.14795/j.v6i3.446.
- BÂRCĂ 2020  
Bârcă, V., Funerary Ditched Enclosures in the Sarmatian Funerary Ritual. Observations Regarding Their Introduction, Distribution, Use, and Dating, *Ziridava. Studia Archaeologica* 34, 325–376.
- BÂRCĂ 2021  
Bârcă, V., Bucket-shaped pendants from the Sarmatae environment. A few notes on the origin, dating and use of these amulets in the Barbarian world, *Cercetări Arheologice* 28/2, 411–438. DOI: https://doi.org/10.46535/ca.28.2.05.
- BÂRCĂ 2022  
Bârcă, V., Pătrunderea și așezarea primelor grupuri de sarmați în Câmpia Panonică. Câteva considerații și observații, *Apulum. Series Archaeologica et Anthropologica* 59, 55–127.

<sup>229</sup> BÂRCĂ 2014, 145.

<sup>230</sup> BÂRCĂ 2014, 145.

- BÂRCĂ 2022a  
Bârcă, V., The Sarmatae cemetery of Timișoara-Hladik (Timis county, Romania). Preliminary notes. In: A. V. Mastykova, E. A. Khajredinova (eds.), *Mogil'nik rimskogo vremeni Frontovoe: varvary na granitzakh Imperii / The Roman Period Cemetery of Frontovoe 3: The Barbarians on the Borders of the Empire* (Moskva), 216–226.
- BÂRCĂ/COCIȘ 2013  
Bârcă, V./Cociș, S., Sarmatian Graves Surrounded by Flat Circular Ditch Discovered at Nădlac (Arad County, Romania), *Ephemeris Napocensis* 23, 31–50.
- BÂRCĂ/COCIȘ 2022  
Bârcă, V./Cociș, S., Brooches of type Almgren group VII, Series I, variation with headknob and vertical catchplate from the territory of Romania. In: Mastykova, A. V./Khajredinova, E. A. (eds.), *Mogil'nik rimskogo vremeni Frontovoe 3: varvary na granitzakh Imperii / The Roman Period Cemetery of Frontovoe 3: The Barbarians on the Borders of the Empire* (Moskva: Institut arheologii. Rossijskaya akademiya nauk), 248–259. DOI: <https://doi.org/10.25681/IARAS.2022.978-5-94375-373-2.248-259>.
- BÂRCĂ et alii 2022  
Bârcă, V./Florescu, C./Fântâneau, C./Matiș, A., Preliminary considerations and notes on the Sarmatian burial vestiges of Timișoara – „Hladik 1” (Timiș county), *Cercetări Arheologice* 29/2, 513–542. DOI: <https://doi.org/10.46535/ca.29.2.05>.
- BÂRCĂ/GRUMEZA 2014  
Bârcă, V./Grmueza, L., Sarmatian Burials in Coffins and Funerary Timber Features Recently Discovered in the Western Plain of Romania, *Ephemeris Napocensis* 24, 157–194.
- BÂRCĂ/GRUMEZA 2022A  
Bârcă, V./Grmueza, L., Sarmatae burials and cemeteries excavated in recent years in south-western Romania. In: Mastykova, A. V./Khajredinova, E. A. (eds.), *Mogil'nik rimskogo vremeni Frontovoe 3: varvary na granitzakh Imperii / The Roman Period Cemetery of Frontovoe 3: The Barbarians on the Borders of the Empire* (Moskva: Institut arheologii. Rossijskaya akademiya nauk), 206–215. DOI: <https://doi.org/10.25681/IARAS.2022.978-5-94375-373-2.206-215>.
- BÂRCĂ/GRUMEZA 2022b  
Bârcă, V./Grmueza, L., Clothes Make the Woman: The Beads Fashion in the Sarmatian Cemetery from Hunedoara Timișană, *Kratkie soobshcheniya Instituta arheologii* 268, 19–31. DOI: <http://doi.org/10.25681/IARAS.0130-2620.268.19-31>.
- BÂRCĂ/FLORESCU 2023  
Bârcă, V./Florescu, C., Necropola sarmatică de la Timișoara – Hladik 1 (jud. Timiș). Observații preliminare. In: Aparaschivei, D./Bilavski, G./Bacumenco-Pirău, L. (eds.), *Varia Archaeologica (III). Situri și peisaje arheologice din spațiul românesc*, (Cluj-Napoca: Mega), 223–266.
- BÂRCĂ/SYMONENKO 2009  
Bârcă, V./Symonenko, O., *Călăreții stepelor. Sarmatii în spațiul nord-pontic* (Cluj-Napoca: Mega).
- BEJAN/MĂRUIA/TĂNASE 2011  
Bejan, A./Măruia, L./Tănase, D., Un mormânt cu podoabe de aur din epoca sarmatică timpurie descoperit la Sănnicolau Mare – Seliște (jud. Timiș), *Analele Banatului S. N.* 19, 161–180.
- BENCZE et alii 2009  
Bencze, Z./Korom, A./Terei, Gy./Tézer, Z., Régészeti kutatások az M0 autópálya soroksári nyomvonalán / Archaeological investigations in the Soroksár section of the M0 motorway. In: *Aquincumi fűzetek, 15, BTM Aquincumi Múzeumának ásatásai és leletmentései 2008-ben / Excavations at the Aquincum Museum in 2008* (Budapest), 130–149.
- BESPALYJ 1985  
Bespalyj, E. I., Kurgan I v. n. e. u. g. Azova, *Sovetskaya Arkheolgiya* 4, 163–172.
- BESPALYJ 1992  
Bespalyj, E. I., Kurgan sarmatskogo vremeni u g. Azova, *Sovetskaya Arkheologiya* 1, 175–191.
- BEZUGLOV/GLEBOV/PARUSIMOV 2009  
Bezuglov, S. I./Glebov, V. P./Parusimov, I. N., *Pozdnesarmatskie pogrebeniya v ust'e Dona (kurgannyj mogil'nik Valovyy I)* (Rostov-na-Donu: Media-Polis).
- COCIȘ/BÂRCĂ 2014  
Cociș, S./Bârcă, V., The “Sarmatian” brooches (headknob and full catchplate variant, Almgren Group VII, Series I) in the Dacia Province and the Barbarian Environment of the Tisza River Basin, *Dacia N. S.* 58, 189–214.
- DINNYÉS 1975  
Dinnyés, I., Az Salakú koporsókapcsok használatáról, *Studia Comitatus* 3, 61–77.
- DOMOCOȘ 2014  
Domocoș, V. B., *Circulația monetară în spațiul dintre provinciile Dacia și Pannonia* (Cluj-Napoca: Mega).
- DZIGOVSKIY 1982  
Dzigovskij, A. N., Sarmatskie pamyatniki stepej Severo-Zapodnogo Prichernomor'ya. In: Dzis-Rajko, G. A. (ed.), *Arkheologicheskie pamyatniki stepej Severo-Zapodnogo Prichernomor'ya* (Kiev), 83–92.
- DZIGOVSKIY 2013  
Dzigovskij, A. N., Sarmaty. In: Briyako, I. B./Samojlova, T. L. (eds.), *Drevnie kul'tury Severo-Zapodnogo Prichernomor'ya (k 95-letiyu Natsional'noj akademii nauk Ukrainy)* (Odessa), 597–630.
- DZYGOVS'KYJ 1993  
Dzygovs'kyj, O. M., *Sarmaty na zahodi stepovogo Prychornomor'ya naprykintsi I st. do n. e. – pershij polovyni IV st. n. e.* (Kyiv: Institut Arkheologii NAN Ukrainy).
- FEJÉR 1991  
Fejér, G., Népvándorlaskori fakoporsók Eurásziában, *A Móra Ferek Múzeum Evkönyve* 2, 1984–1985, 401–429.
- FODOR 1997  
Fodor, I., Hajdúdorog – Csádadomb. Szarmata temetkezések a II–III. Szazadbol. In: Raczky, P./Kovács, T./Anders, A. (eds.), *Utak a múltba. Az M3-as autópálya régészeti leletmentései* (Budapest), 110–113.
- GALLINA 1999  
Gallina, Zs. Késő szarmata temetőrészlet Kiskunfélegyháza-Kővágóéren. Adalék a szarmata sírszerkezetek és a korabeli sírbrátlások kérdéséhez. In: Perémi Ágota, S. (ed.), *A Népvándorlaskor fiatal kutatói 8. Találkozójának előadásai 1997 (Veszprém, 1997. november 28–30)* (Veszprém), 7–27.
- GINDELE 2009  
Gindele, R., Pottery from the Sarmatian funerary finds from the West and North-West of Romania, *Carpatica* 38 (Uzhgorod), 168–184.
- GINDELE 2019  
Gindele, R., Așezarea din secolele IV–V d. Hr. de pe Varianta Ocolitoare Sud a Minicipiului Timișoara, situl 3, *Analele Banatului S. N.* 29, 221–238.
- GINDELE 2023  
Gindele, R., Așezarea sarmatică descoperită la dezvoltarea infrastructurii rutiere de la Cerneteez – Sit 7 (jud. Timiș), *Analele Banatului S. N.* 31, 109–135.
- GRAKOV 1947  
Grakov, B. N., ГYNAIKOKPATOYMEHOI (Perezhitki matriarkhata u sarmatov), *Vestnik drevnej istorii* 3, 100–121.

- GROSU 1990  
Grosu, V. I., *Khronologiya pamyatnikov sarmatskoj kul'tury Dnestrovsko-Prutskogo mezhdurech'ya* (Kishinev: Ştiinţa).
- GROSU 1995  
Grosu, V. I., Sarmati în spaţiul geto-dacic răsăritean, *Arheologia Moldovei* 18, 133–186.
- GRUMEZA 2011  
Grumeza, L., The Sarmatian Necropolis from Foeni (Timiş County), *Analele Banatului S. N.* 19, 181–205.
- GRUMEZA 2012  
Grumeza, L., Sicrie şi amenajări funerare din lemn atestate la sarmati de pe teritoriul Banatului, *Analele Banatului S. N.* 20, 97–113.
- GRUMEZA 2013a  
Grumeza, L., Typology and Chronology of the Beads Found within the Foeni Sarmatian Necropolis, *Tibiscum* 3, 245–260.
- GRUMEZA 2013b  
Grumeza, L., Roman Coins in Sarmatian Graves from the Territory of Banat (2<sup>nd</sup>–4<sup>th</sup> Centuries AD). *Analele Banatului S. N.* 21, 93–104.
- GRUMEZA 2014a  
Grumeza, L., *Sarmatian Cemeteries from Banat (Late 1<sup>st</sup>–Early 5<sup>th</sup> Centuries AD)* (Cluj-Napoca: Mega Publishing House).
- GRUMEZA 2014b  
Grumeza, L., Disc brooches with anthropomorphic depiction glass intaglios in the Sarmatian environment of the Pannonian Plain, *Journal of Ancient History and Archaeology* 1/4, 76–84. DOI: <http://dx.doi.org/10.14795/j.v1i4.82>.
- GRUMEZA 2015  
Grumeza, L., Sarmatian Personal Ornaments from the South-Eastern Part of the Great Hungarian Plain during the 1<sup>st</sup>–3<sup>rd</sup> Centuries AD: Imports and Local Production. In: Cojocaru, V./Rubel, Al./Stah, D./Castelli, T. (eds.), *Mobility in Research on the Black Sea Region. The Proceedings of the International Symposium, Iaşi, July 5–10, 2015*. Pontica et Mediterranea VI (Cluj-Napoca), 433–476.
- GRUMEZA 2016  
Grumeza, L., Post Roman and Sarmatian Pottery Workshops in Banat, Between the End of 3<sup>rd</sup>-Beginning of the 5<sup>th</sup> Century AD, *Ephemeris Napocensis* 26, 67–106.
- GRUMEZA 2019  
Grumeza, L., *Corpus der römischen Funde im europäischen Barbaricum. Rumänien Band 1. Kreis Arad*. (Cluj-Napoca: Mega Verlag).
- GRUMEZA 2020  
Grumeza, L., The More Colourful, the Better! Polychrome Glass Beads of the 2<sup>nd</sup>–4<sup>th</sup> Century Cemeteries in Banat. In: Mărgărit, M./Boroneanţ, A. (eds.), *Beauty and the eye of the beholder. Personal adornments across the millennia* (Târgovişte), 437–445.
- GRUMEZA/BĂRCĂ 2020  
Grumeza, L./Bărcă, V., Glass beads discovered in the Sarmatian cemeteries from south-western Romania, *Arkheologiya i davnya istoriya Ukrainy / Archaeology and Early History of Ukraine* 3 (36), 402–415. DOI: <https://doi.org/10.37445/adiu.2020.03.28>.
- GRUMEZA/BĂRCĂ/RUMEGĂ-IRIMUŞ 2014  
Grumeza, L./Rumegă-Irimuş, L./Bărcă, V., *Beads*. In: Bărcă, V., *Sarmatian vestiges discovered south of the Lower Mureş River. The graves from Hunedoara Timişană and Arad* (Cluj-Napoca: Mega Publishing House), 120–132.
- GRUMEZA/URSUȚIU 2016a  
Grumeza, L./Ursuțiu, A., Amenajări funerare circulare descoperite pe tronsonul autostrăzii Nădlac-Arad, *Siturile Nădlac 3M Nord și 4M*, *Arheologia Moldovei* 39, 195–213.
- GRUMEZA/URSUȚIU 2016b  
Grumeza, L./Ursuțiu, A., The Sarmatian Cemetery from Nădlac 3M North. In: Bărcă, V. (ed.), *Orbis Romanus and Barbaricum. The Barbarians around the Province of Dacia and Their Relations with the Roman Empire* (Cluj-Napoca), 283–232.
- GRUMEZA/URSUȚIU/COPOS 2013  
Grumeza, L./Ursuțiu, A./Copos, G., *Arad "Barieră". Cercetări arheologice preventive într-un sit de epocă sarmatică / Arad "Barieră". Rescue excavation in a Sarmatian period site* (Cluj-Napoca: Mega Publishing House).
- GEORGESCU/BĂLĂRIE 2017  
Georgescu, A./Bălărie, A., The story of a sarmatian grave rescued by Florin Medeleț at Gelu (Variaş comm., Timiş County), *Studii și Cercetări de Istorie veche și Arheologie* 68, 1–4, 119–137.
- GULYÁS 2006  
Gulyás, Gy., Abony 39. lelőhely (Tatárhánys-dűlő). In: Simon, L. (ed.), *Régészeti kutatások másfél millió négyzetméteren. Autópálya és gyorsforgalmi utak építését megelőző régészeti feltárások Pest megyében 2001–2006*. Pest Megyei múzeumi füzetek 7 (Szentendre).
- GULYÁS 2011  
Gulyás, Gy., Szarmata temetkezések Abony és Cegléd környékén, *Studia Comitatus* 31, 125–253.
- GULYÁS 2014  
Gulyás, Gy., *Késő szarmata temetőrészletek Óföldrak-Ürmös II. Lelőhelyen (M43-as autópálya 10. lelőhely)*, *A Nyíregyházi Jósza András Múzeum Évkönyve* 56, 15–107.
- GULYÁS/SÓSKUTI 2017  
Gulyás, Gy./Sóskuti, K., "...s okát nem kereshetjük másban, mint a visszajáró halottól való félelemben" Megjegyzések a késő szarmata gyöngyös viselet kérdéséhez (Óföldrak-Ürmös). In: Gábor, Sz. T./Czúkor, P. (eds.), *Út(on) a kultúrák földjén. A z M43-as autópálya Szeged-országátár közötti szakasz régészeti feltárássai és a hozzá kapcsolódó vizsgálatok* (Szeged), 217–256.
- HERENDI/SÓSKUTI 2016  
Herendi, O./Sóskuti, K., Réz-, bronz-, római, Árpád-kori településnyomok és temetkezések Makó, Járándról. (Előzetes jelentés az M43, 37., HT 40. lelőhelyen végzett régészeti feltárásokról). In: Kvassay, J. (ed.), *Régészeti kutatások Magyarországon 2011–2014 / Archaeological Investigations in Hungary 2011–2014*. (Budapest), 30–50.
- HULLÁM 2012  
Hullám, D., Római császárkori temetkezések Kántorjánosi és Pócspetri határában. In: Szabó, Á./Masek, Zs. (eds.), *Ante viam stratam, A Magyar Nemzeti Múzeummegelőző feltárássai Kántorjánosi s Pócspetrihatárában az M3 autópálya nyírségi nyomvonalán*. (Budapest), 351–394.
- IL'YUKOV/VLASKIN 1992  
Il'yukov, L. S./Vlaskin, M. V., *Sarmaty mezhdurech'ya Sala i Manycha* (Rostov-na-Donu: Izdatel'stvo Rostovskogo universiteta).
- ISTVÁNOVITS 1990  
Istvánovits, E., A Felső-Tisza-vidék legkorábbi szarmata leletei, 2–3. századi sírok Tiszavasváriból, *A Nyíregyházi Jósza András Múzeum Évkönyve* 27–29, 1984–1986, 83–133.
- ISTVÁNOVITS/KULCSÁR 2003  
Istvánovits, E./Kulcsár, V., The archaeology of the Sarmatian territories. Burials. In: Visy, Z. (ed.), *Hungarian archaeology at the turn of the millennium* (Budapest), 271–275.
- ISTVÁNOVITS/KULCSÁR 2017  
Istvánovits, E./Kulcsár, V., *Sarmatians – History and Archaeology of the Forgotten People* (Mainz: Verlag des Römisch-Germanischen Zentralmuseums).
- KAPCSOS 2014  
Kapcsos, N., The Sarmatian Graves of the 4R archaeological site dated to the third-fourth century A.D. Additional data on

- the Sarmatian burial rite in the Lower Mureş region, *Ziridava. Studia Archaeologica* 28, 157–172
- KAPCSOS 2017  
Kapcsos, N., Sarmatian graves from Pecica Site 18. Remarks upon the phenomenon of „isolated” graves from the Cris-Tisa-Mures region, *Ziridava. Studia Archaeologica* 31, 165–180.
- KAPCSOS 2020  
Kapcsos, N., An attempt to reconstruct the chronology of the Roman and Early Migrations Period in the Lower Mureş Valley, *Ziridava. Studia Archaeologica* 34, 305–324.
- KASHUBA/KURCHATOV/SHCHERBAKOVA 2001–2002  
Kashuba, M. T./Kurchatov, S. I./Shcherbakova, T. A., Kochevniki na zapodnoj granitse Velikoj stepi (po materialam kurganov u s. Mokra), *Stratum plus* 4, 180–252.
- KOROM/SZILAS/TEREI 2010  
Korom, A./Szilas, G./Terei, G., Kr.u. 3–5. századi temető és település valamint Árpád-kori falu az M0 körgyűrű nyomvonalán [3rd–5th century AD cemetery and settlement, and Árpád period village along the path of M0 motorway]. In: Zsidi, P./Vámos, P. (eds.), *Aquincumi füzetek, 16, A BTM Aquincumi Múzeumának ásatásai és leletmentései 2009-ben / Excavations at the Aquincum Museum in 2009* (Budapest), 129–151.
- KOSTENKO 1979  
Kostenko, V. I., Sarmaty v mezhdurech'e Orel'i i Smary. In: *Kurgannye drevnosti stepnogo Podneprov'ya III–I v. do n. e.* (Dnepropetrovsk), 124–139.
- KOSTENKO 1980  
Kostenko, V. I., Kul't ognya i konya v pogrebeniyakh sarmatskogo vremeni mezhdurech'ya Orel'i i Samary. In: *Kurgany stepnogo Podneprov'ya* (Dnepropetrovsk), 83–86.
- KOSTENKO 1983  
Kostenko, V. I., *Sarmatskie pamyatniki Dnepro-Don'skogo mezhdurech'ya III v. do n. e. – III v. n. e.* (Dnepropetrovsk: Izdatel'stvo DGU).
- KOSTENKO 1986  
Kostenko, V. I., *Sarmaty Samarsko-Orel'skogo mezhdurechya III vv. do n. e. – IV v. n. e.* (Dnepropetrovsk: Izdatel'stvo DGU).
- KOSTENKO 1993  
Kostenko, V. I., *Sarmaty v Nizhnem Podneprov'e (po materialam Ust'-Kamenskogo mogil'nika)* (Dnepropetrovsk: Izdatel'stvo DGU).
- KOVÁCS/VADAY 1999  
Kovács, L./Vaday, A., On the problem of the marine gastropod shell pendants in the Sarmatian Barbaricum in the Carpathian Basin. In: Vaday, A. (ed.), *Pannonia and Beyond – Studies in Honour of László Barkóczi (= Antaeus 24, 1997–1998)* (Budapest), 247–277.
- KOVPANENKO 1986  
Kovpanenko, G. T., *Sarmatskoe pogrebenie I v. n. e. na Yuzhnom Buge* (Kiev: Naukova dumka).
- KÓHEGYI 1994  
Kóhegyi, M., Sirrablás a magyarországi szarmatáknál. In: Lőrinczy, G. (ed.), *A kőkortól a középkorig. Tanulmányok Trogmayer Ottó 60. Születésnapjára* (Szeged), 277–283.
- KÓHEGYI/VÖRÖS 2011  
Kóhegyi, M./Vörös, G., *Madaras – Halmok, Kr. U. 2–5. Századi szarmata temető* (Szeged: Szegedi Tudományegyetem Régészeti Tanszék).
- KUJÁNI 2014  
Kujáni, Y., Adatok a Maros-Körös-közén 4–5. századi temetkezéseihez az apátfalvi temető alapján, *A Móra Ferenc Múzeum Évkönyve*, Új folyam 1, 101–129.
- KULCHAR 1997  
Kulchar, V., Nekotorye kharakternye cherty pogrebal'nogo obryada sarmatov Karpatskogo bassejna, *Donskie drevnosti* 5, 126–133.
- KULCSÁR 1990  
Kulcsár, V., Előzetes jelentés a lajosmizsei szarmata temető fel-tárásáról. In: Sztrinkó, Is. (ed.), *Múzeumi kutatások Bács-Kiskun megyében 1988* (Kecskemét), 31–36.
- KULCSÁR 1998  
Kulcsár, V., *A kárpát-medencei szarmaták temetkezési szokásai*. Aszód 1990.
- KURCHATOV/BUBULICI 2003  
S. Kurchatov, S./Bubulici, V., Sarmatskoe pogrebenie iz kurgana u s. Oloneshty – 40 let spustya. In: Sava, E. (ed.), *Interferențe culturale-cronologice în spațiul nord-pontic*. (Chișinău, 285–312.
- KURCHATOV/SYMONENKO/CHYRKOV 1995  
Kurchatov, S. I./Symonenko, O. V./Chyrkov, A. Yu., Sarmatskiy voinskiy mogil'nik na Serednomu Pruti, *Arkheologiya* 1, 112–123.
- KÜRTI 2005  
Kürti, B., Szarmata temetőrészlet Kiskundorozsma–Subasáról (M5–26/78. lelőhely, Csongrád megye, 1998), *A Szántó Kovács Múzeum Évkönyve* 7, 85–109.
- LAZAROVICI/RESCH/GERMANN 1983  
Lazarovici, Gh./Resch, F. E./Germann, C., Descoperiri arheologice la Timișoara-Freidorf, *Banatica* 7, 35–51.
- MADGEARU 2011  
Madgearu, A., *Istoria militară a Daciei post-romane 275–614* (Târgoviște: Cetatea de Scaun).
- MAKSIMENKO 1983  
Maksimenko, V. E., *Savromaty i sarmaty na Nizhnem Donu* (Rostov-na-Donu: Izdatelstvo Rostovskogo universiteta).
- MAKSIMENKO 1998  
Maksimenko, V. E., *Sarmaty na Donu (arkheologiya i problemy etnicheskoj istorii)* (= *Donskie drevnosti* 6) (Azov: Azovskij kraevedcheskij muzej).
- MARCHENKO 1996  
Marchenko, I. I., *Siraki Kubani (po materialam kurgannyh pogrebenij Nizhnej Kubani)* (Krasnodar: Kubanskiy gosudarstvennyy universitet).
- MARE et alii 2011  
Mare, M./Tănase, D./Drașovean, F./El Susi, G./Gál, Sz., *Timișoara–Freidorf. Cercetări arheologice preventive din anul 2006* (Cluj-Napoca: Mega).
- MEDVEDEV 1990  
Medvedev, A. P., *Sarmaty i lesostep'* (Voronezh: Izdatel'stvo Voronezhskogo universiteta).
- MIROSHINA/DERZHAVIN 1988  
Miroshina, T. V./Derzhavin, V. L., Sarmatskie pogrebeniya iz mogil'nika Veselaya Roshcha III, *Sovetskaya Arkheologiya* 4, 146–156.
- MORDVINTSEVA/SERGATSKOV 1995  
Mordvintseva, V. I./Sergatskov, I. V., Bogatoe sarmatskoe pogrebenie u stantsii Berdiya, *Rossiyskaya Arkheologiya* 4, 1995, 114–124.
- MOSHKOVA 1963  
Moshkova, M. G., *Pamyatniki prokhorovskoj kul'tury*. Arkheologiya SSSR. Svod arkheologicheskikh istochnikov D1–10 (Moskva: Nauka).
- MUKHOPAD 1986  
Mukhopad, S. E., Sarmatskie pogrebeniya s bronzovymi kotlami v Orel'-Samarskom mezhdurech'e. In: *Problemy arkheologii Podneprov'ya* (Dnepropetrovsk), 136–143.
- NAGY 2005  
Nagy, D. S., Az Orosházi – Tanyák, Máv – homokbánya szarmata temetője, *A Szántó Kovács János Múzeum Évkönyve* 7, 11–48.

- NAGY 2018  
Nagy M., *A Budapest, XVII. Rákospalota, Péceli úti császárkori barbár temető (Kr. u. –4. század) I–II* (Budapest).
- PÁRDUCZ 1940  
Párducz, M., Ernőházai jазig leletek, *Archeológiai Értesítő* III/I, 261–269.
- PÁRDUCZ 1950  
Párducz, M., *A szarmatakor emlékei Magyarországon III / Denkmäler der Sarmatenzeit Ungarns III*. *Archaeologia Hungarica* XXX (Budapest: Akadémiai Kiadó).
- PARKER PEARSON 2003  
Parker Pearson, M., *The archaeology of Death and Burial*. 2<sup>nd</sup> Edition (Stroud: Sutton)
- PROKHOROVA/GUGUEV 1992  
Prokhorova, T. A./Guguev, V. K., Bogatoo sarmatskoe pogrebenie v kurgane 10 Kobayakovskogo mogil'nika, *Sovetskaya Arkheologiya* 1, 142–161.
- RADU/SZEREDAI 2014  
Radu, C./Szeredai, N., Anthropological analysis of a skeletal sample belonging to the Sarmatian population inhabiting the territory at the East of the Pannonian Basin, *Journal of Ancient History and Archaeology* 1/3, 80–85. DOI: <http://dx.doi.org/10.14795/j.v1i3.65>.
- RAEV 1986  
Raev, B. A., *Roman Imports in the Lower Don Basin*. British Archaeological Reports, International Series 278 (Oxford: B.A.R.).
- RAJNA/DINNYÉS/KOVÁCS 2006  
Rajna, A./Dinnyés, I./Kovács, A., Cegléd 4/12. lelőhely (Intézeti és Bába-Molnár-dűlő). In: Simon, L. (ed.), *Régészeti kutatások másfél millió négyzetméteren. Autópálya és gyorsforgalmi utak építését megelőző régészeti feltárások Pest megyében 2001–2006*. Pest Megyei múzeumi füzetek 7 (Szentendre), 103–104.
- SHILOV 1959  
Shilov, V. P., Kalinovskij kurganyj mogil'nik, *Materialy i issledovanya po arkheologii* 60, 323–523.
- SHILOV 1975  
Shilov, V. P., *Ocherki po istorii drevnikh plemen Nizhnego Povolzh'ya* (Leningrad: Nauka).
- SIMON 2006  
Simon, L. (ed.), *Régészeti kutatások másfél millió négyzetméteren. Autópálya és gyorsforgalmi utak építését megelőző régészeti feltárások Pest megyében 2001–2006*. Pest Megyei múzeumi füzetek 7 (Szentendre).
- SIMONENKO 1977  
Simonenko, A. V., Novye sarmatskie pogrebeniya Nizhnego Podneprov'ya. In: Terenozhkin, A. I. (ed.), *Skify i sarmaty* (Kiev), 221–230.
- SIMONENKO 1981  
Simonenko, A. V., Sarmaty v Srednem Podneprov'e. In: Artemenko, I. I. (ed.), *Drevnosti Srednego Podneprov'ya* (Kiev), 52–69.
- SIMONENKO 1991  
Simonenko, A. V., Sarmatskie pogrebeniya so rvami kak istoricheskij istochnik. In: Kashuba, M. T. (ed.), *Drevnejshie obshchnosti zemledel'cev i skotovodov Severnogo Prichernomor'ya (V tys. do n. e. – V v. n. e)* (Kiev), 212–213.
- SIMONENKO 1993  
Simonenko, A. V., *Sarmaty Tavrii* (Kiev: Naukova dumka).
- SIMONENKO 1994  
Simonenko, A. V., The Problem of the Sarmanatian Penetration in the North Pontic Area According to Archaeological Data. In: *Il Mar Nero I* (București), 99–134.
- SIMONENKO 1997  
Simonenko, A. V., Eine sarmatische Bestattung vom Südlichen Bug, *Eurasia Antiqua* 3, 389–407.
- SIMONENKO 2001  
Simonenko, A. V., On the tribal structure of some migrations waves of Sarmatians to the Carpathian Basin. In: Istvánovits, E./Kulcsár, V. (eds.), *International Connections of the Barbarians of the Carpathian Basin in the 1st–5th centuries A.D.* (Aszód-Nyíregyháza), 117–124.
- SIMONENKO 2004  
Simonenko, A. V., Khronologiya i periodizatsiya sarmatskih pamyatnikov Severnogo Prichernomor'ya. In: Raev, B. A. (ed.), *Sarmatskie kul'tury Evrazii: problemy regional'noj khronologii. Doklady k 5-j mezhdunarodnoj konferentsii "Problemy sarmatskoj arkheologii i istorii"* (Krasnodar), 134–173.
- SIMONENKO 2012  
Simonenko, A. V., Bogatoo sarmatskoe pogrebenie u sela Vesnyanoe bliz Nikolaeva. In: *Zoloto, kon' i chelovek. Zbornik statej k 60-letiyu Aleksandra Vladimirovicha Simonenko* (Kiev), 207–226.
- SIMONENKO/LOBAJ 1991  
Simonenko, A. V., B. I. Lobaj, *Sarmaty Severo-Zapodnogo Prichernomor'ya v I v. n. e. (pogrebenie znati u s. Porogi)* (Kiev: Naukova dumka).
- SIMONENKO/MEL'NIK 2004  
Simonenko, A. V./Mel'nik, A. A., Eine sarmatische Bestattung im Kurgan Kamova Mogila, Krivoj Rog, *Eurasia Antiqua* 10, 2004, 269–280.
- SIMONENKO/MEL'NIK 2012  
Simonenko, A. V./Mel'nik, A. A., Sarmatskoe pogrebenie v kurgane Kamova Mogila. In: *Zoloto, kon' i chelovek. Zbornik statej k 60-letiyu Aleksandra Vladimirovicha Simonenko* (Kiev), 295–307.
- SIMONENKO/PODOBED 2012  
Simonenko, A. V./Podobed, B. A., Pozdnesarmatskoe pogrebenie v tsentral'nom Donbase. In: *Zoloto, kon' i chelovek. Zbornik statej k 60-letiyu Aleksandra Vladimirovicha Simonenko* (Kiev), 227–240.
- SKRIPKIN 1990  
Skripkin, A. S., *Aziatskaya Sarmatiya. Problemy khronologii i eë istoricheskij aspekt* (Saratov: Izdatel'stvo Saratovskogo universiteta).
- SMIRNOV 1964  
Smirnov, K. F., *Savromaty. Rannyaya istoriya i kul'tura sarmatov* (Moskva: Nauka).
- SMIRNOV 1984  
Smirnov, K. F., *Sarmaty i utverzhdienie ikh politicheskogo gospodstva v Skifii* (Moskva: Nauka).
- SÓSKUTI 2016  
Sóskuti, K., Középső bronzkori, szarmata, avar-, Árpád-kori településnyomok, valamint szarmata és avar kori temetkezések Makó, Dáli-ugarról (Előzetes jelentés az M43, 40., HT 43. lelőhelyen végzett régészeti feltárásról) / Middle Bronze Age, Sarmatian, Avar and Árpadian Age settlements and Sarmatian and Avar period burials at Makó, Dáli-ugar (Preliminary report of the excavations at Site M43, 40, HT 43). In: Kvassay, J. (ed.), *Régészeti kutatások Magyarországon 2011–2014 / Archaeological Investigations in Hungary 2011–2014* (Budapest), 76–96.
- STAVILÁ/CRAIOVAN 2020  
Stavilá, S./Craiovan, B. A., Sarmatian graves discovered within the archaeological site of Moșnița Veche – „Dealul Sălaș” (Timiș county, Romania), *Banatica* 30/1, 297–316.
- SUBBOTIN/DZIGOVSKIJ 1990  
Subbotin, L. V./Dzigovskij, A. N., *Sarmatskie drevnosti Dnestro-Dunajskogo mezhdurechya II. Kurgannye mogilniki Divizijskij i Beloleskij* (Kiev: Institut Arkheologii).

- SYMONENKO 1994  
Symonenko, O. V., Rann'osarmatskij period u pivnichnomu Prychornomor'i, *Arkheologiya* 1, 32–48.
- SZALONTAI/TÓTH 2003  
Szalontai, Cs./Tóth, K., Szeged-Kiskundorozsma-Nagyszék II. (26/72., M5 Nr. 34. lelohely). In: Szalontai, Cs. (ed.), *Úton-útfélen. Múzeumi kutatások az M5 autópálya nyomvonalán* (Szeged), 69–81.
- SZEKERES 1998  
Szekeres, Á., Sarmatska Necropola Subotica-Verušić, *Rad muzeja Vojvodine* 40, 107–147.
- SZEKERES 1999  
Szekeres, Á., Sarmatian cemetery at Bácsstopolya-Bánkert. In: Vaday, A. (ed.), *Pannonia and Beyond – Studies in Honour of László Barkóczi* (= *Antaeus* 24, 1997–1998), 492–515.
- SZEKERES/SZEKERES 1996  
Szekeres, L./Szekeres, Á., *Szarmata és XI. Századi temetők Verusicson* (Szabadka- Azotara).
- TĂNASE/MARE 2000  
Tănase, D./Mare, M., Pătrunderea sarmaților în vestul Banatului, în lumina unor noi descoperiri arheologice, *Studii și Cercetări de Istorie veche și Arheologie* 51, 3–4, 193–208.
- TÓTH/SZABÓ/HOMOKI 2015  
Tóth, K./Szabó, Á./Homoki, B., *Archaeological research at the Twin-barrows near Onga (Northeast Hungary) in 2015*, *A Herman Ottó Múzeum Évkönyve* 54, 2015, 275–292.
- TUTKOVICS 2015  
Tutkovics, E. K., *Szarmata temetkezések a bükkábrányi lignitbánya területén – Bükkábrány-Bánya, XI/A lelőhely szarmata sírjai*. *A Herman Ottó Múzeum Évkönyve* 54, 221–274.
- VADAY 1989  
Vaday, A., *Die sarmatischen Denkmäler des Komitats Szolnok* (= *Antaeus* 17–18, 1988–1989) (Budapest: Archäologisches Inst. der UAW).
- VADAY 1994  
Vaday, A., Late Sarmatian Graves and Their Connections within the Great Hungarian Plain, *Slovenská Archeologia* 42/1, 105–124.
- VADAY/DOMBORÓCZKI 2001  
Vaday, A./Domboróczki, L., Mezőszemere, Kismari-Fenek. Spätkaiser-frühvölkerwanderungszeitliches Gräberfeldsdetail, *Agria* 37, 5–206.
- VÁRADI 1997  
Váradi, A., Szihalom–Pamlényi-tábla. Késő szarmata – kora népvándorláskori telep és temető a IV–V. századból [Late Sarmatian-early migration period settlement and cemetery from AD 4th–5th century]. In: Raczky, P./Kovács, T./Anders, A. (eds.), *Utak a múltba: az M3-as autópálya régészeti leletmentései / Paths into the past: rescue excavations on the M 3 motorway* (Budapest), 117–119.
- VÖRÖS 1981  
Vörös, G., Későszarmata hunkori telep és temető Sándorfalva-Eperjesen, *Múzeumi kutatások Csongrád megyében* 1981, 25–31.
- VÖRÖS 1985  
Vörös, G., Hunkori szarmata temető Sándorfalva-Eperjesen, *A Móra Ferek Múzeum Évkönyve* 2, 1982–1983, 129–172.
- VÖRÖS 1988  
Vörös, G., Későszarmatakorai temetőrészlet Szeged Tarján városrészéből, *Communicationes Archaeologicae Hungaricae* 1988, 113–124.
- VÖRÖS 1996  
Vörös, G., Temetkezési szokások és viselet egy dél-alföldi szarmata temetőben (Szeged-Táapé), *Studia Archaeologica. A Móra Ferek Múzeum Évkönyve* 2, 111–176.
- VÖRÖS 2002  
Vörös, G., A Vasküti szarmata halmok leletei (Adatok a szarmata koporsók és gerendakamrák köréhez), *Studia Archaeologica, A Móra Ferek Múzeum Évkönyve* 8, 157–176.
- VÖRÖS 2005  
Vörös, G., A szarmata kori gyermek temetkezések jellemzői néhány temető adatai alapján (Előtanulmány a Madaras-Halmok temető feldolgozásához), *A Szántó Kovács János Múzeum Évkönyve* 7, 127–150.
- VYAZ'MITINA 1954  
Vyaz'mitina, M. I., Sarmatskie pogrebeniya u s. Novo-Filipovka. In: *Voprosy skifo-sarmatskoj arkheologii (Po materialam konferentsii IIMK AN SSSR 1952 g.)* (Moskva), 220–244.
- WALTER 2020  
Walter, D., Szarmata kerítőárkos temetkezések Csanádpalota – Országhatár M43 56. Lelőhelyről, *A Móra Ferek Múzeum Évkönyve, Új folyam* 7, 13–36.
- WALTER/PÓPITY 2020  
Walter, D./Pópity, D., *Szarmata kerítőárkos temetkezések Csanádpalota – Országhatár M43 56. lelőhelyről*. In: Bíró, Gy./Pintér-Nagy, K./Szebenyi, T./Felföldi, Sz./Takács, M. (eds.), *Új nemzedék. A szegedi Régészeti Tanszék tehetséggondozásának elmúlt évtizedei. Ünnepi kötet B. Tóth Ágnes, Kulcsár Valéria, Vörös Gabriella és Wolf Mária tiszteletére* (Szeged), 151–186.
- ZAJTSEV/MORDVINTSEVA 2003  
Zajtsev, Yu. P./Mordvintseva, V. I., „Nogajchinskij” kurgan v stepnom Krymu, *Vestnik drevnei istorii* 2, 61–99.