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Roman gaming paraphernalia from the Rómer Flóris Museum in Győr, Hungary

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ABSTRACT

Hungarian museums are rich in artefacts connected to Roman gaming and play, and the systematic collection and publication of these finds adds to the growing body of knowledge about the ludic culture in classical antiquity. The territory of Roman Pannonia along the Danube *limes* still represents a research gap in the study of Roman gaming paraphernalia.

The paper discusses pieces of Roman gaming equipment from the collection of the Rómer Flóris Museum of Art and History in Győr (Hungary). Although not large, the strength of the collection lies in the fact that most of the artefacts connected to Roman games come from modern excavations with secure find circumstances. The six-sided bone dice, bone gaming counters, and two possible grid type game boards come from four different Roman localities: the auxiliary fort and *vicus* of Arrabona (Győr), the late Roman cemetery of the Quadrata auxiliary fort and *vicus* (Mosonszentmiklós-Jánosházapuszta), the late Roman cemetery of Mursella *municipium* (Mórichida-Kisárpás), and the Roman road station at Gönyű. Gaming equipment from the cemeteries was rare, with only 3 of the 251 graves yielding ludic material: of these two were adult male burials and one child of unknown sex. A comparison with published Roman cemeteries from Pannonia shows that it is common for pieces of gaming equipment to turn up only in a small fraction of graves within a cemetery and that these graves usually contain one or two pieces at the most. Whole gaming sets, like the set of decorated bone counters from Mórichida-Kisárpás are quite exceptional.

KEYWORDS

Roman Pannonia, bone gaming counters, six-sided dice, grid-type game board, late Roman burials, *ludus latrunculorum*

INTRODUCTION

Various pieces of Roman gaming equipment can be found in the collection of the Rómer Flóris Museum of Art and History in Győr (Hungary).¹ Founded in 1859, the Rómer Flóris Museum (RFM) collects, preserves and presents archaeological finds from the northwestern part of Hungary (Győr-Moson-Sopron County), which belonged to the Roman province of Pannonia Superior during the 2nd–3rd centuries AD and to Pannonia Prima during the 4th century. Between 1949 and 2012 the name of the museum was Xántus János Museum, only to be renamed after Flóris Rómer again in 2013 when several museums of Győr were merged into one institution.

The strength of this collection of gaming paraphernalia is that although small, almost all pieces come from modern archaeological excavations with find contexts and fairly secure dating. This is in stark contrast to the much larger collection in the Kuny Domokos Museum in Tata, where most objects were found during the late 19th or early 20th century and were parts of private collections before eventually entering the museum.²

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¹I would like to thank Krisztina Pesti from the Rómer Flóris Museum, Győr, for all her help.

²Dobosi (2025).

The gaming paraphernalia in the collection of the RFM include bone dice, bone gaming counters and two possible grid type game boards from four different Roman settlements: two six-sided bone dice were found in the auxiliary *vicus* of Arrabona (Győr), a bone die and counter came to light in the late Roman cemetery of the Quadrata auxiliary fort and *vicus* (Mosonszentmiklós-Jánosházpuszta), a single and a set of bone gaming counters were unearthed in the late Roman cemetery of Mursella *municipium* (Mórichida-Kisárpás), and two possible grid type game boards were excavated in the road station at Gönyű. It is likely that there are further unknown pieces of gaming equipment in the RFM, as material from recent excavations has yet to be inventoried.

TWO ROMAN DICE FROM ARRABONA

Though only small areas of Arrabona (Győr) have been excavated to date, several game-related finds demonstrate that play was an active part of life in the settlement, one of the largest in the region. The auxiliary *castellum* and *vicus* lie under the medieval, baroque and modern town centres in a densely built urban environment. Therefore, only two bone dice are known from the *vicus* at present, one from a 2009 excavation of Szilvia Bíró at Széchenyi Square, and a stray find from the 1960s from the area of the Bécsi Kapu Square. Arrabona was one of the early auxiliary camps already in existence during the reign of emperor Tiberius (AD 14–37)³ until the end of the 4th century.⁴ The earliest remains of the adjoining auxiliary *vicus* were located to the east of the *castellum* and can be dated to the middle of the 1st century to the reign of emperor Claudius (AD 41–54). Timber framed and wattle-and-daub houses from the second half of the 1st century AD were excavated at and around Széchenyi Square in the eastern part of the *vicus*.⁵ From the first half of the 2nd century, houses with stone foundations started to appear, but these co-existed with the wooden houses until the end of the century.⁶ During this same time, the *vicus* spread to the area south of the *castellum*, at present-day Bécsi Kapu Square.⁷ In the 3rd century, the settlement was burnt down several times due

to barbarian attacks, and by the 4th century most of its territory was abandoned and replaced by cemeteries.⁸

Of the two dice from Arrabona, one was found in the eastern part of the *vicus*, the other south of the *castellum*. Cat. 1. die came to light as a stray find in the eastern part of the *vicus* or the southernmost part of the *castellum*, at Bécsi Kapu Square between the Castle Casamate and the Rába bridge in 1964 (Fig. 1). In contrast, the Cat. 2. die was unearthed in the western part of the *vicus*, during the rescue excavation at the southeastern corner of the so-called Lloyd-building at no. 7 Széchenyi Square.⁹ Interestingly, the die came to light from inside an early Roman wooden building, from the debris of a wattle-and-daub wall on a wooden floor.¹⁰ The die itself cannot be dated, however, the timber house was probably built in the second half of the 1st or first half of the 2nd century AD.

Both dice were typical Roman six-sided cubic bone dice made of one piece of solid bone. The size of the dice is quite uniform, the length of the edges is between 8.2 and 9.9 mm. Both are slightly irregular in shape, as usual for Roman dice.¹¹ Although the length difference of the edges within each of the two dice stays under 1 mm, this length difference causes visible irregularities because of the small size of the dice: the faces are not squares, but trapezoids or quadrilaterals. The numbers are indicated with dot-ring (Cat. 1) or dot-ring-ring (Cat. 2) motifs, and numbering of the faces goes from one to six and the numbers on the opposite sides adding up to seven (so-called Sevens configuration), which is the most common numbering configuration in the Roman world.¹² When the dice are numbered according to the Sevens configuration, there are still 16 different variations for placing the pips onto the faces of the dice. Eight of these variations can be seen on Fig. 2c, the other eight variations differ from these in that the pips on side six are arranged horizontally and not vertically. The pips are arranged in two different variations on Cat. 1 and 2 dice, and in a third variation on Cat. 3 die, as can be seen below. Comparing this to the eight dice of the Kuny Domokos Museum in Tata (Hungary),¹³ shows that two of the variations do not appear in Tata, where we can see five different variations on the eight dice.¹⁴ This means that there are 7 different variations of numbering on the 11 dice, although all are numbered regularly, according to the Sevens configuration. This probably indicates that the dice were

³Bíró (2020) 73; Horváth (2021) 10; Bíró (2022) 122.

⁴The first garrison of Arrabona was the *ala Pannoniorum*, which arrived during the reign of Tiberius. It was replaced by the *ala I Augusta Ituraeorum sagittaria* at middle of the 1st century until AD 92. For a short time the *ala I Hispanorum Arvorum* was stationed in Arrabona, and in AD 106 the *ala I Ulpia contariorum milliaria civium Romanorum* arrived and stayed until the 4th century. As the troop was twice the size of the earlier, 500-soldier troops, the auxiliary fort was enlarged and rebuilt with stone walls at the beginning of the 2nd century. Szőnyi (1988); Lőrincz (2001) 18–22; Bíró (2020); Horváth (2021) 13; Bíró (2022).

⁵Gabler (1971) 9–10; Szőnyi (2007) 125; Bíró (2020) 73–75; Horváth (2021) 11–12; Bíró (2022) 123–125.

⁶Gabler (1971) 49; Szőnyi (2007) 125; Bíró (2020) 80.

⁷Bíró (2020) Figs 1–2; Bíró (2022) Figs 1–2.

⁸Gabler (1971) 50; Bíró (2020) 83 and Fig. 4; Horváth (2021) 40; Bíró (2022) 133–134 and Fig. 4.

⁹Bíró et al. (2010) 40.

¹⁰Excavation documentation in the Rómer Flóris Museum: Archaeological Documentation Collection 193–10.

¹¹Eerkens and de Voogt (2022).

¹²Eerkens and de Voogt (2017) 165; Swift (2017) 203–204; Küchelmann (2018) 119.

¹³All eight dice in the collection of the Kuny Domokos Museum come from Roman Brigetio (Komárom, Hungary, only 40 km from Arrabona).

¹⁴Dobosi (2025) Fig. 1. Variations on the RFM dice: I/1, II/1, II/3; variations on the KDM dice: I/1, I/2, I/3, II/2, II/4.

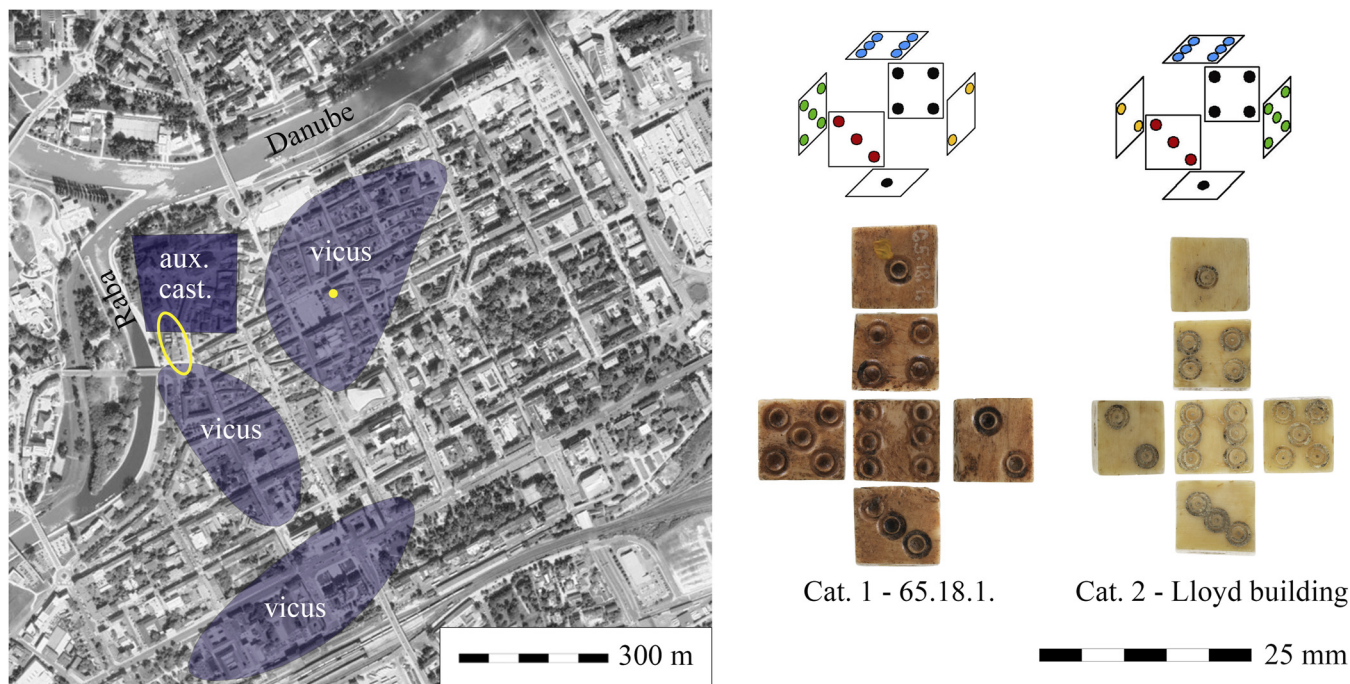


Fig. 1. Two six-sided dice from Arrabona auxiliary fort and *vicus* (Győr, Hungary). The find spot of the dice marked with yellow (Photos and drawings: L. Dobosi, map based on Bíró, 2022, Fig. 3)

made by different local makers and not in a specialist workshop with standardised production.

A BONE DIE AND GAMING COUNTER FROM THE LATE ROMAN CEMETERY OF QUADRATA

In the late Roman cemetery of the Quadrata auxiliary *castellum* and the adjoining *vicus* (Lébény-Barátföldpuszta, Hungary), 102 graves were excavated, one of which contained gaming paraphernalia: a bone counter and a six-sided die. An earth and timber fort at Quadrata was already built by the end of the reign of emperor Trajan (AD 98–117) which was reconstructed with stone walls after the destructions of the Marcomannic Wars at the end of the 2nd century.¹⁵ The *castellum* was rebuilt again during the Constantine-dynasty and was in use all through the 4th century.¹⁶ About the life and size of the auxiliary *vicus* we have virtually no information, as it has not been excavated yet. The late Roman cemetery lay about 1 km southeast of the *castellum*, at the so-called Mosonszentmiklós-Jánosháza, Roman hill archaeological site. The existence

of the late Roman necropolis had been known since the 19th century¹⁷ but its archaeological excavation became necessary only during the 1950s when sand mining was begun at the site. The Roman hill contained a large Bronze age graveyard as well as the late Roman cemetery and the two were unearthed simultaneously during several seasons of rescue excavations between 1957–1959 and 1963–1970 by András Uzsoki and Dénes Gabler. Neither of the cemeteries were completely excavated, but even so, 102 Roman graves came to light,¹⁸ dated by the numerous coin finds to between the late 3rd and late 4th centuries.¹⁹ Most of the burials in the Roman cemetery were inhumation burials in simple earth graves, men, women and children alike. The cemetery was surrounded by a V-shaped ditch and a rectangular *cella memoriae* stood in its eastern half.²⁰

All except one of the burials contained grave goods but the only one with gaming paraphernalia was Grave 10, a relatively rich adult male burial (Fig. 2). The bone die and the gaming counter were placed at the foot of the skeleton. Beside these, the grave contained three bronze coins, a bronze crossbow brooch with bulb-head, a bronze belt-buckle, a piece of flint

¹⁵Gabler (1966) 88–93; Gabler (1977a) 170–172; Gabler (1977b); Gabler (2003) 65–67.

¹⁶Gabler (1966) 90; Gabler (2003) 67. The *castellum* was home to the *cohors IIII voluntariorum* c. R. from 118/119 until the beginning of the 3rd century, then the *cohors III Alpinorum equitata* until the end of the 3rd century, see Lőrincz (2001) 28 and 44. During the 4th century, the *equites Maiuri* were stationed here based on the Notitia Dignitatum (Occ. 34), see Gabler (1966) 69; Gabler (2003) 67.

¹⁷Gabler (1966) 69.

¹⁸Based on the arrangement of the graves and the location of the surrounding ditch, there was place for about an additional 30–40 graves. Gabler (1972) 159.

¹⁹The earliest coins were from the reign of emperors Probus (276–282) and Aurelianus (270–275), while the latest from the reign of Valentinian I (364–375). Gabler (1972) 159.

²⁰Gabler (1972) 159–160. A few graves lay outside the ditch.

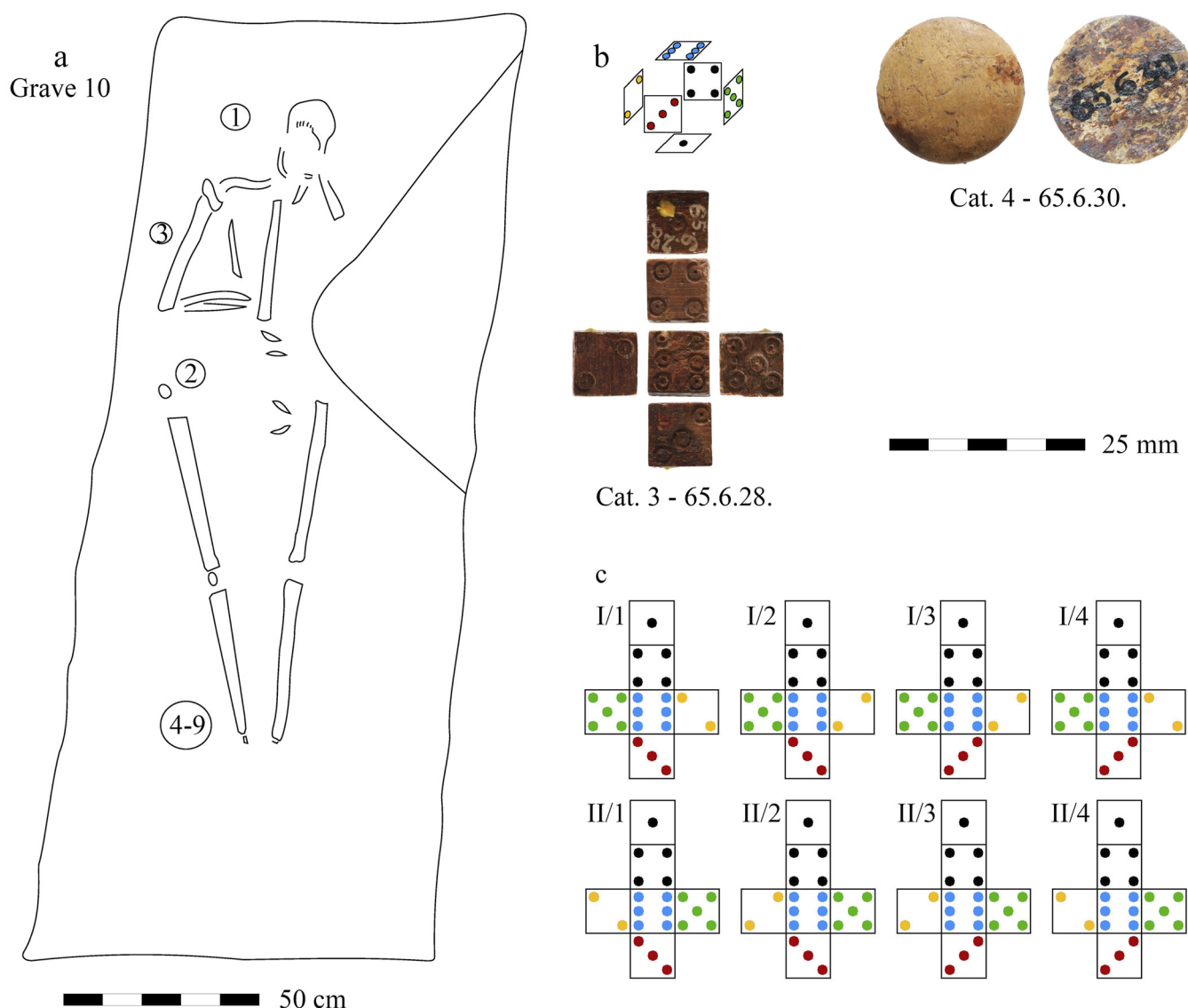


Fig. 2. Grave 10, in the late Roman cemetery of Quadrata auxiliary *castellum* and *vicus* at the Mosonszentmiklós-Jánosházpuszta, Római domb archaeological site. a, drawing of Grave 10, an adult male inhumation burial, 1: brooch 2: belt buckle 3: vessel 4-9: three bronze coins, a bone counter, a bone die, a piece of flint to strike fire, two unidentified metal objects; b, the bone die and gaming counter from the grave; c, eight possible pip-configurations for the numbering of the dice if the numbers on the opposite sides add up to 7 (Sevens) (Photos and drawings: L. Dobosi)

for striking fire, a small ceramic vessel, a whetstone, an iron knife, an iron nail and unidentified fragmented and deformed metal objects.²¹ The coins, the bone die and counter, the flint and two unidentified metal objects might have been inside a pouch when they were placed at the foot of the skeleton. The six-sided bone die was around 8 mm and unusually regular in shape for a Roman die, almost exactly cubic with square faces. The numbers are indicated with dot-ring motifs, and the numbering follows the Sevens configuration. The

plano-convex bone gaming counter was also carefully made although devoid of any decoration.²²

BONE GAMING COUNTERS FROM THE EASTERN CEMETERY OF MURSELLA

In the late Roman cemetery of Mursella *municipium*, two out of 149 graves contained gaming counters that are now in

²¹The grave was excavated in 1963 by Dénes Gabler; description and drawing in the excavation documentation in the Római Flóris Museum: Archaeological Documentation Collection 614–71. The sex of the skeleton was determined based on the size of the skeleton and on the grave goods.

²²This counter type is Type 3 in N. Crummy's typology (Crummy, 1984, 91), Type 4a in Stephen Greep's typology (Greep, 1983, Fig. 205; Greep, 2023, 1000) and Type 5 in Dobosi's typology of the Pannonian bone counters (Dobosi, 2025, Fig. 2).

the Rómer Flóris Museum. Mursella was founded on the territory of the *civitas Boiorum* in the second half of the 1st century AD as a small and short-lived *castellum* and the adjoining *vicus*. After the military was withdrawn, the settlement transformed into a civilian *vicus* which was elevated to the rank of *municipium* during the reign of emperor Hadrian (AD 117–138). The continued existence of the settlement during the 4th century is attested by ample coin finds, the latest of which are the coins of emperor Valens (AD 364–375).²³ The necropolis of the late Roman settlement was found to the east of the town (so-called Eastern cemetery) and was excavated by Endre Bíró between 1956 and 1958. The unearthed 149 burials were mostly inhumation burials dated to the second half of the 4th century.²⁴ He only wrote a short report on his findings, but Felix Teichner published the cemetery in detail complete with photos based on the excavation documentations of E. Bíró.²⁵

From the two inhumation burials with gaming counters, Grave 135 was an adult male burial rich in grave goods, and Grave 107 was a child burial (Fig. 3). The bone counters in Grave 135 were found as a set at the feet of the skeleton. Originally 21 in number, only 18 counters are now in the collection of the RFM.²⁶ Three must have crumbled to pieces as they were already in a poor condition at the time of the excavation. Apart from the bone counters, Grave 135 also contained a silver belt buckle and strap-end, a gilded bronze crossbow brooch with bulb-head (type Prötter 3 or 4), as well as five bronze rings.²⁷ As the set of bone counters were found near a belt buckle and strap-end, they might have been inside a pouch that hung from the belt and placed at the foot of the skeleton.

The bone counters that were found as a set in Grave 135 were not uniform in terms of size, shape and decoration (Cat. 6–23). They were all circular, plano-convex counters with a domed upper surface and flat bottom, but they bulged to a different degree. Their diameter ranged between 21.6 and 27.5 mm and their height in the middle was between 4.3 and 7.5 mm. Some of them were elaborately decorated with dot-ring motifs and circular grooves: four dot-ring motifs in the middle were surrounded by two concentric grooves and further nine dot-rings along the circumference, again surrounded by a groove. Another type had no dot-rings in the middle and seven along the circumference, yet another only had a few concentric grooves. Seven of the counters had extremely worn surfaces perhaps due to their burial environment, and it is impossible to determine if they were originally decorated or not.

Plano-convex bone counters decorated with dot-ring motifs were not among the most widespread types in Pannonia. Two similar, but not identical pieces are in the collection of the Danube Region Museum in Komárno, Slovakia, which were probably either found in Brigetio (Komárom, Hungary) or in the counter fortress of Brigetio at Iža, Slovakia. These have three dot-rings in the middle and five or six along the circumference of the counters.²⁸ Five further similar counters found in Savaria (Szombathely, Hungary) are in the Hungarian National Museum in Budapest.²⁹ A decorated plano-convex bone counter, identical to the Brigetio and Savaria pieces, is also published from Singidunum in Moesia (Belgrade, Serbia).³⁰ Somewhat different were the eight counters published from Solva, which were found in Grave 247 at the foot of a child skeleton in the late Roman cemetery of the auxiliary fort.³¹

A child grave, Grave 107 contained a single bone gaming counter (Cat. 5). The extremely worn and fragmented counter was of the circular, plano-convex type, probably undecorated, but because of its weathered state, it is impossible to state this with certainty. Beside the counter, a glass vessel and three glass beads were found in the grave. The skeleton itself was almost entirely decomposed.³²

According to the excavation documentation, a circular bone disk was found in Grave 116, another inhumation burial of an adult male rich in grave goods. The object itself crumbled to pieces and could not be saved, according to the documentation, so nothing more is known about it.³³ It might have been another circular, plano-convex gaming counter, because the one in Grave 107 was described with the same word.³⁴ Apart from this bone object, the grave contained four coins from the Constantine-dynasty, a gilded bronze crossbow brooch with bulb-head, two bronze belt-buckles and a strap-end, a grey ceramic vessel, a whetstone, an iron object, as well as the canine tooth of a wild boar.³⁵

The other 146 graves unearthed in the cemetery did not contain gaming pieces or dice.

TWO POSSIBLE GAME BOARDS FROM THE ROAD STATION OF GÖNYŰ

Two *tegula* fragments with a rectangular grid pattern came to light in 2007, during the excavations led by Szilvia Bíró at

²³Szőnyi (2002) 52–60; Bíró (2016) 350; Teichner (2021) 42–54.

²⁴Bíró (1959) 173–176.

²⁵Teichner (2021) 251–296. The original excavation documentation itself is now in the Rómer Flóris Museum in Győr available for researchers.

²⁶Teichner (2021) 292.

²⁷Inv. nos of the objects: RFM 59.24.136–140. Traces of glass objects could also be observed by the head and the right elbow. Teichner (2021) 292 and Table 81. The set of gaming counters featured in the permanent exhibition of the museum for years along with the brooch.

²⁸Hrnčiarik (2012) 77–78 and Table XVII/263–264; Kovár et al. (2026).

²⁹T. Bíró (1994) Plate LXXVIII/669–673.

³⁰Janković (2009) Fig. 7.

³¹H. Kelemen (2008) 57 and Plate 58.

³²Teichner (2021) 284 and Table 78.

³³The piece was not inventoried. Teichner (2021) 286–287.

³⁴The word used for it in the documentation was “kerek csontlap”. The counter in Grave 107 was described in the inventory book as “egyik oldalán lapos, másik oldalán domború kerek csontlap”.

³⁵Teichner (2021) 286–287 and Table 79.

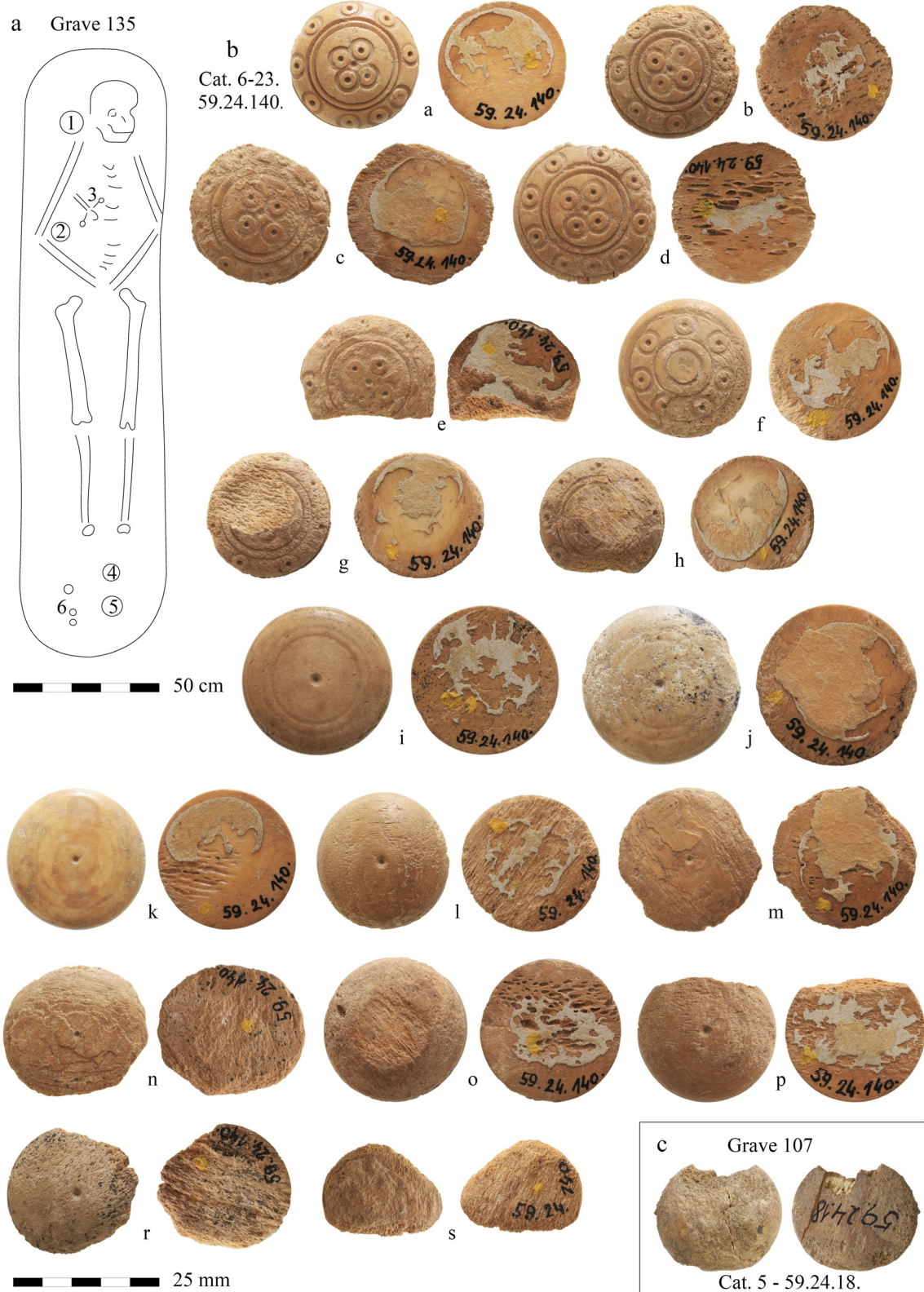


Fig. 3. Grave 135 and Grave 107 in the late Roman cemetery of Mursella *municipium* at the Mórchida-Kisárpás archaeological site. a: drawing of Grave 135, an adult male inhumation burial, 1-2: glass vessels 3: brooch 4: belt buckle 5: set of bone counters 6: bronze rings; b: the set of bone gaming counters from the grave; c: the bone gaming counter from Grave 107, a child burial (Photos and drawings: L. Dobosi)

the Roman road station at Gönyű, about halfway between the auxiliary *vici* of Arrabona (Győr, Hungary) and Ad Statuas (Ács-Vaspusztá), about 15 km from both along the *limes* road. Based on the find material, the building was erected at the end of the 1st or beginning of the 2nd century AD and was in use for about 150 years, until probably the second half of the 3rd century.³⁶ Its roof was covered with *tegulae* and *imbrices*, many bearing the stamp of the *legio I Adiutrix*, the home legion of Brigetio (Komárom-Szöny, Hungary).³⁷ The brick and tile workshop of the legion stood on the eastern side of the Brigetio legionary fortress,³⁸ about 30 km downstream on the Danube from Gönyű. Other tile stamps include two stamps of the *legio XIII Gemina*, two stamps of the workshop of Lucius Barbius Aquilensis and dozens with the letters C A, probably belonging to a private workshop. The place of production of these stamps remains uncertain, as well as the dating of all tiles.³⁹

The *tegula* fragments with grid pattern on their surfaces were both found in destruction layers and neither of them bore a stamp. They could have served as game boards, however, their identification as such is not unambiguous⁴⁰ and in the case of Cat. 25 it is quite improbable. No further pieces of gaming equipment have been found at the site.

The Cat. 24 *tegula* fragment (Fig. 4a), which comes from the middle of the tile, is fully covered by an incised grid pattern. It is impossible to tell if the pattern was made before or after firing. The lines are thin, shallow, and drawn without the aid of a ruler, but the overall picture shows a quite regular, rectangular grid pattern drawn with decisive movements, without any sign of corrections. These characteristics corroborate the hypothesis that this was indeed a grid-type game board. However, the grid pattern is relatively dense for a game board, the bigger squares are about 20×23 mm or 19×24 mm in size, while the smallest ones are only 18×18 mm large. Based on the at least partially preserved squares, the board must have consisted of at least 7×12 squares. The tile fragment is roughly the fifth of the surface area of a full *tegula*. There is a complete chalk board held in Dover Castle which has 8×8 squares where the individual squares are as small as 15–18 mm square,⁴¹ and board sizes range from 6×6 to 11×16 in the case of the 25 intact known game boards from Roman sites but can be larger outside the borders of the Empire (up to 17×18 squares).⁴² Considering the above, the grid pattern on the Cat. 24 *tegula* fragment could have been a grid type game board, usually associated with the strategic game *ludus*

latrunculorum, especially common along the northern *limes* on both sides of the border.⁴³

The grid pattern on the Cat. 25 *tegula* fragment (Fig. 4b) appears to be more makeshift. The surviving fragment was the lower right corner of the *tegula*, with the lower cutaway intact on its back side. Although only a tiny piece of the right flange survives, it is evident that the grid pattern went all the way to the flange, there was no border around the pattern. The vertical lines of the grid went down to the lower edge of the tile, however, the horizontal lines stopped at about 5 cm from the edge. The lines were more likely to have been incised before firing than after firing, but the clay must have been past the leather hard state. The lines are thin and shallow, drawn without the use of a ruler. The grid pattern is much less regular than on the other tile, the distances between the lines are more haphazard. The smallest of the surviving squares measures only 10×12 mm, the larger ones around 15×20 mm, and 5×5 squares are at least partially available. The tile fragment is small, its surface area is only about the one sixteenth of the surface of a full *tegula*. The grid pattern on the *tegula* fragment might have been intended to be a game board, but it seems to have been left unfinished. Maybe the maker decided that the already existing grid was too crooked and some of the squares too small to serve as a game board and left the last few horizontal lines unfinished, or the makeshift pattern served an entirely different purpose not connected to gaming.

PIECES OF GAMING EQUIPMENT IN ROMAN GRAVES IN PANNONIA

Pieces of Roman gaming equipment turn up in graves in Pannonia on a regular basis, however, cannot be described as frequent grave goods. Gaming paraphernalia can be found in both adult men and women burials, as well as in child graves, in both early and late Roman cemeteries,⁴⁴ in the cemeteries of both civilian settlements and military forts, in inhumation burials as well as in cremation burials. In Pannonia, they are best known from 4th-century graveyards for two reasons: firstly, most large cemeteries excavated in Pannonia can be dated to the 4th century, and secondly, the 4th-century burials are almost exclusively inhumation burials with some grave goods, among them occasionally gaming counters and dice.⁴⁵ Not all cemeteries contained graves with gaming pieces, in fact, there are few cemetery publications from Roman Pannonia where gaming paraphernalia are mentioned as grave goods at all. The pieces of gaming equipment in the discussed late Roman cemeteries of Quadrata auxiliary *castellum* and *vicus* and Mursella *municipium* serve as examples of gaming in both the

³⁶Bíró (2008) 100–101. The coins start with the *as* of emperor Nerva (96–98).

³⁷Bíró (2008) 101; Bíró (2009) 38–41.

³⁸Dobosi and Borhy (2022) 129–130.

³⁹Bíró (2009) 38–41; Bíró (2010) 145–147; Bíró (2017) 183.

⁴⁰About the problems of the identification of game boards see for example: Carè (2022) 238–239; Pace et al. (2024), 359; Penn et al. (2025).

⁴¹Crist et al. (2024) Fig 1.

⁴²Schädler (1995); Crummy (2007) 361; Crist et al. (2024) 65–68 and Figs 1–2.

⁴³About *ludus latrunculorum* and its game boards most recently: Crist et al. (2024); Schädler and Hall (2024) 158–162; Penn et al. (2025); Kovár et al. (2026).

⁴⁴Ottományi (2025) 243.

⁴⁵Lányi (1990) 248.

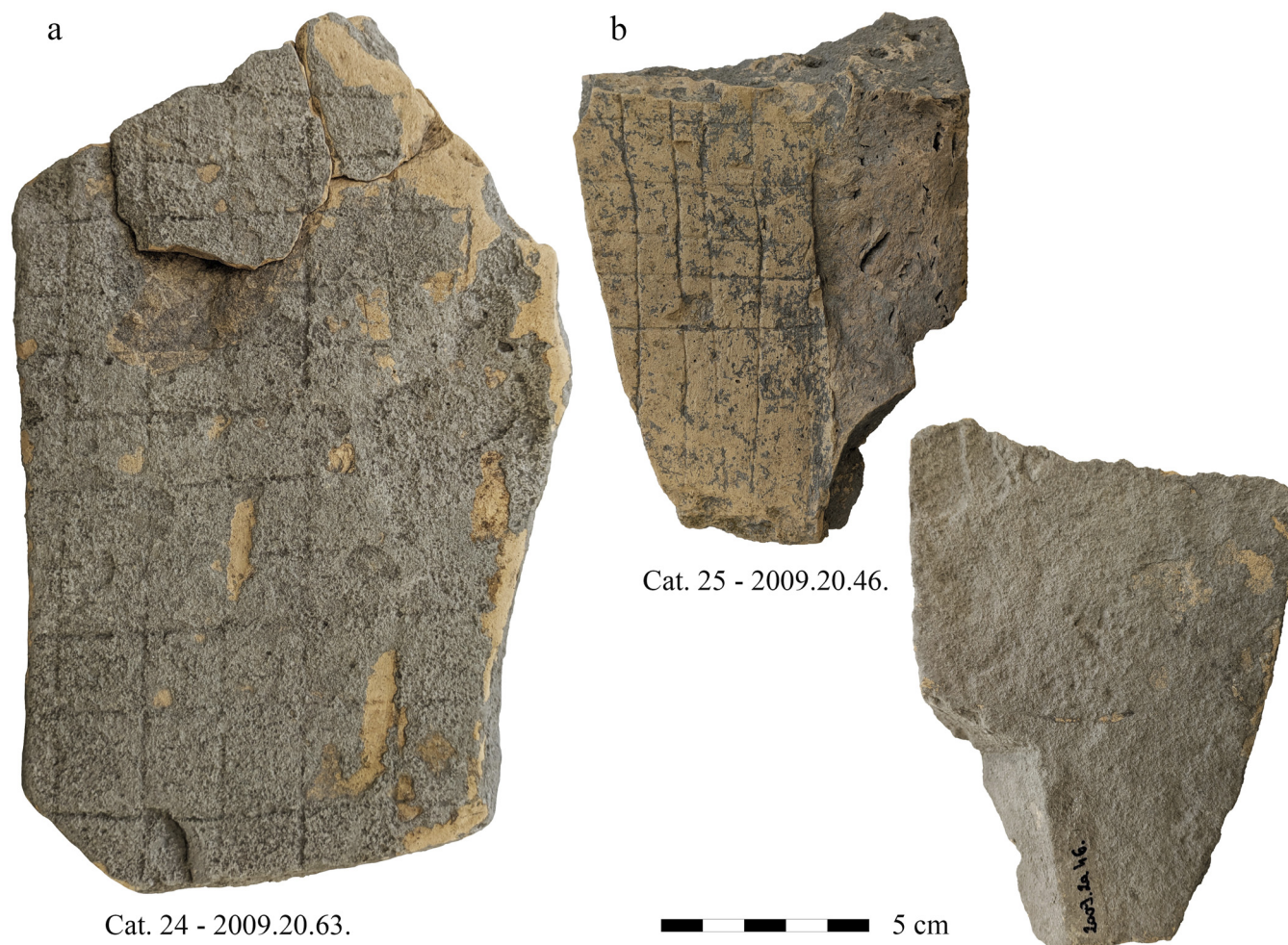


Fig. 4. The two possible grid type game boards from Gönyű road station (Photos: L. Dobosi)

military and civilian sphere. Only a small proportion of the burials contained gaming paraphernalia in both cemeteries: one out of 102 burials in Quadrata and 2 (maybe 3) burials out of 149 in Mursella. From these 3 (or 4) graves only one was a child burial, the others were the burials of relatively rich adult males. If we look at other published Pannonian cemeteries, a similar pattern arises.

From the c. two dozen auxiliary forts of Pannonia, the graveyards of only a few have been at least partly excavated: Solva (Esztergom), Ulcisia (Szentendre), Intercisa (Dunaújváros) and Vetus Salina (Adony).

In the late Roman necropolis of the auxiliary fort at Solva (Esztergom, Bánomi-dűlő) more than 330 graves were excavated, from which two contained gaming pieces: eight bone counters were found in Grave 247,⁴⁶ a child burial and a broken millefiori glass counter in Grave 219, the burial of an adult woman.⁴⁷

From the 165 graves unearthed in the late Roman cemetery of the auxiliary *castellum* in Ulcisia (its name was changed to Constantia in the 4th century), one contained gaming paraphernalia: Grave 47 was a tile grave built for an adult male and female, and the two six-sided dice were placed at the left foot of the male in a small casket.⁴⁸ Gaming pieces deposited in small caskets are not unheard of: a bronze casket containing 10 glass and bone gaming counters was unearthed in a grave in the cemetery of the auxiliary fort of Asciburgium (Moers-Asberg, Germany).⁴⁹

There was an unusually large number of graves with pieces of gaming equipment in a segment of a cemetery in Intercisa. In the early 1900s, 112 late Roman inhumation burials were excavated on the parcel of Ferenc Hauser on the so-called Öreghegy site. The grave goods from these burials

⁴⁶H. Kelemen (2008) 57 and Plate 58.

⁴⁷H. Kelemen (2008) 51 and Plate 49. The anthropological analysis was conducted by M. Merczi, see Merczi (2008).

⁴⁸T. Maróti and Topál (1980) 112 and Plate 15; Ottományi (2024) 130; Ottományi (2025) 243. The burial was found in 1972, at 24 Római sánc Street during a rescue excavation led by Sarolta Tettamanti and Judit Topál. The presence of the small casket is deduced from an iron staple. Inv. no. of the dice: 78.142.1-2.

⁴⁹Euskirchen (2022) 131.

were purchased by the Berliner Museum in 1909 and were published by Felix Teichner in 2012. Based on his catalogue, six graves out of 112 contained gaming paraphernalia as grave goods: five bone gaming counters in Grave B2, one bone counter in each of Grave B11, Grave B14, Grave B53, two bone dice in Grave 63 and glass and bone counters in Grave B83.⁵⁰ Unfortunately, no information is available about the age and sex of the deceased. Further pieces of gaming equipment were found in other parts of the Intercisa cemeteries.⁵¹

In Vetus Salina only a few graves have been excavated in the late Roman graveyard near the southern and western walls of the auxiliary *castellum*. In 1950, six graves were excavated from which three were completely devoid of grave goods, but one was relatively rich. Grave 6, the inhumation burial of an adult male contained a crossbow brooch, a belt buckle, a few metal objects and a set of 20 round, plano-convex, undecorated bone gaming counters found by the right hand of the skeleton.⁵²

In one cemetery in Brigetio at the Komárom, Nagymagtár site only one grave out of 97 contained gaming paraphernalia. The cemetery was used from the early 2nd century to the middle of the 3rd century AD. A bone die was found at the foot of an adult of unknown sex.⁵³ A study of 85 child inhumation burials from Brigetio showed that only one contained a bone die and a glass counter (Grave J/64).⁵⁴

In the western cemetery of Aquincum (Budapest, Bécsi Street) one bone die was found out of c. 180 graves. The burial with the broken six-sided die was Grave 79, which belonged to an adult male and could be dated to the first half of the 2nd century based on the abundant grave goods found in the burial.⁵⁵

From the civil town of Sopianae (Pécs, Hungary), Ferenc Fülepi published 305 burials that were unearthed between 1716 and 1977 and from which the late 3rd-century inhumation burial (Grave R/170) was the sole burial with gaming paraphernalia. Beside the ten bone and one glass gaming counters, the grave of an adult male contained two coins of emperor Probus (276–282), one coin of Carinus (283–285), glass bottle fragments, a silver brooch, an iron knife, shoe nails and further bronze and iron objects (mostly fragmented).⁵⁶ This mismatched set of gaming pieces is particularly interesting: one round, plano-convex, dark green millefiori (mosaic) glass counter with yellow circles, one flat, round bone counter with countersunk upper surface and nine plano-convex bone counters some of which were cut up to thin slices.⁵⁷

At the Keszthely-Dobogó site, a civilian cemetery consisting of 134 graves used from the 1st to the 4th centuries was unearthed completely by Károly Sági between 1955 and 1962. The sole burial with gaming pieces was Grave 111, the cremation burial of a young, adult woman rich in grave goods that were damaged by fire. The grave contained two blue and white glass gaming counters, ceramic and glass vessels, bronze bracelets, a golden earring, a silver hairpin, bronze pelta-shaped brooch, four 4th-century bronze coins, an iron knife, remains of a double-sided wood comb a bone spoon, bone spindle whorl, and further small bone and metal objects; it was the richest grave in the cemetery.⁵⁸ The burial was a niche grave dated to the 4th century, and might have belonged to a Romanised barbarian group, based on the form of the burial and the grave goods.⁵⁹

Another cremation burial with pieces of gaming equipment was unearthed in Mannersdorf am Leithagebirge, near Carnuntum (Bad-Deutschaltenburg, Austria). In the large necropolis used between the late 1st and early 5th centuries, 257 graves were uncovered during the excavation campaigns led by Gustav Melzer and Hannsjörg Ubl in 1968–1985. The one grave that contained two six-sided bone dice was Grave 217, a rich cremation burial of an adult male and an adult female from the first half of the 3rd century. The human remains and the bone dice, pottery vessels (several Faltenbechers and Samian ware), glass vessels, a bronze hair pin with gilded head, several bronze objects and a fragmented piece of amber were placed in a stone ossuary (one of the four stone ossuaries in the cemetery).⁶⁰

Two large Roman cemeteries have been partially excavated in the civil town of Scarbantia (Sopron, Hungary) from the 19th century onwards: one south of the city along the Amber Road to Savaria (Szombathely, Hungary) and the other to the north, along the same road to Carnuntum.⁶¹ By the early 20th century, more than a hundred graves have been unearthed, however, we know of only two burials with gaming paraphernalia. Both were excavated in the southern necropolis by Lajos Bella in 1895, and both were cremation burials. A *bustum* burial contained a small, black pottery beaker with 23 small bronze objects and 2 six-sided bone dice that acquired a green colour from the patina formed on the bronze objects.⁶² The other burial was an exceptionally rich cremation burial of a woman⁶³ with a large amount of grave goods placed in a 0.8 × 1.1 m large stone cinerary chest dated to the turn of the 1st to 2nd century AD. Among the grave goods were five pottery and two glass vessels, nine carved amber statuettes and cosmetic

⁵⁰Teichner (2012) 233–257.

⁵¹R. Alföldi et al. (1957) 484–491.

⁵²Barkóczi and Bónis (1954) 179 and Pl. 45/7–26.

⁵³Olasz (2020) Table 1.

⁵⁴Olasz (2025).

⁵⁵Topál (1993) 37–38; T. Bíró et al. (2012) 110.

⁵⁶Fülepi (1977) 32 and Pl. 17/5–15.

⁵⁷The diameter of the gaming counters is around 24–27 mm.

⁵⁸Sági (1981) 75, 104 and Fig. 76/10.

⁵⁹Sági (1981) 104–115.

⁶⁰Ployer (2023) 231 and 503–504.

⁶¹Gömöri (1999) 98, Fig. 3.

⁶²Bella (1895) 400 and Fig. 26–27.

⁶³The gender identification was not based on the human remains but rather on the grave goods. Distaffs, for example, can be exclusively found in female burials in Pannonia to our present knowledge, see Pásztókai-Szeőke (2011).

cases, four decorated amber rings, an assortment of small amber objects, two amber distaffs, iron nails and most importantly: two six-sided bone dice and 39 small, plano-convex gaming counters made of yellow and dark red amber.⁶⁴ The excavator of the grave did not recognise the counters as gaming pieces, but thought that they were burnt as incense. For this reason, he did not think they were particularly significant and did not publish them in detail. Unfortunately, most of the counters are now lost, along with the two dice, and we have no idea, how many of the counters were red and how many yellow, and if there were indeed 39 pieces at the time of the excavation. There are currently 15 counters in the Sopron Museum: seven yellow and eight of dark burgundy colour. It seems that the two dice and the 39 counters belonged to a gaming set, either incomplete with an odd number of counters missing, or with a few extra counters. The set might have been used to play *ludus duodecim scriptorum*, a widespread Roman race game, which is believed to have been played with two or three dice and at 15 counters for each of the two players.⁶⁵ Further evidence is available for people playing *duodecim scripta* in Scarbantia: a game board made of limestone was found on the *forum* of the settlement.⁶⁶

Realising that this is only a small set of data, not suitable to draw far-reaching conclusions, further investigations are necessary to outline trends about the deposition of gaming paraphernalia as grave goods in Pannonia. It seems that in most cemeteries only a very small fraction of the burials contained gaming counters or dice, if at all. Usually, there are only a few pieces of gaming equipment placed in the graves, complete gaming sets are extremely rare (see for example the Scarbantia set as the most complete example with two sets of counters and two dice). When there are several counters in a grave it is not infrequent that these smaller or larger assemblages comprise a mixture of counters in terms of shape, decoration colour or even materials (see for example the Sopianae assemblage).⁶⁷ It can also be observed that counters are much more frequently put in Pannonian graves than dice. Graves with gaming paraphernalia tend to belong to adult males, which might be accidental, as for example in Moesia, gaming pieces and dice are found equally in adult male or female and children burials.⁶⁸ Both male and female burials containing pieces of gaming equipment are usually among the richest burials in the given cemetery.

Pieces of gaming equipment feature as grave goods not only in Pannonia, but everywhere in the Roman Empire, and

even beyond its borders in Roman Iron Age northern Europe. Placing dice, gaming counters and actual or symbolic game boards seems to be a wider phenomenon, present also before and after the Roman era: they can be found in Greek burials since the 7th century BC, in Egypt since the 3rd millennium BC (especially Senet game boards), in Etruscan tombs, or in the Viking boat burials in the Migration period.⁶⁹ Gaming paraphernalia were practical objects to be put in a grave for use and entertainment in the afterlife,⁷⁰ however, they are usually considered to have had symbolic meanings as well. According to one hypothesis, gaming pieces or game boards alluded to the idea of moving along one's life was similar to the movement of the counters along the game board, and board games were a metaphor for life and death.⁷¹ When put in a grave, they also served to create a memory-link between the deceased and their family or friends,⁷² or as a symbol of good luck in the afterlife.⁷³

Board game pieces in graves and board gaming in general are often associated with high status and elite lifestyle, because one way the elite could distinguish itself from the lower classes was to spend time with non-productive activities. Playing board games and acquiring considerable skill in them required a lot of leisure time, not necessarily available to hard-working people, thus board games became a symbol of elite identity according to some researchers.⁷⁴ This cross-cultural phenomenon can be traced in ancient Greece, Rome, and in Iron age and Migration period Northern Europe and it could be one reason why board game pieces are frequently found in burials rich in grave goods, as can be seen in Pannonian cemeteries as well. Looking at Northern European Iron age burials, H. Whittaker observed, that pieces of gaming equipment are usually parts of high-status male burials as opposed to high-status female burials. It seems that there might be a connection between board games and qualities of leadership: gaming pieces in a grave might have been symbols of intelligence or strategical skills.⁷⁵ Board game pieces in female burials are rarer, and they might have belonged to extraordinarily powerful women.⁷⁶ Although plenty of written sources are cited that attest to elite men playing board games in ancient Greece and Rome as well, again linked to warfare and strategic thinking,⁷⁷ it has been pointed out recently that playing women have also featured in the literary sources but have been mostly ignored in the past.⁷⁸

⁶⁹Whittaker (2004) 279; Whittaker (2006) 103; Hall (2016) 440.

⁷⁰Whittaker (2004) 280; Euskirchen (2022) 131.

⁷¹Schmidt and Fiedler (1990) 179–182; Whittaker (2004) 285; Whittaker (2006) 108.

⁷²Penn and Courts (2022); Hall (2016).

⁷³Schmidt and Fiedler (1990) 179–182; Euskirchen (2022) 131.

⁷⁴Whittaker (2004) 286–287; Whittaker (2006) 103; Hall (2016) 440.

⁷⁵Whittaker (2004) 287–288; Whittaker (2006) 105; Hall (2016) 446.

⁷⁶Whittaker (2006) 106–107.

⁷⁷Whittaker (2004) 288–291.

⁷⁸See for example Courts (2022).

⁶⁴Bella (1895) 392–400 with figures; Gömöri (1999) 104–106; Gömöri (2009) 21.

⁶⁵Schädler (1995).

⁶⁶Gömöri (1982) 352–356 and figs 1–2; Gömöri (1986) 365–367 and fig. 34. For further *duodecim scripta* boards from Pannonia (Aquincum and Intercisa) see Dobosi and Szabadváry (2026).

⁶⁷Such patchwork sets are not infrequent in other Roman provinces either, see Penn and Courts (2022).

⁶⁸Janković (2018) 241.

CONCLUSIONS

The pieces of Roman gaming equipment in the collection of the Rómer Flóris Museum of Art and History (Győr, Hungary) add to the small but growing body of gaming paraphernalia published from Roman Pannonia. All but one of the artefacts come from modern excavations with secure find circumstances from four different locations: two six-sided bone dice were found in the auxiliary *vicus* of Arrabona (Győr), a bone die and counter came to light in the late Roman cemetery of the Quadrata auxiliary fort and *vicus* (Mosonszentmiklós-Jánosházapuszta), a single and a set of bone gaming counters were unearthed in the late Roman cemetery of Mursella *municipium* (Mórichida-Kisárpás), and two possible grid type game boards were excavated in the road station at Gönyű.

Most important are the well-dated finds from the late Roman cemeteries where bone counters and a die were recovered from fourth-century graves. Gaming paraphernalia deposited in burials as grave goods indicate that gaming pieces were not pure functional objects used in everyday life but were sometimes valued possessions of an individual and could evoke emotions and memories in relatives and friends. Although the two discussed late Roman cemeteries do not provide enough data for an in-depth analysis, comparison with other graveyards published from Roman Pannonia outline some of the overall trends. It seems that gaming paraphernalia appear only in a very small fraction of the burials in a cemetery, and the graves with gaming pieces or dice are usually burials of adult males and tend to be among the richest graves in a given cemetery. Only few pieces of gaming equipment are usually placed in the graves, complete sets are extremely rare. Gaming counters seem to be more frequent grave goods than dice, but the reason for this needs further investigation. Might this be in connection with the fact that *ludus latruncularum*, a strategic game needing counters but not dice was a very popular game in Pannonia?

The two grid type game boards found in Gönyű shed light on the problematics connected to the identification of ancient game boards. From the two *tegula* fragments with grid pattern on their upper surfaces one was most probably purpose-made and used as a game board, however, the other was very makeshift and might have been left unfinished: maybe the maker decided to leave it incomplete because of the crooked lines or the tile might have been made for a completely different purpose.

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Cat. 1.	RFM 65.18.1. (Fig. 1)											
object type	Six-sided cubic bone die											
findspot	Arrabona, Győr, between Castle Casamate and the bridge on the river Rába											
provenance	gift of Gábor Lacó (1964)											
length of edges [mm]	1–2	1–3	1–4	1–5	6–2	6–3	6–4	6–5	2–3	2–4	5–3	5–4
	9.7	9.7	9.5	9.4	9.5	9.8	9.9	9.4	8.9	8.9	8.8	8.8
weight [g]	1.6											
numbering	Sevens, I/1											
pip style	dot-ring											
colour	light brown											
literature	unpublished											
description	Six-sided die made of bone. Slightly flattened shape, largest faces 1 and 6, faces a bit trapezoid. Length difference between shortest and longest edge is 9.3%. Some of the edges rounded. Numbers are shown with dot-ring motives placed irregularly within the faces of the die. Root marks on the faces 3, 4 and 6											
Cat. 2.	RFM uninventoried (Fig. 1)											
object type	Six-sided cubic bone die											
findspot	Arrabona, Győr, Széchenyi Square, Lloyd building, L surface, KE 337, 10.14.2009											
provenance	excavation of Szilvia Bíró											
length of edges [mm]	1–2	1–3	1–4	1–5	6–2	6–3	6–4	6–5	2–3	2–4	5–3	5–4
	9.0	9.2	9.2	8.7	8.8	9.1	9.2	8.7	8.0	8.0	8.3	8.2
weight [g]	1.4											
numbering	Sevens, II/1											
pip style	dot-ring-ring (diameter of outer ring: 3.0 mm)											
colour	light yellowish white											
literature	unpublished											
description	Six-sided die made of bone. Irregular shape with slightly trapezoid faces; length difference between shortest and longest edge is 13.0%. Corners slightly rounded. Numbers are shown with dot-ring-ring motives placed irregularly within the faces of the die. Saw marks visible on all faces											
Cat. 3.	RFM 65.6.28. (Fig. 1)											
object type	Six-sided cubic bone die											
findspot	Mosonszentmiklós, Jánosházpuszta, Roman hill, 4th century cemetery, Grave 10											
provenance	excavation of András Uzsoki (1963)											
length of edges [mm]	1–2	1–3	1–4	1–5	6–2	6–3	6–4	6–5	2–3	2–4	5–3	5–4
	7.8	7.9	7.7	8.0	7.9	7.9	7.6	7.8	7.9	7.7	7.9	7.7
weight [g]	0.9											
numbering	Sevens, II/3											
pip style	dot-ring											
colour	dark brown											
literature	unpublished											
description	Six-sided die made of bone. Almost perfect cubic shape, length difference between shortest and longest edge is 5.0%. Numbers are shown with dot-ring motives placed irregularly within the faces of the die. Edges and corners chipped, faces 2, 5 and 6 are cracked											

Cat. 4.	RFM 65.6.30. (Fig. 2)	
object type	bone counter	
findspot	Mosonszentmiklós, Jánosházpuszta, Roman hill, 4th century cemetery, Grave 10	
provenance	excavation of András Uzsoki and Dénes Gabler (1963)	
diameter [mm]	19.3	19.4
thickness [mm]	4.7	
weight [g]	1.7	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, undecorated upper surface. Polished, slightly scratched, few root marks	

Cat. 5.	RFM 59.24.18. (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 107	
provenance	excavation of Endre Bíró	
diameter [mm]	21.8	18.7 (broken)
thickness [mm]	6.9	
weight [g]	1.7	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Extremely worn, broken, small parts missing. A large crack runs through the middle	

Cat. 6.	RFM 59.24.140a (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	22.2	22.1
thickness [mm]	6.1	
weight [g]	3.0	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of four dot rings in the middle surrounded by two concentric grooves. There are nine dot-rings along the circumference and a further groove along the edge. Nicely polished, the edge is a bit chipped	

Cat. 7. RFM 59.24.140b (Fig. 2)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	23.0	21.5 (broken)
thickness [mm]	5.2	
weight [g]	2.3	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of four dot rings in the middle surrounded by two concentric grooves. There are eight dot-rings along the circumference and a further groove along the edge. The counter is very worn and chipped	

Cat. 8. RFM 59.24.140c (Fig. 2)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	24.4	22.4 (broken)
thickness [mm]	6.1	
weight [g]	3.2	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of four dot rings in the middle surrounded by two concentric grooves. There are nine dot-rings along the circumference and a further groove along the edge. The counter is very worn and chipped	

Cat. 9. RFM 59.24.140d (Fig. 2)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	24.5	24.0 (broken)
thickness [mm]	4.8	
weight [g]	2.4	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of four dot rings in the middle surrounded by two concentric grooves. There are nine dot-rings along the circumference and a further groove along the edge. The counter is worn and chipped, especially along the edge	

Cat. 10.	RFM 59.24.140e (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	23.2	17.8 (broken)
thickness [mm]	5.3	
weight [g]	2.3	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). Broken, about one fourth of the counter is missing. The decoration consists of four dot rings in the middle surrounded by two concentric groves. There are further dot-rings along the circumference (original number unknown) and a groove along the edge. The counter is very worn and chipped	
Cat. 11.	RFM 59.24.140f (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	23.3	22.9
thickness [mm]	4.6	
weight [g]	2.7	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of two concentric groves in the middle. There are seven dot-rings and a further groove along the circumference. The counter is worn and chipped, especially on one side	
Cat. 12.	RFM 59.24.140g (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	21.6	21.2
thickness [mm]	4.9	
weight [g]	2.0	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of four (?) dot rings in the middle (now remains of two are visible) surrounded by two concentric groves. There are seven dot-rings along the circumference and a further groove along the edge. The counter is extremely worn and chipped, most of the decoration is just discernible. Reverse is in very good condition, nicely polished	

Cat. 13. RFM 59.24.140h (Fig. 2)

object type	bone counter
findspot	Kisárpás, late Roman cemetery, Grave 135
provenance	excavation of Endre Bíró
diameter [mm]	21.7 20.0 (broken)
thickness [mm]	6.8
weight [g]	2.9
colour	light brown
literature	unpublished
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. The decoration originally probably consisted of four (?) dot rings in the middle (now the central dot of one is visible) surrounded by two concentric groves. There are seven dot-rings along the circumference (originally there were probably 8) and a further grove along the edge. Broken, a small piece missing on one side. The counter is extremely worn and chipped, most of the decoration is just discernible. Reverse is in very good condition, nicely polished, bit chipped along the edge

Cat. 14. RFM 59.24.140i (Fig. 2)

object type	bone counter
findspot	Kisárpás, late Roman cemetery, Grave 135
provenance	excavation of Endre Bíró
diameter [mm]	25.7 25.6
thickness [mm]	4.5
weight [g]	3.5
colour	light brown
literature	unpublished
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of three shallow, faint concentric groves. The surface is nicely polished, in very good condition. Few root marks on reverse

Cat. 15. RFM 59.24.140j (Fig. 2)

object type	bone counter
findspot	Kisárpás, late Roman cemetery, Grave 135
provenance	excavation of Endre Bíró
diameter [mm]	27.5 26.8
thickness [mm]	5.2
weight [g]	3.9
colour	light brown
literature	unpublished
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of three shallow, faint concentric groves. The surface is worn, chipped

Cat. 16.	RFM 59.24.140k (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	24.3	23.8
thickness [mm]	4.3	
weight [g]	2.7	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed, decorated upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The decoration consists of three shallow, very faint, only just discernible concentric grooves. The surface is nicely polished, in good condition. Slightly worn along the edge	
Cat. 17.	RFM 59.24.140l (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
provenance	excavation of Endre Bíró	
diameter [mm]	23.3	22.6
thickness [mm]	7.5	
weight [g]	3.9	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). The surface is worn, chipped	
Cat. 18.	RFM 59.24.140m (Fig. 2)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	25.3	23.6 (broken)
thickness [mm]	3.7	
weight [g]	2.2	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). Upper surface is worn, chipped. The layers of the bone peel away. Broken, small parts missing on two opposite sides of the edge	

Cat. 19. RFM 59.24.140n (Fig. 2)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	25.1	22.3 (broken)
thickness [mm]	4.9	
weight [g]	2.4	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). Upper surface is worn, chipped. The layers of the bone peel away. Broken, small parts missing along the edge	

Cat. 20. RFM 59.24.140o (Fig. 3)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	24.5	24.1
thickness [mm]	6.0	
weight [g]	3.5	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Upper surface is worn, chipped. especially in the middle	

Cat. 21. RFM 59.24.140p (Fig. 3)

object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	23.7	19.8 (broken)
thickness [mm]	6.6	
weight [g]	3.5	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). Upper surface is slightly worn, chipped. Broken, small part missing along the edge on one side	

Cat. 22.	RFM 59.24.140r (Fig. 3)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	22.3 (broken)	21.0 (broken)
thickness [mm]	6.6	
weight [g]	2.1	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Lathe turned, small indentation in the centre of the obverse (lathe centre). Worn, chipped. Broken, parts missing along the edge	

Cat. 23.	RFM 59.24.140s (Fig. 3)	
object type	bone counter	
findspot	Kisárpás, late Roman cemetery, Grave 135	
collection	excavation of Endre Bíró	
diameter [mm]	20.9 (broken)	16.9 (broken)
thickness [mm]	4.8	
weight [g]	1.4	
colour	light brown	
literature	unpublished	
description	Circular, plano-convex bone gaming counter. Flat bottom, domed upper surface. Extremely worn, chipped, broken	

Cat. 24.	RFM 2009.20.63 (Fig. 3)	
object type	fragment of <i>tegula</i> with grid pattern	
findspot	Gönyű, Roman road station	
collection	excavation of Szilvia Bíró	
length [mm]	206	
width [mm]	134	
thickness [mm]	26	
colour	light yellow	
literature	unpublished	
description	Fragment from the middle of a <i>tegula</i> , with no original edges. The full upper surface is covered by an orthogonal grid pattern. The lines were drawn without the aid a ruler, with dynamic movements. The grid is regular looking, the individual squares are between 18 × 18 mm and 19 × 24 mm large	

Cat. 25.	RFM 2009.20.48 (Fig. 3)
object type	fragment of <i>tegula</i> with grid pattern
findspot	Gönyű, Roman road station
collection	excavation of Szilvia Bíró
length [mm]	132
width [mm]	89
thickness [mm]	29–33
colour	light yellow
literature	unpublished
description	Fragment from the lower right corner of a <i>tegula</i> . The surface is partly covered by an orthogonal grid pattern. The lines were drawn without the aid a ruler, the lines are not straight. Near the lower edge of the <i>tegula</i> , the horizontal lines are missing, and the vertical lines peter out about 1 cm before the edge. The grid is not very regular looking, it has a makeshift appearance. The individual squares are between 10×12 mm and 15×20 mm large