

# DISSERTATIONES ARCHAEOLOGICAE

ex Instituto Archaeologico

Universitatis de Rolando Eötvös nominatae



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Contact: [dissarch@btk.elte.hu](mailto:dissarch@btk.elte.hu)

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# Investigations of an Early Iron Age Siege

## Preliminary Report on the Archaeological Research Carried out at Dédestapolcsány-Verebce-bérc between 2020 and 2022

Gábor V. SZABÓ 

Institute of Archaeological Sciences, Eötvös Loránd University, Hungary  
[vasagab@gmail.com](mailto:vasagab@gmail.com)

Marcell BARCSI

Institute of Archaeological Sciences, Eötvös Loránd University, Hungary  
[bmarcell602@gmail.com](mailto:bmarcell602@gmail.com)

Péter BÍRÓ

National Archaeological Institute, Hungarian National Museum, Hungary  
[biro72@gmail.com](mailto:biro72@gmail.com)

Károly TANKÓ 

ELKH-ELTE Research Group for Interdisciplinary Archaeology, Eötvös Loránd University,  
Hungary  
[csishtar@gmail.com](mailto:csishtar@gmail.com)

Gábor VÁCZI 

Institute of Archaeological Sciences, Eötvös Loránd University, Hungary  
[vaczi.gabor@btk.elte.hu](mailto:vaczi.gabor@btk.elte.hu)

Péter MOGYORÓS 

Institute of Archaeological Sciences, Eötvös Loránd University, Hungary  
[mogyipeti5@gmail.com](mailto:mogyipeti5@gmail.com)

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**Abstract:** As part of a new research project, the team of the Institute of Archaeological Sciences of the Eötvös Loránd University has been investigating the Early Iron Age hillfort at Dédestapolcsány-Verebce-bérc since 2020. Based on the results of previous fieldwalk sessions and metal detector surveys, we conducted excavations in 2022 to investigate the effects of the Iron Age siege on the settlement. We unearthed the remains of two buildings, one of which was apparently damaged by fire. A metal detector survey was also carried out simultaneously with the excavations, yielding a Late Bronze Age and several Middle Iron Age depots comprising bronze and iron artefacts.

**Keywords:** Early Iron Age, fortified settlement, armed conflict, iron ingots, metal detector survey

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## Key site of a new research project

The research team of the Institute of Archaeological Sciences of the Eötvös Loránd University, led by Gábor V. Szabó, first explored the site of Dédestapolcsány-Verebce-bérc in 2008 and 2011. The metal detector surveys in these campaigns resulted in localising an Early Iron Age cemetery<sup>1</sup> and discovering the traces of an armed conflict, marked by Early Iron Age arrowheads.<sup>2</sup> A research project<sup>3</sup> was designed based on the archaeological evidence of the siege, and fieldwork, comprising fieldwalk sessions, metal detector surveys and excavations, started in and around the fortified settlement in 2020. As part of this project, the team conducted another excavation inside the hillfort in 2022 to collect more information on the progress, extent and consequences of the one-time siege.

## The aims of the research project

The main question of the research project that has included Dédestapolcsány among its target sites is what caused the major changes undergoing in the central zones of the Carpathian Basin between the 9th and 7th centuries BC. These changes included a fundamental transformation of inhabitation and settlement patterns; groups with weaponry of eastern origin appeared, attacking and destroying fortified settlements; the know-how of ironworking reached the Carpathian Basin for the first time and became widespread fast; and the customs related to the creation of depots changed. Besides, the research is also aimed to reveal who were the people inhabiting the Early Iron Age fortified settlements in the mountain ranges, preserving Late Bronze Age stylistic traditions; what was their relationship with the new mortuary communities with eastern connections appearing in the foothill area at the time (Mezőcsát culture); and what kind of armed conflicts took place in the period in question, and who were the attackers.

Parallel to these questions, the evaluation of the target sites' records may also provide information on the proportions and dynamics of the appearance of iron in household inventories. How long can iron artefacts be considered prestige items, and when did they become everyday objects?

The fortified settlement at Dédestapolcsány-Verebce-bérc was chosen to be a key site of the research project,<sup>4</sup> because it was attacked by a group of probably eastern origin who used early Scythian-type arrowheads in the second half of the 7th century.<sup>5</sup> The reconstructed siege of Dédestapolcsány-Verebce-bérc fits into a complex line of attacks on dozens of settlements in Central Europe in the period.<sup>6</sup> In most cases, the only evidence of the armed conflict is the arrowheads shot towards the settlement; the only exception thus far has been the hillfort of Smolenice-Molpír, where the outcome of the attack has also been revealed.<sup>7</sup>

1 TÓTH 2012; TÓTH 2017.

2 V. SZABÓ et al. 2014.

3 The research was supported by grant no. 138768 by the National Research, Development and Innovation Office. On other results of the project *Social and environmental crises during the Early Iron Age (10th–7th century BC) in the Carpathian Basin: causes, events and consequences*, see V. SZABÓ 2022; BARCSI et al. 2022.

4 Other target sites of the project are the hillforts of Cserépfalu-Méztető and Felsőtárkány-Várhegy (V. SZABÓ 2022).

5 V. SZABÓ et al. 2014; V. SZABÓ et al. 2021; V. SZABÓ et al. 2022, 32–36.

6 V. SZABÓ et al. 2014; CHOCHOROWSKI 2014, 32–43; HELLMUTH KRAMBERGER 2017; KLÁPA 2017; HELLMUTH KRAMBERGER 2021; V. SZABÓ 2022, 32–36, 9. kép.

7 PARZINGER – STEGMANN-RAJTÁR 1988; HELLMUTH 2006; MÜLLER 2012.

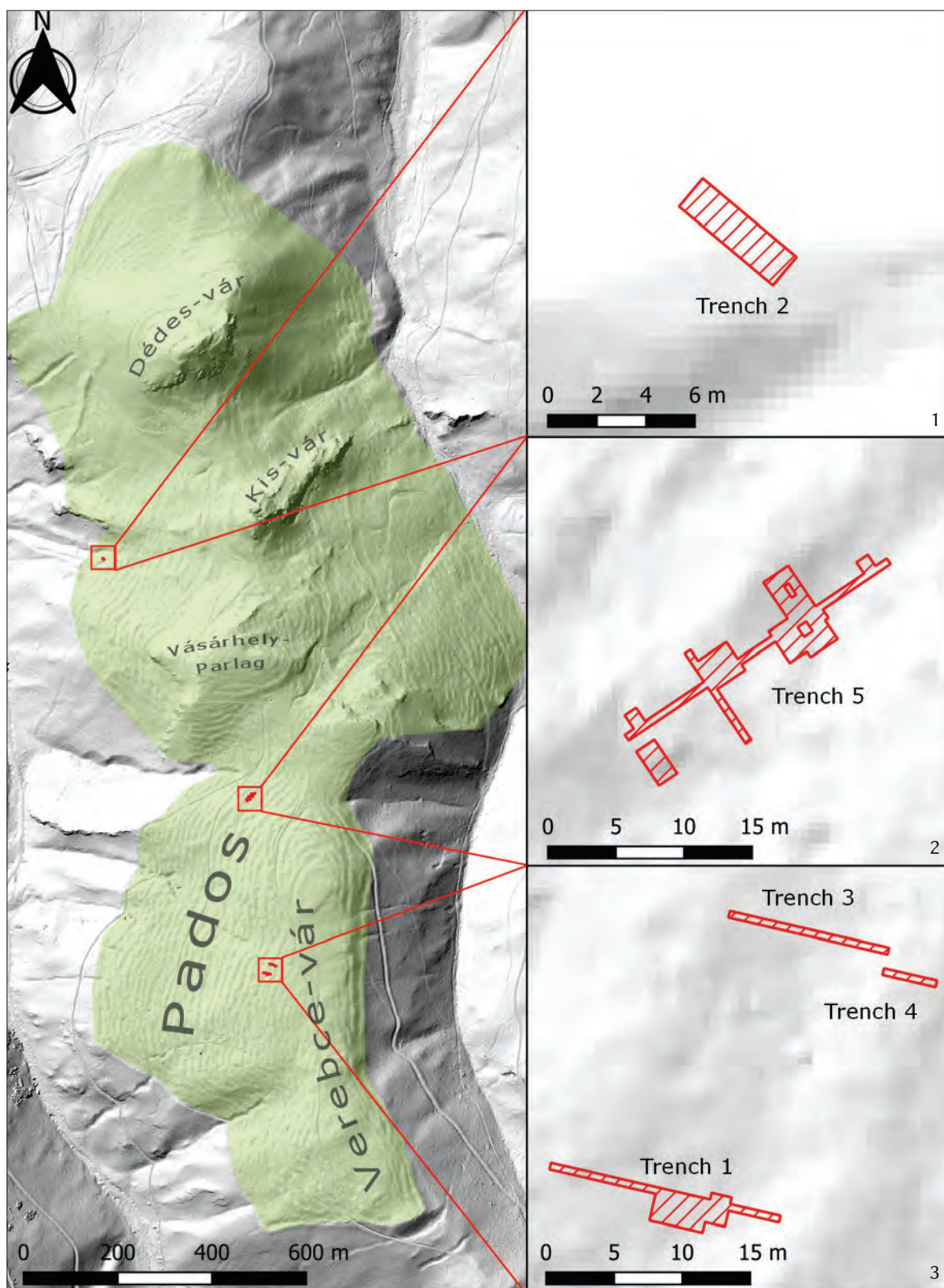


Fig. 1. Topographic map of Dédestapolcsány-Verebce-bérc and the trenches of the 2022 excavation campaign

The size of the site at Dédestapolcsány-Verebce-bérc, the abundance and highly informative character of the find material, and the intensity of the traces of the siege (e.g., hundreds of arrowheads found in the earthwork and inside the settlement and molten metal objects in the area of the former houses) give a fair chance for us to outline a well-founded narrative of the particulars of the siege.

## Topographic setting of the site

The Early Iron Age hillfort of Dédestapolcsány-Verebce-bérc is situated on a north-south ridge sloping down from the Bükk Plateau, the high central zone of the mountain range. The ridge is bordered by the Bán Stream from the west and the Baróc Stream from the east; it consists of three main sections. The southernmost top is the Verebce-vár at 646 m asl, connected in the north to the Kis-vár at 594 m asl by the Vásárhely-parlag, and the northernmost elevation, the Dédes-vár at 597 m asl. As their names suggest,<sup>8</sup> the two latter rocks, Kis-vár and Dédes-vár, comprise ruins of medieval forts,<sup>9</sup> while the western, northern and eastern slopes have been transformed into a system of terraces in prehistoric times, covering almost 150 hectares. The southern end of the Iron Age fortified settlement was reinforced with a high rampart and a double ditch; another 140-metre-long rampart section, also accompanied by a ditch, was discovered on the western slope below the medieval fort (Fig. 1).<sup>10</sup>

The 2022 field campaign focused primarily on the terraces covering the western slopes of the Verebce-vár, an area of approximately 40 hectares.

## Research history of the site<sup>11</sup>

Antal Fodor was the first to describe the prehistoric fortifications of the site in 1827, but he connected them to the 1567 siege of the medieval fort of Dédes.<sup>12</sup> In 1941 and 1944, Márton Róth (Rozsnyói) donated pottery fragments, animal bones and pieces of flint from a cave east of the medieval fort to the Hungarian National Museum;<sup>13</sup> later, Tibor Kemenczei classified these finds into the Neolithic and the Late

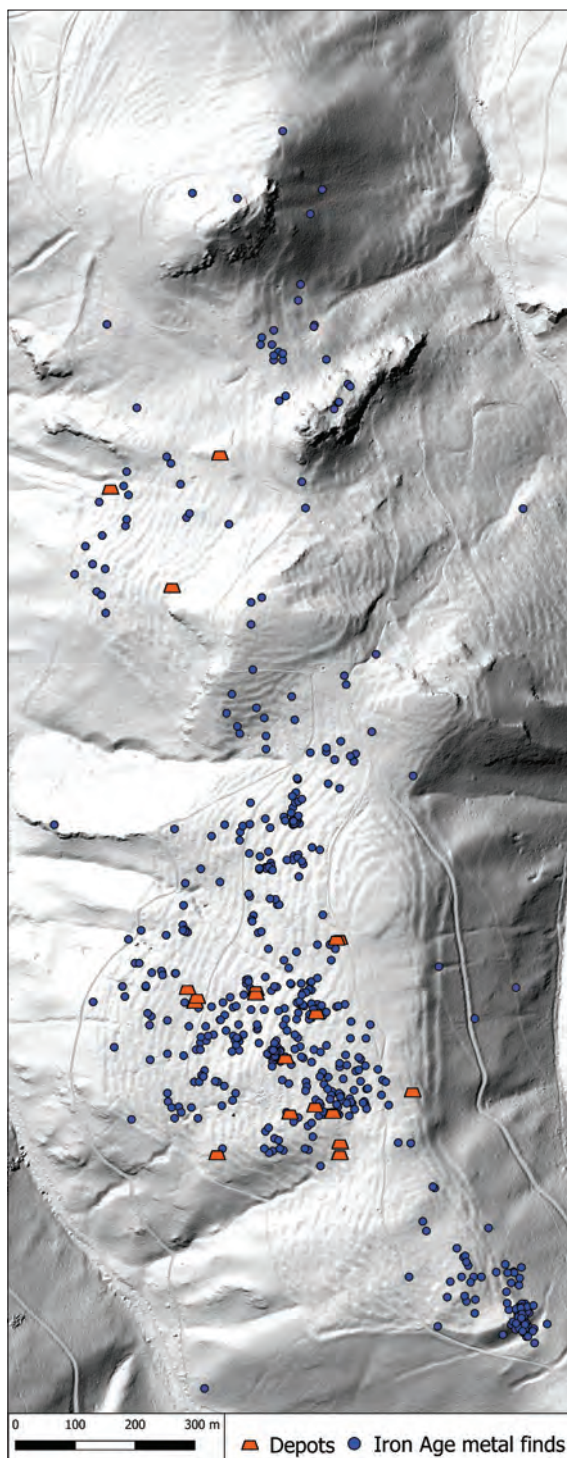


Fig. 2. Distribution of surface metal findings and depots on Dédestapolcsány-Verebce-bérc

8 “Vár” means castle or fort in Hungarian.

9 SZÖRÉNYI 2021.

10 CZAJLIK et al. 2014, 2.

11 For a recent summary of the research history of the site, see TÓTH 2017, 421–424.

12 NOVÁKI – SÁNDORFI 1992, 12; NOVÁKI et al. 2007, 34.

13 NOVÁKI 1988, 83; NOVÁKI et al. 2007, 34.





Fig. 3. Selection of bronze findings from Dédestapolcsány-Verebce-bérc. 1–2 – “Scythian” bronze arrowheads from inside the settlement, 3 – phalera disfigured by heat, 4 – “Scythian” bronze arrowheads molten into a lump, 5 – bronze loop with side rings, 6 – bronze bracelet with incised decoration, 7 – ribbed bronze pin with iron core (Donja Dolina-type), 8 – ribbed bow brooch, 9 – boat brooch (*Kahnfibel*), 10 – phalera

Bronze Age, respectively.<sup>14</sup> A minor research campaign by László Dobosi in 1974 yielded some more prehistoric pottery fragments for the museum’s collection.<sup>15</sup> Gyula Nováki started surveying the site in 1968; he outlined the setting of the settlement and the character and position of the earthworks.<sup>16</sup> Based on the recovered pottery, Tibor Kemenczei and Gyula Nováki assigned the settlement to the Kyjatice culture.<sup>17</sup>

After local residents reported to the Herman Ottó Museum in Miskolc the discovery of iron artefacts left behind on the site by illegal metal detectorists in 2004, Magdolna B. Hellebrandt and Tamás Pusztai surveyed the site. They collected fourteen iron lumps, iron socketed axes and socketed

14 KEMENCZEI 1970, 24; KEMENCZEI 1984, 129.

15 DOBOSY 1975, 20; NOVÁKI 1988, 84, NOVÁKI et al. 2007, 34.

16 NOVÁKI 1988; D. MATUZ – NOVÁKI 2002, 10.

17 KEMENCZEI 1970; NOVÁKI 1988, 88–89; KEMENCZEI 1984, 129; NOVÁKI – SÁNDORFI 1992, 13; NOVÁKI et al. 2007, 35.



Fig. 4. Selection of iron findings from Dédestapolcsány-Verebce-bérc. 1 – iron ingot, 2 – iron sickle, 3 – curved-back knife, 4 – socketed axe, 5 – axe with pointy protrusions on the sides (Ärmchenbeil), 6 – iron bit

chisels, awls, curved-back knives and a Certosa-type brooch; they dated the findings to the Ha C–D period and the Late Iron Age. They also collected pottery sherds, which Magdolna B. Hellebrandt assigned to the Kyjatice culture.<sup>18</sup>

Zoltán Czajlik, another researcher from the Institute of Archaeological Sciences of the Eötvös Loránd University, took aerial photos of the site in 2006. These allowed us to specify the topography of the site, revealing that the ramparts divided the prehistoric settlement in two. This indicated that the fortified settlement underwent a transformation during the Iron Age; the terraces and impressive defensive earthworks on the southern slope were probably also constructed then.<sup>19</sup>

18 B. HELLEBRANDT 2007.

19 CZAJLIK et al. 2008, 122.

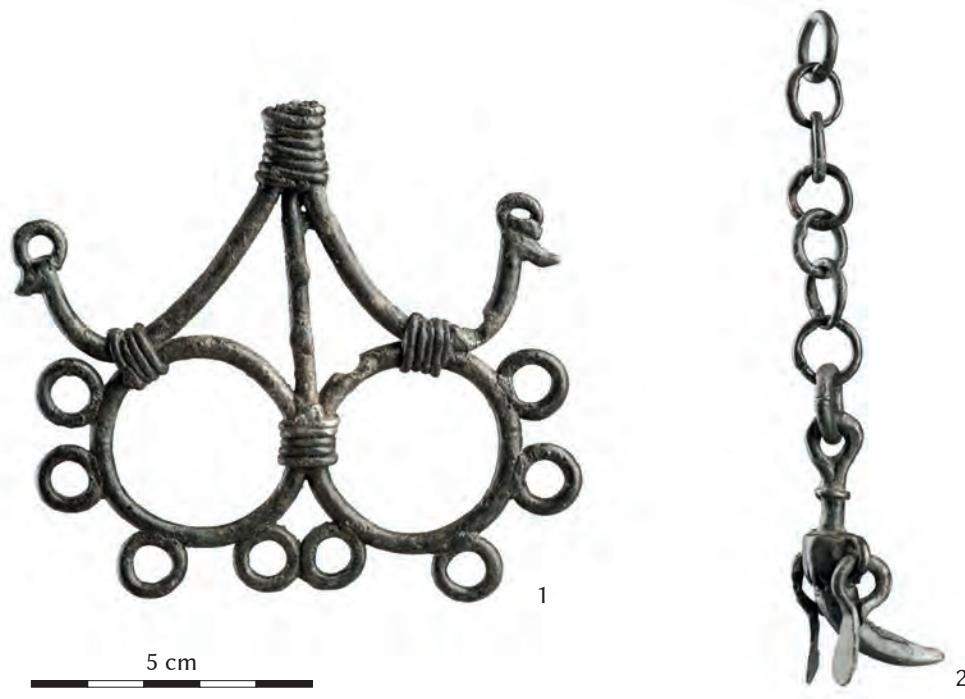


Fig. 5. 1 – bronze pendant, 2 – bronze chain with a bird’s claw-shaped pendant

Gábor V. Szabó and his metal detector research team from the same institution surveyed the site in 2008, collecting additional Early and Middle Iron Age iron artefacts and Late Iron Age bronze objects. The most outstanding discovery in this campaign was the identification of a Middle Iron Age cemetery and the excavation of four of its graves.<sup>20</sup> The evaluation of the burials was published by Farkas Márton Tóth in 2012.<sup>21</sup>

Zoltán Czajlik and a team of university students from the Institute unearthed eleven more graves in the cemetery in 2011.<sup>22</sup> They also conducted fieldwalk sessions, revealing that the proportion of Kyjatice-style pottery fragments is insignificant compared to both Middle Iron Age sherds (in which the site was abounding) and Late Iron Age ceramics (which were fewer but still fairly frequent) and also that none of the metal findings can be dated to the Late Bronze Age.<sup>23</sup>

Gábor V. Szabó and his team also worked on the site the same year and discovered, on a 30–40-metre long section of the rampart protecting the southern end of the settlement, the traces of an armed conflict that took place sometime during the Early or Middle Iron Age. The one-time siege was marked by 234 ‘Scythian’- or ‘eastern’-type bronze arrowheads and dozens of slingstones.<sup>24</sup> The attackers sieged the southeastern part of the earthwork, shooting from two directions toward a bastion.

20 V. SZABÓ 2009, 181–182.

21 TÓTH 2012.

22 CZAJLIK et al. 2014, 2–5; TÓTH 2017, 426–427.

23 CZAJLIK et al. 2014, 1–2.

24 In our previous reconstruction of the attack, the defenders answered the bow and arrow attack with a shower of slingstones at the southern rampart section (V. SZABÓ et al. 2014, 3–4), and the recovered slingstones were interpreted as reserves piled up along the inner side of the ramparts. Recent field research, however, did not recover any slingstones from the foreground of the ramparts. Therefore, it is possible that slings were also weapons of the attackers, and they shot the stones toward the defenders.

The following metal detector survey campaign was carried out by Gábor V. Szabó and his team in 2015 when they found some more Early Iron Age bronze and iron artefacts as well as more arrow-heads.

Commissioned by the Bükk National Park Directorate, a team of the Herman Ottó Museum in Miskolc, led by Klára P. Fischl and Gábor Szörényi, conducted another research campaign in Dédestapolcsány in 2018. They excavated some trenches (that proved negative) and involved metal detector specialist István Bacskai to conduct a metal detector survey on the plateau of the Verebce-bérc in the southern part of the site.



Fig. 6. 1 – horse-head-shaped strap divider from depot no. 2021/2, 2 – bronze bird-head-shaped strap divider, 3 – ram's head-shaped strap dividers



Fig. 7. Depot no. 2021/1, a find assemblage of golden jewellery items

### Metal objects and find assemblages recovered between the summer of 2020 and 2022

The so far last research campaign in the area started in December 2020 as part of the project described above.<sup>25</sup> Work was focused on the western terraces of the settlement in the first place because the dense undergrowth prevented illegal metal detectorists from looting that area.<sup>26</sup> The metal

25 This campaign, as well as all fieldwork hence, was carried out by the ELTE team led by Gábor V. Szabó, with the assistance of a team of volunteer metal detectorists led by Gábor Bakos, from Borsod-Abaúj-Zemplén County.

26 Illegal metal detectorists have plundered the site since the 1990s. We also identified old plunder pits and discovered that the illegal work is still going on nowadays. The information we could collect on the objects that illegal metal detectorists took away is minimal and cannot be verified. Our data providers mentioned a swastika-decorated bronze greave, found there also in the 1990s, as well as several Scythian-type arrowheads and parts of a Late Medieval iron armour with a helmet.



**Fig. 8.** Depot no. 2022/4, a find assemblage comprising iron bits, iron wagon accessories, and bronze horse harness parts. A – distribution of the depot's objects, with separate markings for the *in situ* iron bits, 1 – iron mouthpiece and shanks with a bronze phalera, 2 – iron mouthpiece and shanks, 3 – horse harness mounts and wagon accessories from depot no. 2022/4, 4 – cross-shaped strap divider from depot no. 2022/4

detector surveys between 2020 and 2022 recovered a number of Early and Middle Iron Age metal artefacts; they were conducted as part of preparing the excavations.<sup>27</sup>

27 Besides Early Iron Age objects, only a few artefacts indicate a Late Iron Age occupation of the site: a Celtic iron brooch, a bronze brooch with relief decoration and a large Celtic knife (*Hiebmesser*).



Fig. 9. 1 – depot no. 2021/4, a find assemblage consisting of iron sickles and iron socketed axes, 2 – depot no. 2022/2, a find assemblage consisting of iron sickles, an iron socketed axe, and an iron ingot

The aim of the metal detector surveys carried out as part of the project was to specify the dating of the settlement. We attempted to clarify whether life continued on the settlement after the siege and whether it is possible to separate the pre-and post-siege record of the site. We also wanted to improve our understanding of the structure of the settlement by evaluating surface findings. Does the distribution of surface finds outline the residential area of the elite? Is it possible to determine households from the scatter?

Over the two years of the research project, we spent 25 days in total metal-detecting the site and collected altogether 11 find assemblages and more than a thousand surface finds (Fig. 2). About 250 of the latter were bronze arrowheads (Fig. 3.1–2). Most of the newly discovered arrowheads were found in the inner zones of the hillfort and the western terraces, providing clear evidence that the attackers breached the walls and got inside the settlement. The bronze objects molten together into lumps, found at various points of the settlement, attest to the extent of the destruction (Fig. 3.3–4).

Most iron objects found with metal detectors were ingots (Fig. 4.1), followed by curved-back knives (Fig. 4.3) and socketed axes (Fig. 4.2). Cheek bits, flat axes with pointy protrusions on both sides (*Ärmchenbeil*) and sickles were less frequent (Fig. 2.4–6). Bronze loops with side-rings and diverse bracelet fragments were frequent, just like various types of phaleras, even openwork ones (Fig. 3.3,5–6,10). We have also found various types of brooches, with two boat-shaped ones (*Kahnfibel*) and an arc fibula with a ribbed bow among them (Fig. 3.8–9).<sup>28</sup> The most interesting of the recovered pins were those of the Donja Dolina-type, made from two different metals (Fig. 3.7),<sup>29</sup> as previously, only a single specimen of the type was known from the territory of today's Hungary.<sup>30</sup>



Fig. 10. 1 – depot no. 2021/6, a find assemblage consisting of iron ingots, 2 – depot no. 2021/7, a find assemblage consisting of iron ingots, 3 – depot no. 2022/1, a find assemblage consisting of iron ingots

28 GAVRANOVIĆ 2011, 195–196.

29 GAVRANOVIĆ 2011, 171–172.

30 A pin of the same type, the only analogy in the territory of Hungary, was found in a Scythian grave in Sajószentpéter. That piece, however, was (falsely) interpreted as a quiver lock (KEMENCZEI 1994, 89–90, Abb. 5,4).





Fig. 11. 1 – debris of a building in Trench 1, 2 – the layer under the debris, with a posthole and charred beams, in Trench 1, 3–4 – charred beam

Bronze pendants and mounts with bird head motifs count as unique, especially the jewellery item consisting of loops and decorated with stylised bird heads (Fig. 5.1). We have also recovered a bronze chain with a bird's claw-shaped pendant near that (Fig. 5.2).

The objects of three find assemblages scattered in relatively small areas (of a diameter of only 1–2 metres); moreover, some dislocated bronze zoomorphic strap dividers belonged to each. One of the assemblages comprised four horse-head-shaped, another two bird-head-shaped, and the third, two ram's-head-shaped pieces (Fig. 6).<sup>31</sup>

One of the most outstanding among the closed find assemblages discovered by the metal detector surveys was a small gold hoard hidden in a pottery vessel. It included elements of attire: ten pieces of ring jewellery with conical ends, eight round sequins, and a rectangular mount cut from a gold sheet (Fig. 7). The most significant hoard discovered contained two iron bit sets, horse harness mounts in bronze, and iron hubs of wheels (Fig. 8).<sup>32</sup> Furthermore, two hoards comprised iron sickles, socketed axes, and iron ingots (Fig. 9), while a three find assemblages included iron ingots (Fig. 10).



Fig. 12. Trench 5 with the stone foundation of a building

## Excavation strategy

The 2022 excavation campaign was prepared for years via intensive metal detector research, surface find collecting trips, and a fieldwalk session, aimed at clarifying the topographic relations of the site. Metal detector surveys focused primarily on the areas that used to be inaccessible due to the dense undergrowth (but have become more open by today), as well as the terraces of the western slope.

While in the preparatory phase, we concentrated on metal objects in the first place; we also recorded the coordinates of the findspots of querns and significant pottery fragments (the ones that could be dated). The position of the five trenches was determined based on the distribution pattern

31 Only a few similar strap distributors were known from the territory of today's Hungary before (TÓTH 2018); most analogies to the type are known from early Scythian find assemblages found east of the Carpathian Mountains (МАХОРЬХ 2017).

32 For more information, see the description of Trench 2.

of the metal objects: they were positioned on terraces with a higher concentration of interesting metal objects and arrowheads (Fig. 1.1–3). This way, we tried to localise features connected with the inhabitants of the settlement at the time of the siege and the destruction horizon of the siege.

As the excavations progressed, we expanded the trenches that contained finds and features. Besides excavating, recording, and collecting archaeological findings and features, we also took soil samples, always from a closed context.<sup>33</sup> Simultaneously, metal detector exploration of the site continued, yielding hundreds more, mainly Middle Iron Age bronze and iron objects and eight depots.

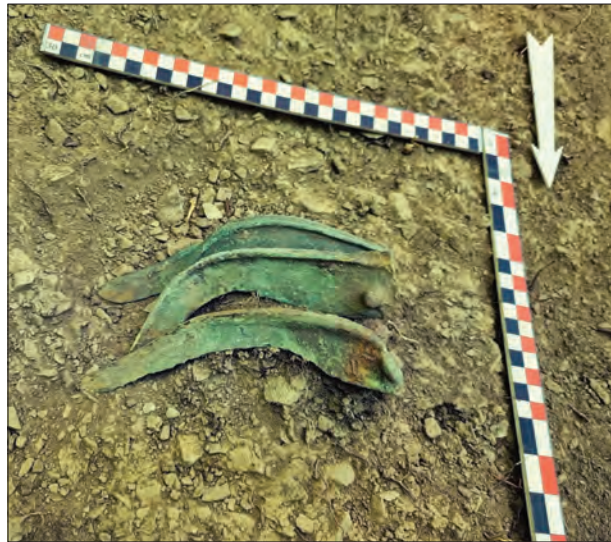


Fig. 13. Depot no. 2022/6, a find assemblage of bronze sickles

## Excavation trenches

Trench 1 was 16 m long and 0.5 m wide. It was opened on a prominent terrace of the “Pados” part of the site, where previous metal detector research brought to light four early Scythian horse-head-shaped strap dividers (Fig. 6.1), an iron bit, and several bronze arrowheads. The west-east oriented trench cut through the terrace; later, we expanded it both north- and southward. Under the top-most dark forest soil layer, we observed a yellow-light-brown erosion layer with pottery and daub fragments and charcoal, which thinned away toward the edge of the terrace. Besides, we found a stone concentration along the inner edge of the terrace, parallel with the next one above; these were probably the remains of the retaining wall of the upper terrace. Before the wall, at a relative depth of 0.65 m, we discovered two joined charred beams (Fig. 11.3–4) with fired daub fragments on their outer side. South of the beams, we found a thick layer of burned, brick-red debris (Fig. 11.1). The features may be interpreted as the corner and collapsed wall of a building destroyed by fire. The deep posthole, cut into the bedrock, only 0.4 m west of the beams was probably also part of the building (Fig. 11.2). The find material of the trench included Early and Middle Iron Age pottery sherds and daub fragments in quantities, as well as spindle whorls, clay weights, quern fragments and a curved-back iron knife.

The northwest-southeast-directed Trench 2 was opened on a slope in the partly eroded area of the western terraces under the Kis-vár (Fig. 1.1), where metal detectorists found two horse harness depots, at a distance of only 1.5 m from each other, in the spring of 2022. Both assemblages contained a horse harness set, together with an iron mouthpiece and shanks (Fig. 8.1–2) and with four iron hubcaps and various shape strap mounts (cross-shaped, oval, and round) scattered around them (Fig. 8.3–4). The trench was designed to cover the findspots of all related findings; we deepened it down to the yellow subsoil but could not observe any archaeological feature. It yielded abundant Early and Middle Iron Age pottery sherds, including fragments of, for example, containers and bowls. Also, this was the only trench to contain animal bones in significant quantities.

33 Archaeobotanical samples were evaluated by archaeologist and archaeobotany specialist Máté Mervel (Institute of Archaeological Sciences, ELTE). For the results, see his study in this volume.

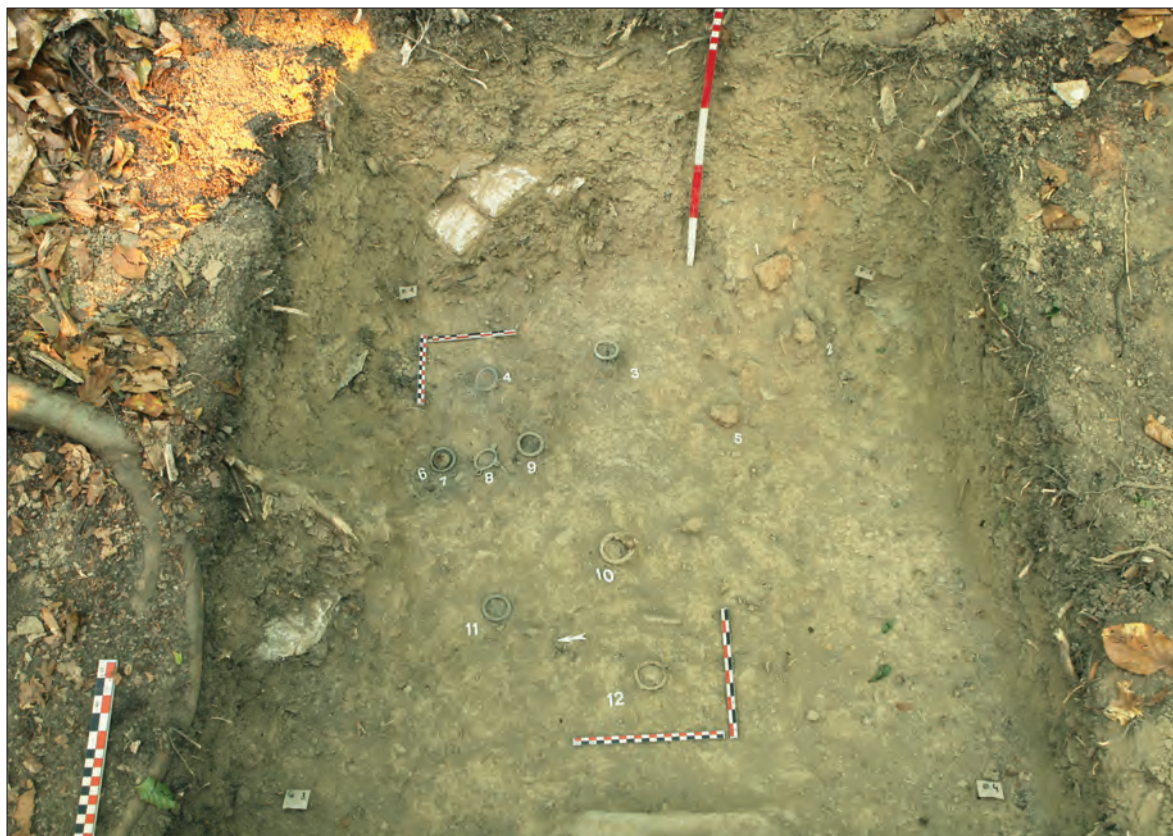


Fig. 14. Depot no. 2022/5, a find assemblage of bronze and iron rings



Fig. 15. Depot no. 2022/7, a find assemblage of bronze jewellery items

Trenches 3 and 4, both 0.5-metre wide and west-east oriented, were laid out on the same terrace as Trench 1 (Fig. 1.3). They only contained a few uncharacteristic sherds.

Trench 5 was positioned at the northern end of the “Pados” part of the site, on a terrace on the western side of the fortified settlement (Fig. 1.2), where uncommonly many finds were collected in the preparatory phase: four bronze arrowheads, two vessel handles in bronze, and two ram’s head-shaped strap dividers (Fig. 6.3). First we opened an 8×0.5-metre trench, then a 25×0.5-metre section perpendicular to the first one. Later, the combined trench was expanded in every direction to follow the discovered features (Fig. 12): a shallow pit and a shallow foundation trench with the base of a rubble wall. The stone foundations gradually eroded away towards the edge of the terrace in the south-east, while after 2 metres, its other end turned toward south-west at a right angle.



Fig. 16. Selection of finds from bronze depot no. 2022/10. 1 – original positions of the two fragments of a bronze phalera broken in two, 2 – double bronze phalera, 3 – round bronze phalera, 4 – star-shaped bronze object with a hole in the middle



Fig. 17. Depot no. 2022/8, a find assemblage consisting of iron curved-back knives and iron ingots. 1 – scatter of the objects of the depot, 2 – *in situ* items of the depot: iron knives and an iron ingot

We attempted to find the supposed parallel foundation trench to glean information about the extent of the former structure but did not succeed in exploring it either north- or southward of the first one. We also observed a significant concentration of pottery sherds—fragmented vessels—along the foundations. The trench yielded Early and Middle Iron Age pottery, a curved-back iron knife, and a small, decorated iron anvil.

## Explored depots of bronze and iron artefacts

Metal detector surveys, conducted simultaneously with the excavations, found eight prehistoric closed find assemblages with bronze and iron objects in total. The artefacts were in primary position in five cases, while three depots had already been disturbed by erosion and animals by the time of discovery.

All depots were excavated the same way: first, we opened a 1×1-metre square trench that covered their signals and expanded it whenever necessary. Soil quality and, in several cases, erosion prevented us from observing related features.

To our great surprise, one of the find assemblages, depot no. 2022/6, discovered on one of the western terraces, could be dated to the early phase of the Late Bronze Age. It contained four bronze sickles of a type that was used during the Br B2–C periods.<sup>34</sup> The sickles were carefully placed on top of each other (Fig. 13). The area surrounding this depot did not yield any similar artefact or fragment, but we collected a coeval flanged axe fragment only 200 m away, on the plateau of the Verebce-vár.

The other seven find assemblages unearthed simultaneously with the excavation could be dated to the Middle Iron Age. They contained artefacts of various types and materials, suggesting diverse reasons behind the act of depositing.

Depot no. 2022/5 consisted of bronze and iron loops scattered in a small area and a curved-back iron knife (Fig. 14). Some loops (especially the large ones with a quadrangular profile) may belong to the bridle or the curb or snaffle rein,<sup>35</sup> while others, like the bronze loop with four side-rings or the bronze bead, were probably part of the clothing instead.<sup>36</sup> This depot could be dated to the Middle Iron Age; analogies to the artefacts were also recovered from the graves of the coeval cemetery beside the settlement.<sup>37</sup>

Depot no. 2022/7 comprised a small heap of jewellery items in bronze and an iron knife (Fig. 15). Some loops with four side-rings were found somewhat away from the depot core; these had been displaced by erosion, but it is also possible that animals or plants disturbed the small depot. The find assemblage included loops with side-rings, two Donja Dolina-type bronze needles, a folded bronze band, and ring jewellery. Two of the bronze loops had textile and leather remains corroded onto their surfaces. The two bronze needles, the loops with side-rings, and a Ciumbrud-type ring jewellery item with a biconical end confirm the Middle Iron Age dating of the assemblage. Analogies to the ring jewellery item are also known from the coeval cemetery on the site.<sup>38</sup>

34 We thank Eszter Fejér the preliminary classification of the artefacts. FEJÉR 2020, 148–167; MOZSOLICS 1973, Taf. 33. 8–11, Taf. 45. 8–10, Taf. 48. 3–4.

35 TÓTH 2012, 72.

36 KOZUBOVÁ 2019, 99, 101; MOGYORÓS – BAKOS 2021, 98.

37 MARINESCU 1984, 79; KEMENCZEI 2009, 54; TÓTH 2012, 72, 3. t. 27–28, 7. t. 4–11; KOZUBOVÁ 2019, 99.

38 KEMENCZEI 2009, 85; TÓTH 2012, 4. t. 6; KOZUBOVÁ 2019, 108; DIZDAR – KAPURAN 2021, 154–175.



Fig. 18. Depot no. 2022/8, a find assemblage of iron ingots

Depot no. 2022/10 contained nine bronze horse harness mounts. The eight round bronze phaleras with double suspension handles on their back and an oval one with relief decoration were scattered in an area of about 15×5 m (Fig. 16).

Depot no. 2022/8 comprised seven iron ingots and nine iron knives that scattered over an area of about 10×10 m; only one ingot and four knives were still *in situ*, forming the core of the depot (Fig. 17).

Depot no. 2022/9 was the most outstanding in the season. The 94 iron ingots were discovered on one of the western terraces (Fig. 18). The average ingot weight was 1.54 kg; the depot weighed 144.85 kg in total. The assemblage was interred undoubtedly during the Middle Iron Age; the infill of its pit also contained several characteristic Middle Iron Age pottery sherds, two spindle whorls, and a blue glass bead. Besides, the location also supports this dating, as all metal objects recovered from the western terraces of the site could be dated to the Middle Iron Age. Furthermore, other find assemblages (for example, depot no. 2022/2) contained similar iron ingots together with iron socketed axes and iron sickles, types characteristic of the period.<sup>39</sup>

## Summary

The research between 2020 and 2022 unravelled a number of new details related to the history of the fortified settlement.

- Depot 2022/6 and a scatter find, a flanged axe fragment, provided clear evidence that humans first inhabited the area during the early centuries of the Late Bronze Age. However, there is still no proof of occupation at the very end of the Late Bronze Age (Kyjatice culture).

39 MIROŠŠAYOVÁ 1987, Tab. 2. 1–7; ČIŽMÁŘ et al. 2021, 34, Fig. 2. 33, Fig. 3. 33.



- Based on the recovered metal and pottery findings, the settlement had its heyday in the Early and Middle Iron Age (Ha C–D1 periods). Early and Middle Iron Age metal objects and quern and pottery fragments scatter all over the site, indicating an exceptionally intense inhabitation of the mountain ridge in this period. Sporadic traces of occupation at the start of the Late Bronze Age and in the Late Iron Age could also be detected.
- The excavations brought to light the remains of buildings, surface structures with upright walls. One of these, the house, the charred beams and debris of which were found in Trench 1, undoubtedly burned down during the siege. Consequently, unearthing the rest of the building has become one of our main tasks, together with identifying and excavating more buildings in order to understand the development, chronology, and inner structure of the settlement, revealing the pattern behind the use of terraces, and estimating the degree of success of the 7th-century BC siege and that of the destruction it resulted in.
- We gained new information about the Early Iron Age siege. It has become clear that the attackers not only targeted the southern rampart but actually breached the lines of defence and got inside the settlement. The burnt-down house in Trench 1, the hundreds of arrowheads collected from the terraces, and the lumps of molten bronze items indicate that fights also took place between the buildings in the innermost part of the settlement.
- The quantity of the Early and Middle Iron Age iron artefacts and pieces of raw material on the site is exceptionally high. Most iron ingots were made of reduced metal, except for two that consisted of iron refined by forging. Iron ingots were found in pure ingot depots as well as find assemblages also comprising other types of artefacts like sickles, socketed axes, and knives. The emergence of ironworking on the site must have been related to the iron reserves in the nearby Upponyi Mountains (at a distance of only 5–10 kilometres), which were also exploited in medieval and modern times. One of our future goals is to investigate the Iron Age presence at the geological iron sources.

The excavation team included archaeologists Gábor Bakos, Marcell Barcsi, Péter Bíró, Máté Mervel, Péter Mogyorós, József Puskás, Gábor V. Szabó, Gábor Váczi, archaeology students András Kovács, Ákos Kutyifa, Dorottya Láng, Csaba Demeter Nagy, Mátyás Peng, Dániel Urbán, Zsófia Török, metal detector technician Lajos Sándor, and volunteers Szabolcs Krisztián Csizi, Anrás Gömöri, Tamás Kapczár, Patrik Kormány, Tamás Puskás, Mátyás Sámuel Szabó, Nándor Sztrakay, István Vadász and Dávid Vinnai.

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