

# Szakony-Kavicsbánya cemetery from the age of the Hungarian conquest

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## ABSTRACT

In the spring of 1961, a graveyard with 7 graves from the age of the Hungarian conquest was found in a gravel pit near Szakony. The graves of 1 man, 2 women and 4 children were documented in the fully excavated cemetery. The nature and geographical location of the site have already attracted particular attention during the research, helping to determine the former extent of the settlement area. Biochemical research identified consanguineal relations between the deceased, thus research often identifies this site to date as a small-family cemetery. It was mainly the finds from horse burials that attracted attention in the material, and it is in this cemetery that the presence of metal-mounted harnesses used by men was first observed authentically. The observations regarding the female grave (no. 6) led to the first authentic reconstruction of a saddle decorated with silver plates too. The research also revealed the Carolingian origin of a harness ornament from grave 7, and almost exact Eastern European parallels of one of the rosette mounts. A new and interesting combination was the olive bead and the plate button from grave 6, examples of the former have only recently become known from Hungarian cemeteries previously thought to be devoid of finds in this respect. No less interesting is the question of the Eastern European parallels of harness mounts or parts of them, which do not exclude the possibility that they were made further east of the Carpathian Basin. But it cannot, of course, be ruled out that the similarities can be interpreted as traces of a system of contacts with the East that existed in the 10<sup>th</sup> century. Perhaps the former possibility cannot be dismissed either, together with the dating of the cemetery to the end of the 9<sup>th</sup> century and the early decades of the 10<sup>th</sup> century, as suggested by scientific dating. In the case of the deceased, the archaeogenetic analysis of the assessable samples refuted the existence of any kinship links, so it is certain that it was not the members of a small family based on consanguinity who were laid to rest in the Répce Valley sometime in the early 10<sup>th</sup> century.

**KEYWORDS:** Hungarian conquest period, cemetery, small family, equestrian burial, saddle, horse harness with belt mounts and rosettes, olive bead, plate button

## Introduction

On the morning of 21 February 1961, Gyula Koltay, headmaster of the school in Szakony, informed the Liszt Ferenc Museum in Sopron that a grave had been discovered during the excavation of material in a gravel pit north-east of the village (Image 1, 1). Museum archaeologist Gyula Nováki travelled to the site, where he excavated the underground part of the burial site that had been disturbed in the middle area, and then informed the Repository of the Hungarian National Museum about the grave's discovery. The Repository appointed István Dienes to carry out the excavation; Dienes arrived in Szakony together with Nováki on 14 March. During the 11 days of the excavation, in addition to two Bronze Age graves, six other graves from the cemetery originating from the period of the Hungarian conquest were found.<sup>1</sup>

## Presentation of the cemetery

The site is located in the western part of the lowland-type, barely dissected and perfectly flat Rápce plain, on a slight, gravel-bottomed slope situated between the once wider, watery valley of the Rápce and the Pócs stream. During the excavation, an area of about 180 m<sup>2</sup> was explored (Image 1, 2), so the cemetery was clearly marked out, and at most, some graves were only destroyed in the already excavated area.<sup>2</sup> This can be confirmed by the fact that during the excavation of the prehistoric cemetery in 1959–60, Gyula Nováki was told by the workers that skeletons had been found in this part of the mine before.<sup>3</sup> Unfortunately, it was not clear from the narrative whether these were shrunken or stretched position burials, and whether they originated from the prehistoric or the conquest era.

A total of seven graves were discovered in the cemetery (Image 1, 3): in addition to the grave found first of a 52–61 year-old male (1), the graves of two females, aged 51–57 (6) and 28–32 (7), as well as four graves of children aged 1.5–2 (2), 7–8 (3), 4.5–5.5 (4) and 4–5 (5) were also found. The man in grave 1 was a strong, robustly built individual, 168 cm tall when alive with a 3.6×1.5 cm lesion on his skull. Part of the frontal bone was detached as a result of the cut caused by a weapon, but the man survived the injury based on the bone resorption seen as a result of surgical intervention.<sup>4</sup>

The graves of the three adults had an approximately similar northwest-southeast orientation. Three of the children's graves were oriented towards the west (2–3, 5) and the fourth towards the north-northwest. The less uniform orientation of the children's graves

1 Dienes 1962; Horváth 2020, pp. 60–66.

2 "Some time ago, (...) several graves were destroyed. (...) Several graves situated to the NE from this grave (Grave 1 – H.C.) might have been destroyed." (Erdélyi 1995, 96).

3 HNM A.D.R. w/o i.n.

4 Éry 1979, pp. 178–179.

compared to those of the adults may have been due to somewhat less attention being paid to burial practices.<sup>5</sup> It was also observed that the children's graves were shallower compared to the adults' graves, which were dug in the gravel subsoil that is more difficult to work with. In addition to the simple shaft graves, the southern side of grave 7 had a small, symbolic hollow carved into it.<sup>6</sup> The deceased were laid in the pit in a supine, stretched-out position; the arms of the woman buried in grave 6 were bent at the elbows and her hands were placed on the edges of her hips, while in grave 7, the arms, probably also bent at the elbows, were positioned slightly away from the body.

The jewellery set of the deceased in grave 6 contained 1 gold wire hoop located at the lower part of the humerus, suggesting it may have been buried in a different manner from the way it was worn, or it may have been associated with the braided hair disc lying next to it. Unlike the majority of gold hoops,<sup>7</sup> this object was found in the grave of a woman. Although its position is unknown, the wire hoop adorned with a cowrie in grave 2 could certainly have been a head ornament, as its compressed ends probably rule out its use as an earring (Image 2, 1). A beaded drop earring was displaced by disturbance in grave 7; judging from the patina stain on the mastoid part of the left-side temporal bone, the earring may have originally been located there.

The smaller beads observed at the cervical vertebrae in grave 6 may have been strung and used as a necklace or may have adorned the neck of the shirt, while the larger beads found at the lower ribs may also have been sewn onto the dress, or possibly decorated the hair braiding discs. The positioning of the latter bone discs corresponds to the general wearing position of metal discs, but, unlike their metal counterparts, they may have been fastened through the holes in their middle. The beads around the skull in grave 5 and similar finds in grave 2 may have been used as necklaces. The collection of beads includes various metal and glass beads (Image 2, 3–5), among which the olive beads from grave 6 (Image 7, 1) are of particular interest: according to a recently published collection of material, this type of bead may be among the first found in Hungary,<sup>8</sup> along with a bead from Felsőzsolca and perhaps a bead from Piliny-Leshegy.<sup>9</sup> (Image 7, 3) These beads are most commonly found in the Moravian and Bavarian parts of the Czech Republic. However, present-day Slovakia and Austria are on the periphery of their distribution area,<sup>10</sup> and thanks to the aforementioned finds, northern Hungary can now be added here too.<sup>11</sup> (Image 7, 4) The beads found in Szakony belong to the most widespread, four-pointed, green-coloured variant of

5 Tomka 1975, p. 59.

6 Varga 2013, pp. 311–312.

7 Mesterházy 2013, p. 207.

8 Košta–Tomková 2011, p. 349; Košta–Tomková 2012, p. 204.

9 Horváth 2020a, p. 88.

10 Košta–Tomková 2012, p. 204.

11 Once again, I would like to thank Réka Fülöp (Archaeological Heritage Institute of the Hungari-

the type, measuring 2.2×1.2 cm, which makes them larger than the Bavarian specimens, and more similar to those from the Czech areas. Another unique piece is the white opaque disc-shaped glass bead found in the same grave (Image 2, 5), which is similar to the ones found on Late Avar drop bead earrings. Another atypical specimen among the Carpathian Basin findings is the set of three black opaque glass beads with a rectangular cross-section (Image 7, 5), which are similar in material to some Avar age beads; beads of the same shape and material were found in the Bolshiye Tigany cemetery. The sawtooth-shaped dangler (Image 2, 2), presumably worn around the neck by the child in grave 2, and which perhaps had a religious function<sup>12</sup>, is similar to danglers found in grave 73 of Szob-Kiserdő and in the cemetery of Csongrád-Vendelhalom.<sup>13</sup>

Among the silver strap bracelets in grave 1 there was one piece of jewellery with a widening, slightly pointed end, while the ends of the bracelets in grave 7 had a rounded shape. All of these findings are thicker and made of silver, and therefore they have to be separated from the ribbon bracelets in grave 6,<sup>14</sup> which were also ornaments of the funeral garment. These bracelets were joined together, perhaps after having been resized or damaged. Like most bracelets of this type, they were undecorated<sup>15</sup> and were found in pairs.

Graves 1 and 6 both contained a gold ring with a blister-shaped head. The exact wearing position of the former is not known; the latter was found on a finger of the right hand, located 25–30 cm from the other bones of the hand, with the hoop cut crosswise (Image 2, 6). If the latter was done in order to make it easier to place the ring on the hand of the deceased affected by rigor mortis, it is certainly not probable that the three fingers of the deceased were later cut off and placed next to the thigh along with the ring. The ring in grave 1 was made from 14 carat gold, probably a combination of 60% gold and 40% tin. Grave 6 also contained a ring whose material was mixed with tin; both rings had a ruby setting.

A low number of metal dress ornaments were found; in addition to the gilded silver rosette from grave 2, a bronze disc from grave 4 may have adorned the chest of the garment. In graves 2 and 7, the garments were fitted with small shank buttons (Image 6, 6); the garment in the latter grave reached at least to the waist of the deceased, judging by the position of the buttons. I do not know of any exact parallels of the larger decorative buttons circled with bead-wire found in grave 6 (image 7, 2) in the contemporary finds of the settlement area in Hungary populated during the conquest.<sup>16</sup> Because of their spherical body, the silver pair of buttons in grave 93 at Szeged-Algyő may be mentioned as a fair, but

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an National Musuem) and Miklós Béla Szőke (Research Centre for the Humanities-Archaeological Institute) for their helpful advice on the beads.

12 Dienes 1972, p. 48.

13 Bakay 1978, p. 44, p. 140.

14 Kovács 2018, pp. 169–173.

15 Kovács 2018, p. 169.

16 Mesterházy p. 2000.

not perfect analogy.<sup>17</sup> The bead-wire fastening of the decorative buttons does not appear in the 9<sup>th</sup> century finds from the Zalavár area,<sup>18</sup> but is not entirely unknown in the Carolingian jewellery of the Eastern Alps<sup>19</sup> or in the Moravian area.<sup>20</sup> However, this technique was undoubtedly a rarer solution on decorative buttons.<sup>21</sup> It is much more common on the plate orbs of some earrings. Geographically, the closest to it are the larger plate buttons in the cemetery at Oroszvár,<sup>22</sup> but the material, size and decoration of these buttons are different. It is perhaps worth mentioning that, according to Lajos Bella's report, in grave 4 excavated in the nearby Jobaháza the wooden buttons were covered with textile, and silver plates were nailed over the textile.<sup>23</sup> In both women's graves, footwear decorated with mounts was also observed, but unfortunately we do not know anything else about them beyond the mere fact that they exist (Images 2, 7–8).

Weapons were only placed in the man's grave during the burial. The bow with 2 bone plates on its handle (Image 2, 9) was perhaps laid on or next to the body of the deceased in such a position that the handle was at waist level. Judging by a few surviving pieces of metal mounting, the arrows for the bow were placed in a quiver on the man's chest, with the mouth of the quiver at the right side of the neck. However, one arrow, or perhaps only the broken-off tip of the arrow, was removed from the quiver and laid on the left side of the other arrows, in the opposite position.

The iron knife may also have been placed at the area around the disturbed pelvis in grave 1; a similar utensil or work tool was not, however, buried with the women in graves 6 and 7, despite the fact that the animal bone found suggests they would have needed it in the afterlife as a utensil to eat the meat dish placed in the grave,<sup>24</sup> or to process it for consumption.

The food items were placed behind the head of the deceased in graves 1 and 7, and near the knee of the right leg in grave 6. The bone suggests that grave 1 contained part of a cow<sup>25</sup>. It is not known whether graves 6 and 7 also contained cattle or whether, being female, the deceased were given provision made from the meat of some other animal. However, as far as the placement of food is concerned, it appears that no difference was made according to sex with regard to which part of the grave the food was placed in.

17 Kürti 1979, 336, tablet II, 4.

18 I would like to express my thanks to Miklós Béla Szőke (Research Centre for the Humanities–Archaeological Institute) for his kind information and valuable advice on the plate buttons!

19 Petschko 2013, pp. 41–42.

20 Hanuliak 2004, pp. 177–180.

21 Ottenwelder–Děd–Barackova 2014, pp. 270–271.

22 Horváth 2014, p. 179

23 Bella 1892, pp. 64–66.

24 Révész 2008, p. 429.

25 Révész 2006, p. 417.

All three adult graves contained the head, legs and harness of the slain horse; all harnesses were decorated with metal ornaments. According to the types of equestrian burial, in grave 1 the ends of the horse's feet, with the hoofs pointing towards the head of the deceased, were laid against the left foot of the man, and the horse's head, oriented in the same way, was placed on top of its feet. In grave 6, the ends of the horse's legs were placed under the back of the horse's head, lying next to the left thigh of the deceased; the horse's legs were partly on top of each other but in different positions: the hoofs of the upper legs were facing west, while the hoofs of the lower legs were facing east. In grave 7, the head of the horse, facing west, was next to the left leg, and next to it and below it were the ends of the legs with their hoofs similarly oriented. In all cases, therefore, the horse's head lay to some extent partly on its feet.

Grave 1 also contained very well-preserved leather parts of the horse harnesses, the remains of which could be excavated in 5–20 cm pieces (Image 3, 1). Based on the grave drawing, the strap found on the right side of the horse's skull was attached to the bit, i.e. the bit was probably attached to the bridle decorated with mounts. Based on the photographic evidence of the leather remains, the edges of the longer straps were probably hemmed. Nováki even noticed that these were sewn to the straps running perpendicular to them. Photographic evidence suggests that the strap, decorated with small mounts, was about 2.5 cm wide, and the larger round mounts were slightly wider, with cross straps sewn underneath. A piece of the cross strap was also observed under the longer strap on one of the smaller leather pieces decorated with round mounts. As I mentioned, the strap was hemmed in at both edges; based on one of the photographs of the grave, it was estimated to be about 5–6 mm thick, but here too the edges of the strap may have been folded in two and then sewn down, i.e. the actual thickness was about half of the estimated one. This is only an approximation, however, as the leather, which had been in the ground for centuries, was certainly not its original size when excavated. The strap decorated with wider mounts must also have been about 2.5 cm wide, and the edges also show a seam mark, but one detail shows that the strap might have been folded in two across its entire width, and not just folded back at the edges as in the previous case. I did not find any evidence of a similar solution on the belt mentioned first, but belts folded in two can also be observed in the Sárospatak-Bak-sahomok find, except that these do not contain any known seam, so the existence of this phenomenon cannot be ruled out. As the wider mounts could have been used to decorate the strap running across the horse's chest, this would also justify the use of a stronger strap.

Of the two straps running along the right side of the horse's skull, the higher one remained in the most intact state, the strap could be traced almost to the back of the horse's skull (Image 3, 2). The end of the strap with the decorated side facing upwards was closed by one strap end, followed by two smaller mounts in the shape of a belt mount (Image 3, 3) and then one smaller round mount. Here, the piece was joined by a strap running perpendicularly, which appears to show three mounts. After the round mount, towards the back of the horse's skull there were nine more ornaments in the shape of belt mounts with the

tip pointing towards the nose of the horse's skull, followed by one larger round ornament on the strap. Then, the direction of the ornaments in the shape of a belt mount turned 180 degrees and from there were arranged with their tips facing the opposite direction. Four pieces can be identified from the grave photographs and based on one of the intact leather straps, but it cannot be ruled out that there may have been an additional piece in the same row. It is now impossible to determine from the photographs whether the forehead strap was attached to the strap at the larger round mounts, but logically, there is no argument against it. Below this strap, slightly deeper and only marginally covered by the previous one, there was another leather strap, observed further away from the horse's skull, the end of which extended slightly beyond the first one, lying in an arched position on its edge, pointing towards the nose of the horse's skull. No mounts are visible on most of the piece shown in the photo; however, one mount and one strap end can be observed on the side of the strap lying on its edge facing the horse skull, meaning that it was mostly turned downwards on its decorated side, as also reported by Gyula Nováki.<sup>26</sup> The remains of the strap can be traced approximately to the eye socket of the horse's skull. Perpendicular to these straps, at a length of about 12–14 cm, there are further strap remnants sewn to the inner sides of the longer ones. At the ends of the straps, there is a distinctly angular strap end (?), hemmed at the edge, which may constitute a separate strap (perhaps connecting the forehead strap and the noseband).

Some pieces of the wider mounts, partly openwork (Image 3, 3), were located at the back of the horse's skull, about the width of the skull, one behind the other, with their tips pointing towards each other. At least five such pieces were located in the posterior part of the skull, about 6–8 cm away and slightly deeper, and five mounts were identified behind the skull as well. Further pieces, some of them openwork, are visible to the right and left of the skull, but predominantly to the right.

In the remains observed in the grave on the right side of the horse's skull, we can identify the bridle,<sup>27</sup> which was placed tied/folded in the grave during the burial, with the inner sides of the straps placed side by side, so that the forehead strap and the noseband lay to the right of the horse's head, approximately in the position in which they were placed on the horse's head. Different bridle types from the 10<sup>th</sup> century have now been classified, including versions without a nose band and with a forehead frame besides bridles with a traditional structure.<sup>28</sup> The bridle found in Szakony, reconstructed by István Dienes, can be classified as one of the traditionally structured bridles with cheek straps, a forehead strap and a noseband<sup>29</sup> (Image 3, 4). The remnant of a strap with a square closure, mentioned at

26 HNM A.D.C. 66/1961.R.

27 Dienes 1972, 24, Image 7

28 Révész 1996, p. 77; Petkes 2017, p. 46.

29 Révész 1996, p. 77.

the noseband, may be a remnant of the leather connecting the forehead strap and the noseband. However, it seems somewhat uncertain to me whether this piece could have been decorated with narrower mounts as they are not mentioned in the grave description, are not depicted in the grave drawing, and cannot be found in the grave photographs. If there were indeed no metal ornaments on the piece, we cannot rule out the possibility that there may have been three pieces at each of the points connecting to the noseband.

Of the wider mounts, those at the end of the burial pit behind the horse's skull were probably on a single strap, and may have been a continuation of the five mounts immediately behind the horse's skull. These were quite close together on the strap. It is questionable in which direction the mount on the left side of the back of the horse's skull, 8–10 cm from the other mounts, was positioned, and thus in which row of mounts it fitted. Based on its position, it is more likely that the slightly obliquely positioned mount behind the right eye socket of the horse's skull belonged to the five mounts observed on the horse's skull. Partly because of this uncertainty, several possibilities for reconstructing the harness can be considered. It is possible that each mount was fastened onto a strap, bent in a "U" shape and placed behind and to the rear of the horse's head, in which case the strap and thus part of the mounts would have been half tilted and partially upright, running in an arc between the two known rows of mounts at the left rear part of the horse's skull. This possibility can partly be called into question given the lack of data on mounts lying in the observed place and position. However, the mounts on the horse's skull and behind it, lying face upwards, had their tips facing each other, which would allow for this possibility on the assumption that, in defiance of symmetry, the strap was not decorated along its entire length, but only at certain parts. On the other hand, the mounts facing each other could also raise the possibility that two straps were placed in the grave, which faced each other judging by the position of the mounts. The mounts could therefore have been used to decorate the chest strap or both the chest strap and the rump strap, and the strap or straps were placed at the end of the horse's head during the burial.

The position of the saddle, presumed given the presence of the stirrups and the girth buckle, is indicated by the stirrup on the right side of the horse's skull. Since the stirrup was under the bridle strap, it may be assumed that it was placed to the right of the horse's head. The dislocated bit with a side rod was probably attached to the bridle at the time of the burial; the crested mouthpiece of the bit permitted easier control of the horse.<sup>30</sup>

The most significant part of the harness in grave 6 was probably the saddle decorated with metalwork, as it is the first example of a saddle with a silver plate decoration to be observed intact.<sup>31</sup> The main dimensions were recorded during the removal of the earth, and the artefact was then encased in paraffin and lifted out; its detailed dismantling and

30 Dienes 1966, p. 216.

31 Mesterházy 1993, p 290.



documentation took place in the museum (Image 4, 1–2). The reconstruction of the saddle with the metal decoration is one of the earliest such reconstructions,<sup>32</sup> which Gyula László also contributed to (Image 4, 3–4).

Another interesting find discovered in grave 6 is a pair of round, long-eyed stirrups (Image 2, 10), which were buried next to the saddle. Dienes referred to their Avar character. At 19.3 cm in height, the stirrup is comparable to the largest of the Avar stirrups, but this size is no longer typical of 10<sup>th</sup> century stirrups. Such large stirrups can only be found among the Carolingian-Normann type or other similar ones that were probably not made locally either. It is an interesting coincidence that the sturdy, straight-soled stirrups looted during raids also come mainly from women's graves.<sup>33</sup> A rectangular eye standing on its shorter side, with an openwork lower part and ribs protruding from the plane of the eye on both sides, enclosing the stirrup strap, can also be seen on long-eyed stirrups of the late 6<sup>th</sup> and early 7<sup>th</sup> centuries (the Avar age). However, a similar eye design is rare on stirrups from the 10<sup>th</sup> century. Geographically, the closest parallel is a stirrup found in Vasasszonyfa, about 10 km south of Szakony,<sup>34</sup> on which the eye is very similar, but the pear shape of the stirrup does not show much similarity. The situation is similar in the case of a pair of stirrups from Hejce, almost on the other side of the occupied area,<sup>35</sup> on which the eyes are also elongated and the ribs run along both edges, but these stirrups are pear-shaped too. A further, slightly fan-shaped specimen with a long eye was found further east, in Tarpa.<sup>36</sup> Both rhombic and oval stirrup arms originating from the Early Avar period have been found, but the rhombic shape is more common in the 10<sup>th</sup> century finds, while the oval shape is much rarer to my knowledge. Of the ribs running along the bottom of the stirrup, the middle one, which can be regarded as a continuation of the arms, is very pronounced. A similar solution – with a less marked form and with a different shape of stirrup – appears in the 10<sup>th</sup> century finds originating from the Carpathian Basin; the southern regions of the Urals also offer a good analogy, including the shape of the stirrup.<sup>37</sup> At the same time, in terms of their condition these two stirrups are similar to the ones of the Early Avar period, which have also survived in good condition as a result of good forging techniques<sup>38</sup>, in contrast to the highly fragmentary – but typically 10<sup>th</sup> century type – stirrups found in graves 1 and 7 of the cemetery, which probably points to the technological difference between the two types of stirrups. I would find it difficult to pinpoint the origin of the stirrups, but their secondary use must

32 Mesterházy 1993, p. 290; Mesterházy 1997, pp. 38–39.

33 Kovács 2001, p. 13.

34 Kiss 2000, 257, 86. t.

35 HNM Department of Archaeology 9/1898.1–2.

36 I would like to thank Attila Jakab (JAM) for the information on this find.

37 Komar 2018, p. 188.

38 Fodor n.d.

certainly be taken into account,<sup>39</sup> as well as the question why such a pair of stirrups was used by the deceased or why it was buried with him.

From grave 6, three types of metal mount horse harness were unearthed, as well as some small strap ends with lion designs.<sup>40</sup> Some of these, according to István Dienes, were placed along the longitudinal wall of the grave, and then in a line curving towards the bit and extending under the saddle. He also observed that the bit was partly disconnected from the bridle, given that one of the strap sections did not bend towards the bit but was extended along the wall of the grave (Image 5, 1). Based on the grave drawing and photographs, some of the 22 rounded mounts (Image 5, 2) lay in a closed arrangement between the horse's leg bones and the wall of the burial pit, with their frontal faces up or down, or less frequently, on their sides to varying degrees. The face-down mounts, five in total, were closer to the wall of the burial pit, spaced about 5–7 mm apart, in a slightly curved line. Towards the end of the burial pit, about 5 cm from the last one, there was one small strap end (Image 5, 4), also in a face-down position, but slightly off the line of the mounts, more towards the pit wall. At about 0.8–1.5 cm from the row of mounts, in the direction of the horse's legbones, more mounts were located with their front face upwards, in a tilted position to varying degrees or standing upright on their edge, in a slightly curved row. Four of these lay on their face, bordered by 2 pieces to the north and 1 piece to the south. The rows of mounts facing up or down were slightly offset from each other. The detail photograph also shows one further small strap end, about 3 cm from the upward-facing mounts, in the direction of the horse's legbones, with their front face down. The 13 round mounts with rosettes (Image 5, 5) were located at the eastern end of the burial pit. Four of them were located at the eastern wall of the grave, at its northern part, higher than the bottom of the grave, in a tilted position with their front sides downwards, 1 to 1.5 cm apart. Three pieces were located along the southern half of the same shorter side, but further apart. One piece was located between the girth buckle on the longitudinal axis of the grave and the four mounts mentioned first, while one was 2–3 cm north-west of the girth buckle, near the remains of the rear pommel. One piece was located at the base of the stirrup on the horse's skull and two were found between the horse's legbones, below the saddle remains. Unfortunately, the location of the other pieces cannot be determined with certainty. Of the metal ornaments, the 22 rounded mounts and the four small strap ends can be linked to the bridle, and are connected through their attachment by rivets and the frame on their edges, while the 13 rosettes fastened with bent-end nails may have been placed on the noseband and/or the rump strap. The exact location of the two openwork mounts – in the shape of a belt mount – representing a dog<sup>41</sup> (Image 5, 2) is not known.

39 Gömöri 2000, pp. 280–283.

40 Bollók 2015, pp. 345–346.

41 I would like to express my thanks once again for the definition offered by István Vörös (HNM).

The variability of the mount sets with rosettes is well known,<sup>42</sup> but in this case, in addition to the classic mounts and strap ends with rosettes, the openwork mounts, two of which represent animals and 22 represent floral patterns, add further variety to the harness decoration. These cannot clearly be classified as mounts with rosettes, since their most widely interpreted pieces are those made up of patterns organised radially around a single centre.<sup>43</sup> On the other hand, the frame on the edges of the mounts, which are referred to by various names in research,<sup>44</sup> are almost exclusively characteristic of the group decorated with rosettes in the Carpathian Basin finds from the age of the Hungarian conquest. The two openwork mounts are also interesting given that the animal depictions on the harnesses decorated with rosettes appear on the strap ends,<sup>45</sup> and not on other mount types. Mounts with a floral design that open symmetrically in two directions in the middle part cannot therefore be clearly classified as mounts with rosettes, and it would be more accurate to describe them as having a shape of a belt mount. However, the coexistence of mounts with rosettes and in the shape of belt mounts on a single horse harness is rather rare. In the Békéscsaba-Erzsébet grave it would be difficult to locate the belt-mount-shaped ornaments (8 pieces) more precisely on the horse harness,<sup>46</sup> while the location of the metal ornaments (3+16 pieces) in the shape of a belt mount is not known in grave 2 in Gádoros either.<sup>47</sup> Thus apart from the grave at Szakony, we only have data on the exact location of the ornaments in grave II/53 in Karos-Eperjesszög. There, the eleven mounts in the shape of a belt mount, which were fastened with bent pegs, unlike the riveted rosettes, were placed on the bridle,<sup>48</sup> similarly to the mounts found in Szakony and discussed here. It is also likely that the four small strap ends were located on the bridle, and perhaps so were the two openwork mounts based on the similar riveted fastening.

The analogous pieces of the frame and the central floral design on the rounded mounts can also be found among the metal objects of the so-called Subbotitsy horizon, dating from the second half of the 9<sup>th</sup> century, found in the eastern part of the Carpathian Basin; these pieces are likely to be associated with Hungarians of the pre-conquest age. They also appear further east, at the Uyelgi site.<sup>49</sup> Another striking feature of the mounts is the semi-oval gilded part, which protrudes in the middle of the pattern, breaking the curve of the mount, with a triangular indentation in its middle. Based on its shape, this part is probably not a representation

42 Mesterházy 1980, p. 101; Révész 1996, p. 55.

43 Bollók 2015, p. 318.

44 Bollók 2015, pp. 318–319; Komar 2018, p. 105.

45 The mounts featuring animals on the harness are listed by: Révész 1997, p. 178–179.

46 Révész 1997, p. 175.

47 Fettich 1937, p. 102.

48 Révész 1996, pp. 29, 57.

49 Bollók 2015, pp. 363–364, 374; Komar 2018, pp. 236–237, 240, 252, 256; Türk–Langó 2020, pp. 254–255.

of the rounded eyes of the rosettes, which have been created as openwork or remained filled in due to a casting fault; rather, the triangular indentation is suggestive of the openwork of some of the belt mounts. Similar features can also be observed on the artefacts from the eastern areas. I do not know of any exact parallel of the two framed mounts adorned with a dog above the openwork, but perhaps the lions in a similar position or in a stalking position above the openwork on the framed mount of the Subbotitsy horizon could represent a more distant parallel.<sup>50</sup>

Grave 7 (Image 6, 1) also contained a horse harness decorated with metal, but due to disturbance, presumably only the pieces lying under the horse's skull were preserved in their original position. Among the pieces of horse harness mounts with rosettes (Image 6, 4–5), it is also worth mentioning the one larger, rounded horse harness mount depicting a palmetto tree<sup>51</sup> (Image 6, 2), which is similar to the ones found in grave 59 in Érsekújvár, where two pieces were found.<sup>52</sup> They are almost identical in size to the one found in Szakony, the latter being only 1 mm larger, and they were also fastened with four rivets. However, the design of the items found in Érsekújvár differs in the number of leaves on the plant,<sup>53</sup> and the simpler design of the leaves is further accentuated by the fact that only one of them has some kind of decoration on the edge of the mount: a moulded pattern imitating a series of notches, as opposed to the beaded frame running along the edge of the item found in Szakony, and the tendril<sup>54</sup> filled with a beaded pattern or a rim decorated with a scale pattern on the inside of the frame.<sup>55</sup> This may also be observed on the mounts<sup>56</sup> from the Slavic settlement of Arkhangelskoye<sup>57</sup> and on pieces from the Khanenko collection found along the central Dnieper, as well as on items discovered more recently at an unknown site.<sup>58</sup> In terms of the pattern, these are also more accurate analogues of the mounts found in Szakony. The diameter of the Arkhangelskoye and Khanenko collection pieces is 4.3–4.4 cm,<sup>59</sup> which is almost identical to the 4.4×4.5 cm diameters of the items found in Szakony. The ones discovered in Szakony were fastened with four rivets spaced at approximately the same distance apart on the back of the mount, while the pieces of metalwork found at Arkhangelskoye staves were probably fastened with three rivets each.

Also worthy of special mention among the horse harnesses is the one leaf-shaped plate, cut secondarily from a larger object (Image 6, 8). Its foreign nature was already recognised

50 Komar 2018, pp. 129, 152, 241.

51 Bollók 2015, pp. 260–262.

52 Rejholcová 1974, 440–441, Tab. VII. 14–15.

53 Bollók 2015, p. 262.

54 Bollók 2015, p. 262.

55 Komar 2018, p. 135.

56 Tsybin 2018, pp. 336–338.

57 Komar 2018, 141, 150, Image 36, 15–16.

58 Komar 2018, 101, 141, Image 6, 12, 14.

59 Tsybin 2018, 338, Image 5

by Dienes, who also indicated the western origin of the object, which must have come into the possession of its owner as loot. Dienes also pointed out, however, that even in the case of the object with a foreign design, an attempt had been made to adapt it to an appropriate shape, i.e. that of the larger, leaf-shaped horse harness ornaments well known from the archaeological finds. The object has recently been examined in detail by Ádám Bollók, who has also given a detailed description of it. The object can be identified as a piece of metalwork originating from a Carolingian workshop on the continent, but its function is not known; it might have been part of an altar, a reliquary box or even part of a book cover.<sup>60</sup> A rattle originating from the grave (Image 6, 3) was also found on the horse harness and, similarly to the previous one, the saddle was decorated with silver plates (Image 6, 7).

In the present case the results<sup>61</sup> of archaeogenetic studies<sup>62</sup> seem to refute the idea, based on the assumed kinship relations, that the buried persons were members of a small family; therefore, it remains an open question whether small family cemeteries may have existed at the given age, and if so, whether the present one was a burial or a settlement unit. What is certain, however, is that the cemeteries labelled as ‘small family’ ones<sup>63</sup> sometimes exhibit marked differences in structure, since the cemetery of Szakony is more closed in terms of the location of the graves, similarly to the cemetery of Gádoros,<sup>64</sup> which might be logical to assume if the persons are closely linked to each other; the cemetery of the Madaras-Árvai slope<sup>65</sup>, however, contains graves that are further apart, and the cemetery of Szatymaz<sup>66</sup> might contain several rows of graves or the beginning of such rows. There must have been a reason why the graves were not dug close to each other, and therefore we must also consider the possibility that the empty sections may have been pre-designated burial sites, pointing to the fact that the community may have been larger; however, perhaps due to the mobility of the community, these designated graves were never dug.

The results of the radiocarbon dating indicate a 4.8% probability of burial for grave 1 between 780 and 790, 39.7% between 810 and 900, and 23.7% between 910 and 960.<sup>67</sup> In this case, the first value with the lowest probability can be excluded with certainty, as well as the first half of the period 810–900 with the highest probability.<sup>68</sup>

60 Bollók 2014, pp. 82–85.

61 Dienes 1972, p. 14.

62 The study is being carried out by the Archeogenetic Research Centre of the Institute for Hungarian Research (MKI). I would like to thank Gergely Varga (MKI) for the preliminary information.

63 cf. Kovács 2013, pp. 512–513.

64 Bálint 1991, pp. 37–51.

65 Kőhegyi 1980.

66 Bálint 1991, pp. 19–37.

67 Révész 2006, 419; Stadler 2006, 114, Abb. 7.

68 Révész 2006, p. 419.

## Summary

The cemetery of the community – which left behind 7 graves but contained an uncertain number of individuals – has been a major focus of the research due to its nature and geographical location, and it contributed to determining the expansion of the settlement area in that period. Biochemical studies, a new method introduced in the 1970s, have led to conclusions on the nature of the community by determining possible family links among the deceased; these conclusions are still valid today, although they have never been verified in detail.<sup>69</sup> Among the artefactual finds, the saddle and the horse harness decorated with mounts received special attention; besides, some metal horse-harness ornaments were also analysed separately. Archaeological sources on the former life of the community display links in several directions. The largest layer, of course, consists of funerary customs and grave goods typical of the conquering population in the Carpathian Basin. One layer, however, points in the direction of the pre-Hungarian, Avar period, including the bead known from the late Avar glass bead earrings and the Avar-style pair of stirrups, which differs from the stirrups found in other graves not only in form but also in the grade of preservation. However, these may have been in use in successive periods of the Avar period. The combination of olive beads and plate buttons was a jewellery combination observed in the core distribution area of the beads, but further well-dated artefact combinations are needed to determine whether these beads appeared only later in peripheral areas or remained in use longer than the period between the second half of the 9<sup>th</sup> century and the first third of the 10<sup>th</sup> century, which has been defined as the period of use for this type of object.<sup>70</sup> A further layer is formed by horse-harness ornaments with oriental analogies, for which an analysis of the materials might shed light on whether they were made in the eastern regions and arrived in the Carpathian Basin with their owners who were born beyond the Carpathians; or perhaps the similarities can be seen as a sign of the links to eastern kins<sup>71</sup> that still existed in the 10<sup>th</sup> century. I believe that the finds of the cemetery – and in part the results of the radiocarbon dating – support that the early 10<sup>th</sup> century is the most likely date for the origin of these ornaments. Also considering also the age of the woman buried in grave 6, I think that the former is the more probable of the above-mentioned possibilities. The more recent finds from Eastern European areas also increasingly point to the fact that this material culture was not born in the Carpathian Basin, but certain elements of it had existed even before the settlers moved to the new homeland, and it was further developed within the Carpathians.<sup>72</sup> ■

69 Kovács 2013, pp. 512–513.

70 Košta–Tomková 2012, p. 212.

71 Komar 2018, p. 198; Türk–Langó 2020, p. 250.

72 László Révész (HNM, University of Szeged) provided me with the fragments on the cemetery from István Dienes' estate; once again, I would like to thank him for his help.

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## ABBREVIATIONS

W/o i.n. – Without inventory number

GCEAH – Graves from the Conquest and Early Árpád periods of Hungary

HNM – Hungarian National Museum, Budapest

A.D.C. – Archaeological Documentation Collection

SM – Sopron Museum, Sopron

## KIVONAT

## Szakony-Kavicsbánya honfoglaláskori temetője

1961 tavaszán került elő egy 7 síros honfoglaláskori temető a Szakony melletti kavicsbányában. A teljesen feltárt temetőben 1 férfi, 2 nő és 4 gyermek sírját dokumentálták, jellege és földrajzi helyzete alapján a lelőhely kiemelt figyelmet kapott már a kutatásban, hozzájárulva a településterület egykori kiterjedésének meghatározásához. A biokémiai kutatások pedig rokonsági kapcsolatokat határoztak meg az elhunytak között, így napjainkig a kutatás gyakran kiscsaládi temetőként határozza meg ezt a lelőhelyet. A leletanyagban főként a lovas temetkezések leletei kaptak figyelmet, ebben a temetőben vált először hiteles módon megfigyelhetővé a férfiak által használt fémveretes lószerszámok egykori megléte. A 6. számú női sírban tett megfigyelések pedig ugyancsak az első hiteles ezüstlemezekkel díszített nyeregrekonstrukciót eredményezték. Továbbá a kutatás rámutatott a 7. sír egyik lószerszámdíszének Karoling eredetére, s a rozettás veretek egyik tagjának szinte pontos kelet-európai párhuzamaira. Új, érdekes összetételű együttes a 6. sírből származó olívagyöngy és lemezgomb párosa, előbbiek példái csak az utóbbi időkben kezdtek ismertté válni az eddig ebből a szempontból leletmentesnek gondolt magyarországi temetőkben. Nem kevésbé érdekes a lószerszámveretek, vagy azok egyes részleteinek kelet-európai párhuzamainak kérdése, amelyek alapján nem lehet kizárni, hogy ezek még a Kárpát-medencétől keletre készültek. De az sem zárható ki természetesen, hogy a hasonlóságok a 10. században is fennálló keleti kapcsolatrendszer nyomaiként értékelhetők. Nem lehet azonban elvetni az előbbi lehetőség reális voltát sem, a temető természettudományos kormeghatározása által sugalmazott 9. század végére, 10. század első évtizedeire való keltezésével egyetemben. Az elhunytak esetében az archeogenetikai vizsgálat az értékelhető minták esetében a rokonsági kapcsolatokat cáfolta, így bizonyára nem egy vérségi alapon szerveződő kiscsalád tagjait helyezték nyugalomra a Répce völgyében valamikor a 10. század elején.

**KULCSSZAVAK:** honfoglaláskor, temető, kiscsalád, lovas temetkezés, nyereg, övveret alakú és rozettás lószerszámveretek, olívagyöngy, lemezgomb

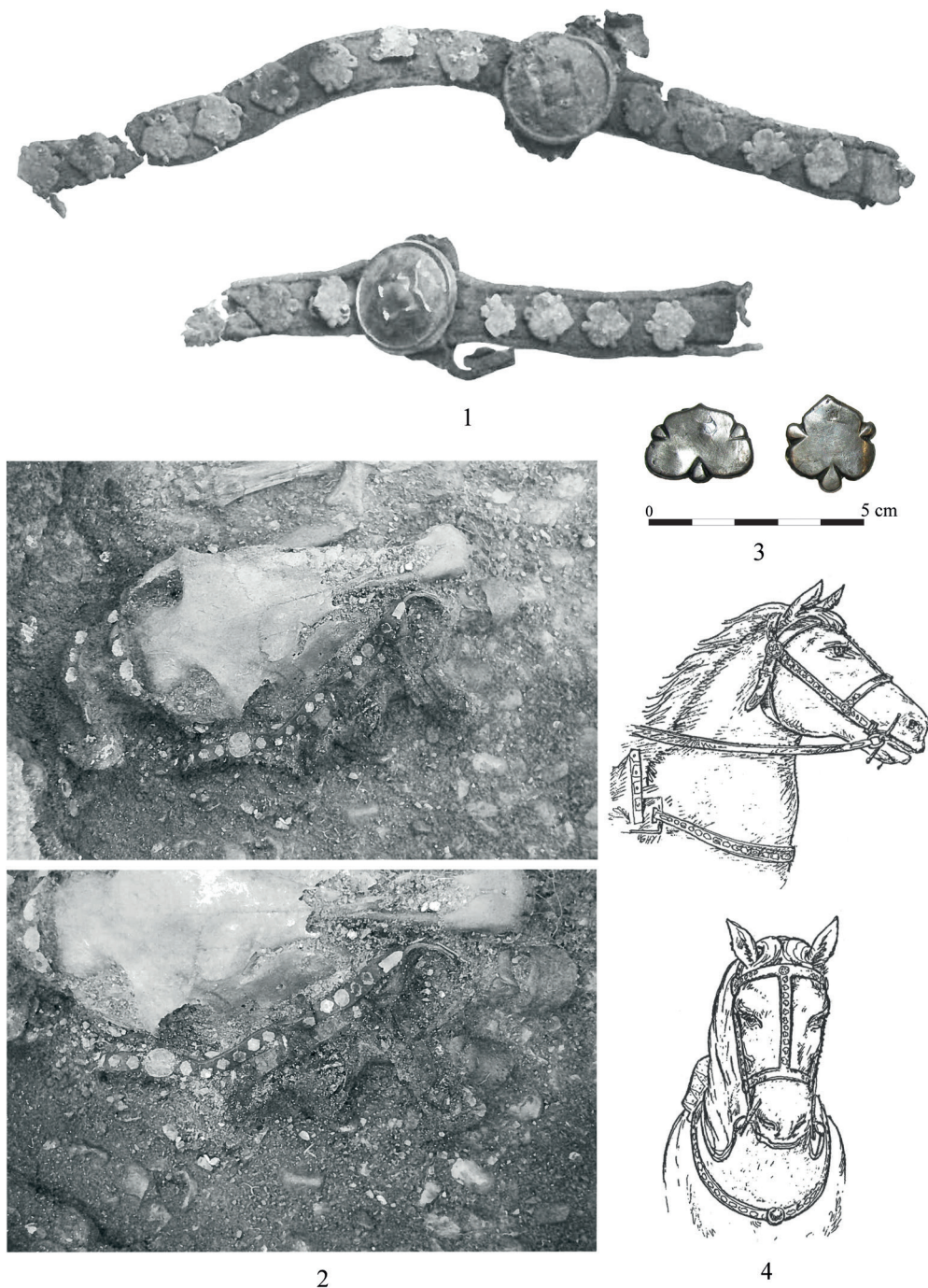
# IMAGE ANNOTATIONS



**Image 1.** 1: Szakony-Kavicsbánya (1:10000), 2: the area of the gravel pit and the opened probes, 3: cemetery map



Image 2. 1-2: grave 2, 3-8, 10: grave 6, 9: grave 1



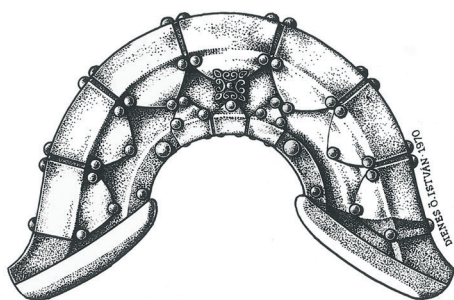
**Image 3.** 1: remains of a horse harness with metalwork recovered from grave 1, 2: detail photograph of the location of the horse-harness ornaments, 3: metalwork of horse-harness ornaments, 4: reconstruction drawing of the horse harness



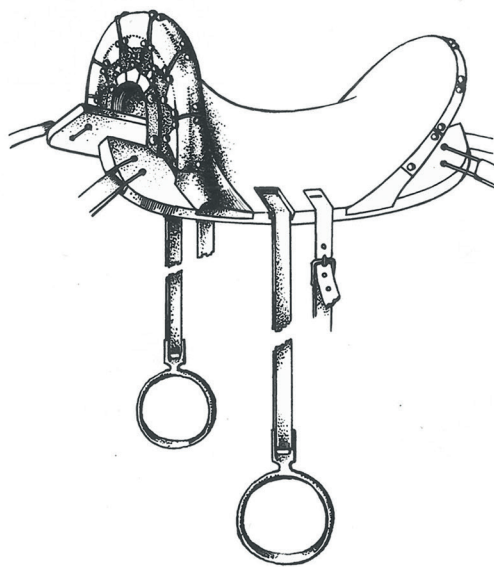
1



2



3



4

**Image 4.** 1: grave 6, 2: saddle pommel lifted out in situ, 3-4: reconstruction drawing of the saddle

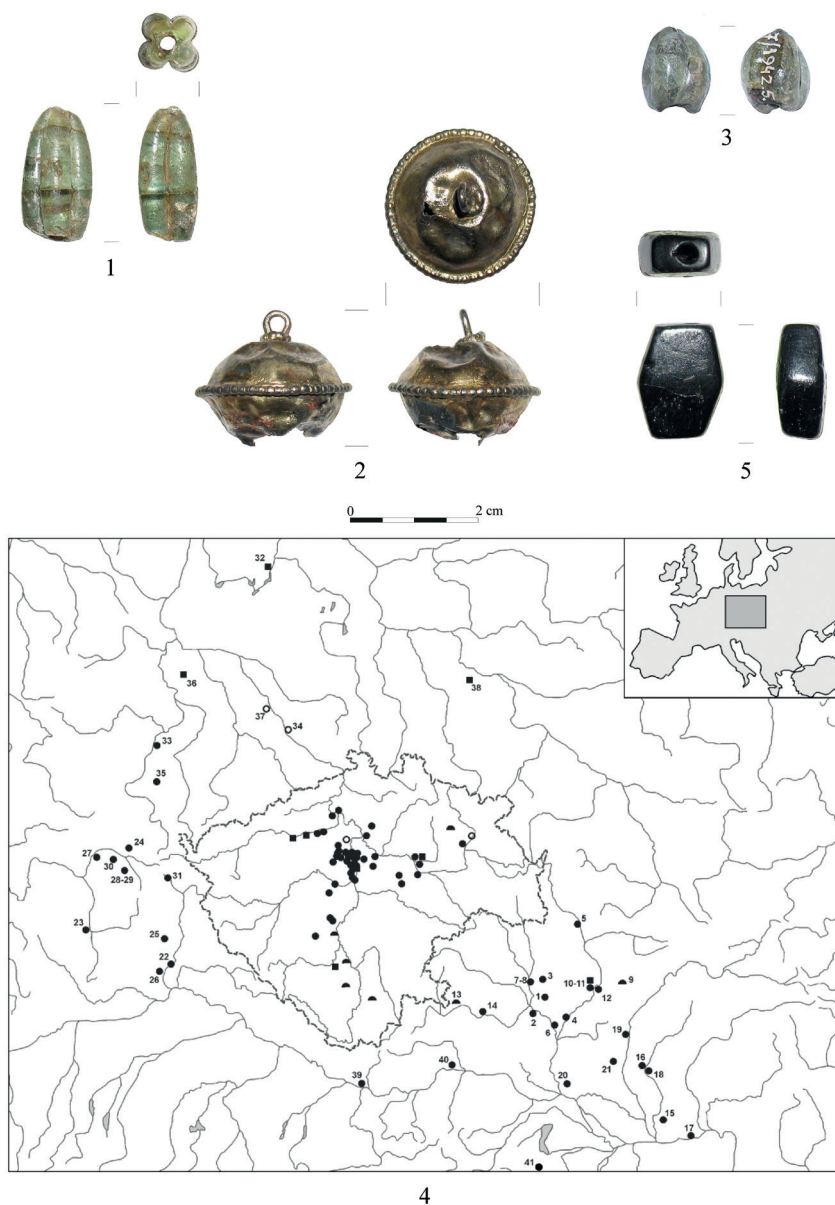


**Image 5.** 1: detail photograph of the location of the harness mounts in grave 6, 2-5: harness mounts recovered from the grave



Image 6. grave 7





**Image 7.** 1-2, 5: grave 6, 3: Felsőzsolca, further details of site unknown, 4: distribution area of olive beads (according to Košta-Tomková). Numbering of archaeological sites in Austria, Slovakia and Hungary. 1: Boleradice, 2: Dolní Věstonice 3: Hostěradky-Rešov, 4: Mikulčice, 5: Olomouc, 6: Pohansko u Břeclav, 7: Rajhrad, 8: Rajhradice, 9: Rudimov-Kruhy, 10: Staré Město-Na valách, 11: Staré Město-osada I., 12: Uherské Hradiště-Sady, 13: Vysočany, 14: Znojmo-Hradiště, 15: Bajč, 16: Čakajovce, 17: Mužla-Čenkov, 18: Nitra-Lupka, 19: Pobedim, 20: Stupava-Mást, 21: Špačince, 39: Gusen, 40: Krems an der Donau, 41: Szakony-Kavicsbánya

