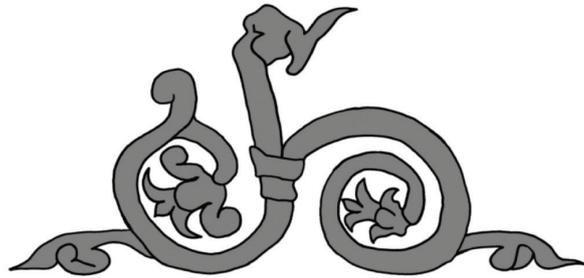


ZIRIDAVA
STUDIA ARCHAEOLOGICA

31

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Editura MEGA
Cluj-Napoca
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In Romania, the periodical can be obtained through subscription or exchange, sent as post shipment, from Museum of Arad, Arad, Piata G. Enescu 1, 310131, Romania.
Tel. 0040-257-281847.

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The content of the papers totally involve the responsibility of the authors.

Layout: Francisc Baja, Florin Mărginean, Victor Sava

ISSN 2392-8786



EDITURA MEGA | www.edituramega.ro
e-mail: mega@edituramega.ro

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Avar Graves Recently Discovered in Gâmbaş (Alba County) on the Spot Called “Ogoarele de jos”*

Călin Cosma, Adrian Bolog, Ovidiu Oargă

Abstract: Two Avar graves were discovered in 2015 during the archaeological excavations performed on the route of the future Sebeş-Turda highway, in the border of the settlement of Gâmbaş (Alba County), on the spot called “Ogoarele de jos”. The place of discovery is a high terrace of River Mureş, located north-east of the settlement of Gâmbaş, at the base of “Măguricea” Hill, where River Mureş changes its course from east-west to south (Fig. 1a). The two funerary complexes are located on this plateau along the NNW-SSW axis, very close to the north-western edge of the terrace, 15 m apart (Fig. 1b).

The two graves date to the Middle Avar Period (650/670–710/720) and are part of the Avar environment in Transylvania/the Carpathian Basin.

The two graves discovered in 2015 in Gâmbaş on the spot of “Ogoarele de jos” is 3 km in a straight line from the Avar cemetery in Gâmbaş/Cimitirul vechi reformat, discovered in 1911 and researched in 1913 (Fig. 1a). It is thus very likely that the two graves in Gâmbaş – spot “Ogoarele de jos” was part of a different cemetery than the one in la Gâmbaş/Cimitirul reformat, researched in 1911, 1913.

Keywords: Avars, graves, funerary ritual, jewelry, everyday objects.

Two Avar graves were discovered in 2015 during archaeological excavations performed on the route of the future Sebeş-Turda highway on the edge of the settlement of Gâmbaş (Alba County), on the site conventionally labeled No. 3. The place where they were found, that the locals call Ogoarele de jos, is a high terrace of River Mureş, located north-east of the settlement of Gâmbaş, at the base of “Măguricea” Hill, in a place where River Mureş changes its course from east-west to south (Fig. 1a). The two funerary complexes are located on the plateau in question along the NNW-SSW axis, very close to the north-western edge of the terrace, 15 m apart (Fig. 1b).



Fig. 1a-b. The geographic position of the two graves in the border of the village of Gâmbaş.

Grave no. 1

Adult, 30–40 years of age. The pit became apparent at – 0.40 m. The bottom of the pit was at the

* English translation: Ana M. Gruia.

depth of -1.30 m. The grave pit was rectangular with rounded corners. The dimensions of the grave were 2.32×0.84 m. The deceased had been placed in the grave in dorsal decubitus. Only parts from the upper skeleton have been preserved. The skeleton was oriented S-W with the head, N-E the feet (Fig. 2a-b). No traces of looting or subsequent disturbances of the tomb have been noted.

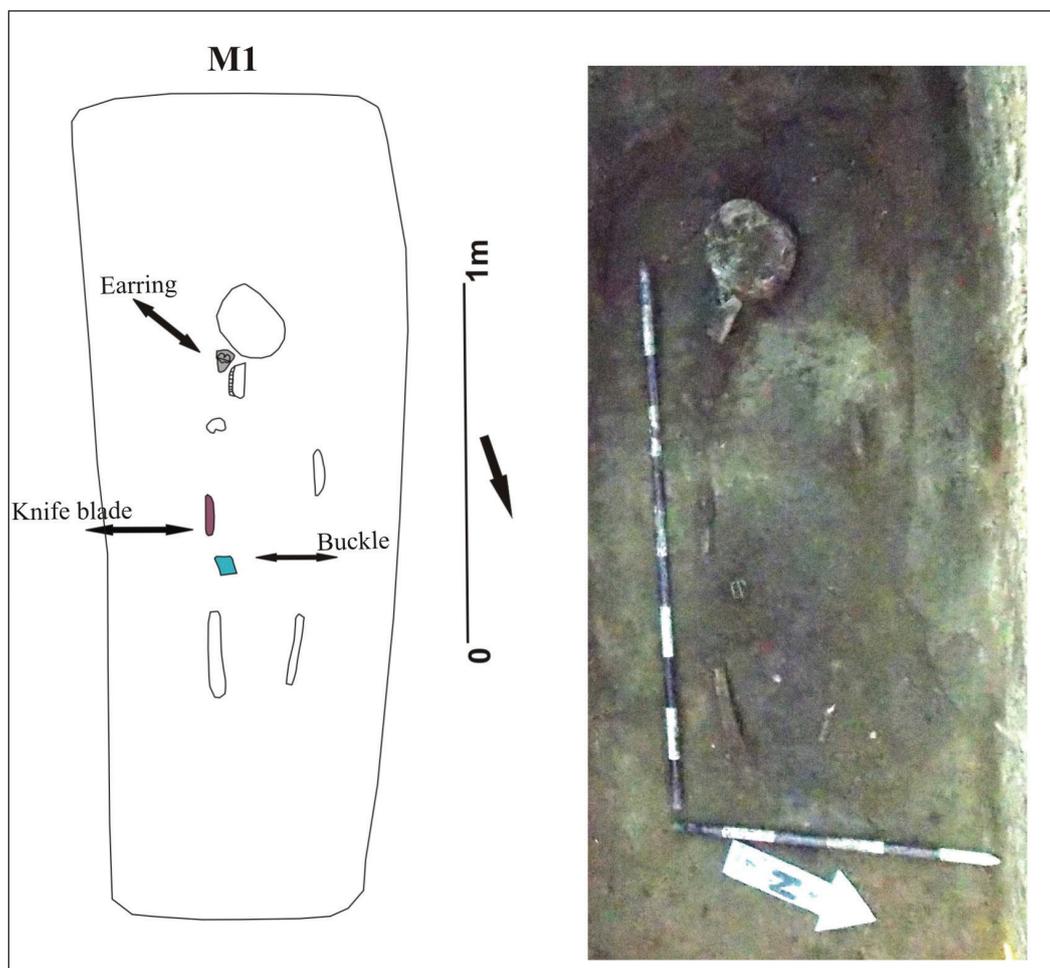


Fig. 2 a-b. Ground plan of grave 1.

The funerary inventory consists of jewelry items and dress accessories.

1. Silver earring with lunula-shaped body and star-shaped pendant, cast in a single-valve mold (Pl. 1/1, 2/1). It was discovered near the right ear (Fig. 2a-b). The upper part of the lunula was very slightly arched. The upper right tip of the lunula is marked by a narrow ring and then the loop that was once inserted in the ear. The upper left tip of the lunula ends in a prominence that is prolonged and convex in the middle, in shape of a barrel/bitronconical. It is marked at the ends by two rings that delimitate and stress the barrel shape of the prominence. The crescent moon is ornamented with a “fir tree” motif placed on the margins of its sides and in the center. The pendant is circular. It has the shape of an umbo, with a small granule in the middle, from which three petals start towards the outside. The umbo is marked by five corners in the shape of a grape bunch, made of small pearl-shaped granules. Earring height = 5.6 cm; Height of the star-shaped pendant = 1.4 cm; Width of the crescent = 3.7 cm. Unirii National Museum Alba Iulia, inv.no. F 10 408.

2. Bronze earring with globular pendant (Pl. 1/4, 2/4). Discovered in the area of the right ear. The loop is made of a bronze bar, lozenge shaped in profile. The ends are blunt. The pendant consists of two superposed spheres. The first sphere is smaller in diameter and is attached to the earring’s loop. The second sphere (spherical bulb) is made of black glass, inserted through perforation on the wire that starts from the iron sphere. Diameter: = 2.2 cm; Bar thickness = 0.2 cm; Pendant length = 0.8 cm; Diameter of the small sphere = 0.5 cm; Diameter of the large sphere = 0.7 cm. Unirii National Museum Alba Iulia, inv. no. F 10 411.

3. Bronze earring with globular pendant (Pl. 1/5, 2/5). Discovered in the area of the left ear. The loop made of bronze bar is lozenge in profile. The ends are blunt. The pendant consists of two superposed spheres. The first sphere is smaller in diameter and is attached to the earring's loop. The second sphere (spherical bulb) is made of black glass and has been inserted, through perforation, on the wire that starts from the iron sphere. Diameter = 2.2 cm; Bar thickness = 0.2 cm; Pendant length = 0.8 cm; Diameter of the small sphere = 0.5 cm; Diameter of the large sphere = 0.7 cm. Unirii National Museum Alba Iulia, inv. no. F 10 412.

4. Silver earring (Pl. 1/2, 2/2). Discovered in the area of the right earring. Made of thin, round bar. One of the ends is pointy and the other is wide. Diameter = 2 cm, Bar thickness = 0.2 cm. Unirii National Museum Alba Iulia, inv. no. F 10 409.

5. Bronze earring (Pl. 1/3, 2/3). Discovered in the area of the left earring. Made of thin, round bar. Both ends are blunt. One of the ends is pointy, the other is wide. Diameter = 1.8 cm; Bar thickness = 0.2 cm. Unirii National Museum Alba Iulia, inv. no. F 10 410.

6. Necklace made of beads of various types: yellow, made of clay fabric, the size of millet grains; in the center they are large, cylindrical in shape, with striations, bitronconic shapes, melon or barrel shaped (Pl. 1/7, 2/7). Discovered in the area of the sternum. Unirii National Museum Alba Iulia, inv. no. F 10 414.

7. Trapezoidal buckle cast out of bronze. The tongue is also preserved (Pl. 1/6, 2/6a-b). Discovered in the area of the human pelvis (Fig. 2a-b). The bar is oval in section and has a flat reverse. Dimensions: 3.5 × 3 cm; Diameter of the loop's bar = 0.4 cm; Diameter of the pin = 0.5 cm. Unirii National Museum Alba Iulia, inv. no. F 10 413.

8. Iron knife (Pl. 1/8, 2/8). Discovered on the right side of the human pelvis. Blade with a single edge. One part of the handle tang has not been preserved. Preserved length = 13.2 cm; Blade length = 10.5 cm; Blade width = 2.5 cm. Unirii National Museum Alba Iulia, inv. no. F 10 415.

9. The macroscopic, morphologic analyses have led to the identification of an animal bone, i.e. a bird's, that can be interpreted as a funerary offering.

Grave no. 2

Adult, old. The grave pit became apparent at -1.20 m. The bottom of the grave pit was at the depth of -1.60 m. The grave pit was rectangular with rounded corners. The dimensions of the grave were 2.20 × 0.76 m. The deceased had been placed in the tomb in dorsal decubitus. The skeleton was almost entirely preserved, but the preservation state of the bones was precarious, so that in some cases the surface of the bones could not be observed (see the anthropological analysis of the skeleton presented in the end of the study). The orientation of the skeleton was S-W the head, N-E the feet (Fig. 3a-b). No traces of looting or subsequent disturbance have been noted.

The funerary inventory of the grave consisted of jewelry items and dress accessories.

1. Loop-shaped earring made of bronze with an attached pendant in the shape of a grape bunch (Pl. 3/1, 4/1). Was discovered in the area of the right ear (Fig. 3a-b). The loop is made of a bronze bar that is round in section. The ends are blunt. The attached pendant is in the shape of a grape bunch consisting of three pearl-shaped small spheres attached to each other in shape of a circle and a fourth sphere in the center of the previous three. Diameter: = 2 cm; Bar thickness = 0.2 cm; Pendant height = 0.4 cm. Unirii National Museum Alba Iulia, inv. no. F 10 416.

2. Loop-shaped earring made of bronze with one end in shape of a spiral (Pl. 3/2, 4/2). Discovered in the area of the left ear (Fig. 3a-b). The loop is made of a bronze bar that is round in section. One of the ends is pointy. The other end is bent three times, in shape of a spiral on the outside. Diameter: = 2.2 cm; Bar thickness = 0.2 cm. Unirii National Museum Alba Iulia, inv. no. F 10 417.

3. Necklace made of beads of different types: yellow, made of clay fabric, barrel-shaped, melon-shaped or bitronconic (Pl. 3/3, 4/3). Discovered in the area of the sternum (Fig. 3a-b). Unirii National Museum Alba Iulia, inv. no. F 10 418.

4. Iron knife (Pl. 3/4, 4/4). Discovered near the left arm (Fig. 3a-b). Single edge blade. The handle shaft has not been preserved. Preserved length: = 13.5 cm; Blade width = 1 cm. Unirii National Museum Alba Iulia, inv. no. F 10 419.

4. Sea shell.

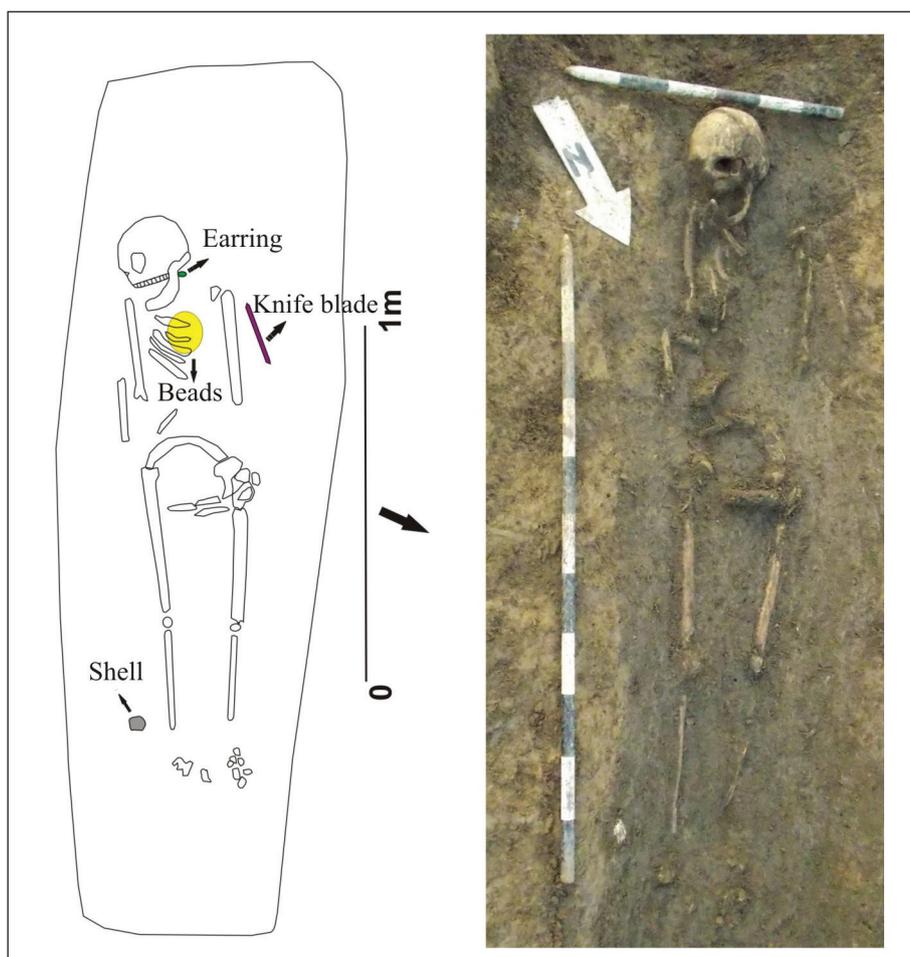


Fig. 3 a-b. Ground plan of grave 2.

Analogies. Dating. Ethnical and cultural identification

Earring with lunular pendant (Grave 1 – Pl. 1/1, 2/1).

From a formal perspective, the earrings from Gâmbaşcan be included in the large group of lunular earrings with star-shaped pendant present in the Carpathian Basin and the Lower Danube Basin during the seventh-eighth centuries. Thus, the lunula in Gâmbaşcan be included in type II Comşa, dated to the second half of the 7th century, throughout the 8th century and even to the first decades of the 9th century¹; to type II variant C. Cilinská, dated to the 7th–8th centuries, still considered as a later variant than other typological variants of the earrings of the same type²; to type III Teodor, dated to the period between the end of the 7th century and the beginning of the 9th century³; to type VIII B, VIII G Grigorov⁴, type V Grigorov, variants generally dated to the 7th–8th centuries⁵; to the type of lunula-shaped earrings variant G Garam, performed for earrings discovered in the cemetery in Tiszafüred, variant dated to the end of the 7th century and until the second half of the 8th century⁶.

D. Staššikova- Štukovská is the author of a combined typology of lunular earrings from the Carpathian Basin dated to the 7th–8th centuries that takes into consideration the shape of the lunula, the upper ending of the lunular body of the earrings, the ornament and the manner in which it was applied to the items, and the different types of pendants attached to the lower part of the lunulae⁷. In reference to this typology, the shape of the lunula in Gâmbaşcan be included in the large group that

¹ Comşa 1971, 383, fig. 1.

² Cilinská 1975, 71–72, fig. 1, 6, 12.

³ Teodor 1995, 192–193, 194, fig. 4/10, 12–19, 5/4–5, 7, 9–11, fig. 6.

⁴ Grigorov 1999, 30–32, tab. 6, 9.

⁵ Grigorov 2007, 103–104, 137, Tip. V.

⁶ Garam 1995, 276–280, Abb. 149/1–2, Abb. 160, variant C.

⁷ Staššikova- Štukovská 1999, 250–298.

forms type 1–13b⁸. One notes the fact that the upper part of the lunula of the earring in Gâmbaş is slightly curved by comparison to the 13 variants in D. Staššikova-Štukovská's typology.

Earrings with the lunula with just two horns in the upper part, like the one in Gâmbaş, were discovered, for example, in the cemetery from Tiszafüred (Hungary)⁹. The earrings from this cemetery are nevertheless different than the artefact from a Gâmbaş through the decoration of the lunula. The lunulae with just two horns in the upper part, like the one in Gâmbaş, are also present in the Bulgarian environment during the 7th–11th centuries, but the model on the lunula and the star-shaped pendants are different than the one on the item from Gâmbaş¹⁰. In Transylvania, in the yet unpublished cemetery in Teiuș (Alba County), archaeologists have found two similar earrings, both through their shape and the upper ending of the lunula, with just two horns¹¹.

The lunula from Gâmbaş is different from other items also through the fact that a barrel-shaped (birtonconic) ornament also features on one of the upper horns (the left one). This ornament also had a functional role (i.e. of a fastening/closing groove for the end of the loop that went through the ear). Such endings form type 2b Staššikova-Štukovská¹². We nevertheless note the fact that the great majority of lunular earrings have barrel-shaped ornaments on both horns¹³, not just on one as in the case of the artifact from Gâmbaş.

The most numerous lunula-shaped earrings are decorated in the techniques of filigree and granulation, with grains set in the shape of grape bunches or linear or curved straps on the body of the lunula¹⁴. In Gâmbaş the model consists of an ornament in the shape of a fir tree, a decorative motif that features rather rarely on the plates of the lunulae¹⁵. In Transylvania, a fir-tree-shaped ornament features on the lunula of an earring discovered in Tomb 2 from the Avar grave in Cicău, a necropolis that dates back to the Middle Avar Period¹⁶. We are not aware of lunulae with two horns in the upper part that display an ornament (fir-tree-shaped, placed in two rows on the plate of the lunula) identical to the one from the lunular plaque of the earring from Gâmbaş.

The largest part of lunular earrings ending in two horns in the upper part are provided with an attached pendant that is round and marked by three triangles in the shape of grape bunches¹⁷. The pendant attached to the lunulae, umbo-shaped and marked by five triangles in the shape of grape bunches, made through granulation, is also present in a series of lunular earrings discovered in the Carpathian Basin¹⁸. An analogy from a location that is close geographically to the pendant attached to the lunular earring from Gâmbaş is for example the earring from Cicău, that dates, as we have mentioned above, to the Middle Avar Period¹⁹. Still, umbones with five triangles are most often encountered on earrings provided with three horns in the upper part of the lunula²⁰.

Considering all the details related to the shape and the component elements of the lunula presented in the paragraphs above we can state that the earring from Gâmbaş is a distinct item, at least so far, among the lunular earrings discovered in a geographic area more or less close to Transylvania.

It has been stated that lunular earrings are artifacts that have originated in the Byzantine world, with the model taken over and used in the Carpathian Basin during the 7th–8th centuries²¹. Specialists

⁸ Staššikova-Štukovská, 1999, 254.

⁹ Garam 1995, 276–280, Abb. 149/7–9, Abb. 160, variant C.

¹⁰ For verification see: Grigorov 1999, 30–32, tab. 6, 9.

¹¹ Unpublished research C. Cosma.

¹² Staššikova-Štukovská 1999, 254–255.

¹³ For example: Comșa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

¹⁴ For example: Comșa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

¹⁵ Compară Staššikova-Štukovská 1999, 254–255, 5b.

¹⁶ Winkler *et al.* 1977, 270–271, 273, fig. 3/2/3, pl. II/5.

¹⁷ For example: Comșa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

¹⁸ For example: Comșa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

¹⁹ Winkler *et al.* 1977, 270–271, 273, fig. 3/2/3, pl. II/5.

²⁰ For example: Comșa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

²¹ Comșa 1971, 385–390; Teodor 1995, 187–190; Staššikova-Štukovská 1999, 250–298.

have also noted on the large number of shapes of lunular earrings ornament in various manners discovered on sites from the Carpathian Basin, explaining it through the existence of contacts between the various cultural environments in the Middle and Lower Basin of the Danube during the 7th–8th centuries²². There were certainly regional workshops in the Carpathian Basin that have developed and produced lunular earrings of various types, shapes, and with various decorations²³. The earring in Gâmbaş is an extremely well manufactured item, also through how the ornament on the lunula and on the attached umbo was made. This fact and the production of this earring out of silver place the object in an upper category of lunular earrings from the Carpathian Basin. It might have been an object from Byzantium, but also a product of a regional workshop located somewhere on the territory of Transylvania.

I have stated above the fact that the majority of specialists who have dealt with the typology of lunular earrings have suggested that such artifacts should be dated to the interval between the second half of the 7th century and the beginning of the 9th century²⁴. D. Staššikova-Štukovská mentions the fact that lunular earrings must be regarded as a type of artifact that belongs to the 7th–8th centuries and regarding the definition of their ethnicity, the topic must still be researched²⁵. Still, a series of elements pertaining to their technology and decoration (discussed in the paragraphs above), analyzed in depth, have allowed for the formulation of certain hypotheses for restricting the chronology of certain types of lunular earrings for just certain periods during the 7th or the 8th century²⁶. Authors have remarked in the special literature the fact that the items with better made ornaments, displaying finer workmanship, are earlier than the items with carelessly rendered, sometimes just sketched decorative motifs²⁷. Thus, the first group (of better quality items) mainly dates to the second half of the 7th century and the first part of the 8th century²⁸, when the earring from Gâmbaş can also be dated. It is unlikely that the item is earlier than that, as lunulae started to feature in the Carpathian Basin in archaeological contexts dated starting with the middle of the 7th century. Lunular earrings discovered for example in north-western Romania, but also in other geographical areas, dated to the second half of the 8th century and even to the first half of the 9th century are of a different type than the item from Gâmbaş²⁹.

The two earrings with black glass pendant found in Grave no. 1 (Pl. 1/4–5, 2/4–5) are artifacts that feature in the Avar cemeteries in women's graves. Z. Cilinská dates this type of earrings between the second half of the 7th century and the middle of the 8th century³⁰. In Tiszafüred earrings with attached pearl pendants were also present during the third third of the 8th century³¹, while in the Bulgarian environment, though few such items have been found, they continue to be present in archaeological contexts dated to the last decades of the 8th century³².

Earrings with open ends, like the ones in Grave no. 1 in Gâmbaş (Pl. 1/2–3, 2/2–3), are artifacts that have been discovered in Avar cemeteries both in children's and adult's tombs³³. From the Avar environment this type of earring was adopted in the Bulgarian area³⁴. They are not a precise chronological indicator, as such artifacts feature in contexts dated to the Middle and Late Avar periods³⁵.

The earring with attached grape bunch-shaped pendant from Grave no. 2 in Gâmbaş (Pl. 3/1, 4/1) is an item with little dating power, as artifacts of this type were used by the Avar populations in the Carpathian Basin throughout the Middle and Late Avar periods (650–800)³⁶.

²² Comşa 1971, 385–390; Teodor 1995, 187–190; Staššikova-Štukovská 1999, 250–298.

²³ Mesterházy 1990, 102; Teodor 1995, 187–190, Stanciu 2000, 139; Cosma 2002, 78.

²⁴ For example: Comşa 1971, 376–390; Cilinská 1975, 71–72, fig. 1,6, 12; Teodor 1995, 187–206; Garam 1995, 276–280, Abb. 149/1–12, Abb. 160; Grigorov 1999, 21–42; Staššikova-Štukovská 1999, 250–298.

²⁵ Staššikova-Štukovská 1999, 296–298.

²⁶ Stanciu 2000, 139–141; Cosma 2002, 78–79, 132–133; Staššikova-Štukovská 1999, 250–298.

²⁷ Horedt 1958, 83; Comşa 1971, 383 și n. 36.

²⁸ Comşa 1971, 383 and n. 36.; Stanciu 2000, 139–141; Cosma 2002, 78–79, 132–133; Staššikova-Štukovská 1999, 250–298.

²⁹ Cosma 2002, 78–79, 132–133, pl. 153/4.

³⁰ Cilinská 1966, 144, Abb. 11.

³¹ Garam 1995, 276.

³² Grigorov 1999, 42, tab.8, tip IV A.

³³ Garam 1995, 284, abb. 149/17–18.

³⁴ Grigorov 1999, 42, tab. 8, tip I A.

³⁵ Garam 1995, 284, abb. 149/17–18.

³⁶ Cilinská 1975, 75–76, Abb. 1/VII, Abb.6; Garam 1995, 263–266; Grigorov 2007, 103–104, 136, 141, Tip. II. 1.

As for the **earring with a spiral-shaped ending** from Grave no. 2 (Pl. 3/2, 4/2), specialists mention the fact that it started to be produced around year 700 in the Carpathian Basin³⁷. As it is a relatively easy to made jewelry item, it was used by women of modest social standing³⁸. An earring that is almost identical to the one from Grave no. 2 in Gâmbaş has been identified in Tomb 6/1913 from the same settlement³⁹. The cemetery that includes Tomb 6/1913 dates to the Middle Avar Period⁴⁰.

The beads discovered in the two tombs from Gâmbaş (Pl. 1/7, 2/7, 3/3, 4/3) are dress accessories often encountered in children's tombs, but also in those of adults in Avar cemeteries dated throughout the existence of the Avar Khaganate from the Carpathian Basin⁴¹.

The trapezoidal buckle from Grave no. 1 in Gâmbaş (Pl. 1/6, 2/6a-b) was part of the dead person's belt. Belt buckles such as the one in Gâmbaş were discovered in numerous Avar tombs. They were generally dated on the basis of their association with other materials (belt tongues, belt appliques) that allow for finer chronological identifications. On the basis of the discoveries in the necropolis in Nové Zámky, Z. Cilinská included trapezoidal bronze belt buckles in type I of main belts that feature pendants, appliques, and tongues ornamented with perforated animal scenes. The same typology suggests that type I is earlier than types II and III the belt buckles of which are oval in shape and the frame is decorated with vegetal motifs, associated to items decorated in a similar fashion⁴². Nevertheless, there are numerous examples in the Avar necropolises that prove the fact that such artifacts were in use throughout the 8th century (including its final part)⁴³. Among these examples we only mention the most relevant: Kisköre⁴⁴, Szob⁴⁵, Pilismarót⁴⁶, Gyód-Máriahegy⁴⁷, and Kékesd⁴⁸. Thus, according to the earring with which it is associated (the items presented above) the belt buckle in Gâmbaş can be dated to the Middle Avar Period.

The iron knives (Pl. 1/8, 2/8, 3/4, 4/4) discovered one in each of the two graves from Gâmbaş, used in the Avar world to various ends (as weapons or everyday objects), are commonly present in the Avar necropolises from the Carpathian Basin⁴⁹. They feature in men's, but also women's tombs. There are several opinions on how their presence in tombs should be interpreted. In some cases specialists presume that they had an apotropaic function⁵⁰. When the knives are associated in tombs with weapons, they have been interpreted as artifacts belonging to those warriors' set of weapons⁵¹. Other researchers state that the presence of knives in graves symbolizes, among other things, that person's free status in Avar society⁵².

The corroboration of data regarding the chronological identification of the objects in the two tombs discovered in 2015 in Gâmbaş/Ogoarele de jos (data presented in the previous paragraphs) allows for the dating of the two funerary complexes to the Middle Avar Period (650/670–710/720) and their integration into the Avar environment in Transylvania/the Carpathian Basin.

Anthropological data

The anthropological analysis of the skeletons in the graves from Gâmbaş has revealed the fact that the deceased had been mature persons (see the anthropological analysis below/Appendices 1–3). The

³⁷ Cilinská 1975, 77, Abb. 1/VIII/B, Abb.6; Garam 1995, 286.

³⁸ Cilinská 1975, 77.

³⁹ Horedt 1958, 98, fig. 16/21.

⁴⁰ Horedt 1958, 87–91; Cosma 2015, 254–262.

⁴¹ See for example: Garam 1995, 290–298; Pásztor 1997, 213–230; Pásztor 2015, 119–154; Schmid 2015, 44–49.

⁴² Cilinská 1966, 176–179, 177, fig. 19.

⁴³ Even in the cemetery in Nové Zámky, in M. 98, belt buckles of that type feature in association only with items with vegetal decoration: Cilinská 1966, 25, M. 98, pl. XXVIII/M. 98.

⁴⁴ Garam 1979, M. 136, 27, 74–76, pl. 21/38.

⁴⁵ Kovrig 1975, M.1, 161, 200, fig. 3/M. 1/3.

⁴⁶ Szabó 1975, M. 1, 245, 277, fig.3/M. 1/1.

⁴⁷ Kiss 1977, M. 74, 42–43, pl. X/M. 74/1.

⁴⁸ Kiss 1977, M. 135, M. 137, 54, 59, pl. XVII/M. 135/1, M. 137/1.

⁴⁹ Sós/Salamon 1995, 56–58.

⁵⁰ Sós/Salamon 1995, 56.

⁵¹ Sós/Salamon 1995, 57.

⁵² Horedt 1958, 70; Winkler et alii 1977, 273.

age of the individual in Grave no. 1 has been estimated at between 30–40 years at the time of death, while that of the individual in Grave no. 2 has been defined as that of an aged adult.

The peculiarities of the skull (the glabella, the external occipital protuberance, the mastoid process) show male characteristics, but determining the gender in all certainty is risky in the absence of the rest of the skeleton (the pelvic area) notes Sándor Gál Szilárd (Mureş County Museum, Târgu Mureş), the author of the anthropological analysis of the human skeleton from Grave no. 1 Gâmbaş (see below the anthropological analysis/Appendix 1).

As for the deceased in Grave no. 2, on the basis of morphology of the skull's characteristics (only the mastoid process, the supraorbital edge and the glabella could be observed), the gender of the individual has been determined a possibly male, states Claudia Radu (The Center of Molecular Biology, The Institute of Interdisciplinary Researches in Bio-Nano Sciences, Babeş-Bolyai University Cluj-Napoca), who has performed the anthropological analysis of the skeleton in Grave no. 2 (see below the anthropological analysis/Appendix 2).

Due to the very poor state of preservation of the two skeletons, the DNA analyses have not provided relevant data for determining the gender of the deceased. A single piece of information was obtained though, indicating the fact that the person in Grave no. 1 probably originated in the Near East, part of the populations from the Eurasian steppes from the second half of the first millennium A.D. that have migrated towards Europe⁵³.

Comment of the anthropological data in correspondence with the funerary inventory inside the tombs. We should note that in both cases one can only presume that the deceased had been male. DNA analyses have shown that the deceased in Grave no. 1 had possible Asian origins. If indeed the skeletons in the two graves from Gâmbaş belonged to men, then we must present several data regarding the presence of earrings in the case of the two tombs.

In the Avar environment, earrings are considered artifacts typical for female fashion⁵⁴. Nevertheless, earrings were also discovered in some graves that belonged to high status Avar warriors of the Avar Khaganate from Pannonia⁵⁵. These were artifacts made of precious metal (especially gold) and a single item of the type was found in each grave, placed right or left of the skull⁵⁶. The warrior graves where such discoveries were made have been dated to the Early Period in the development of the Avar Khaganate in Pannonia⁵⁷. The deposition of a single precious metal earring in graves is a ritual that the first Avars reaching Pannonia have brought with them from Eurasia⁵⁸.

As for the types of earrings from the graves of Avar warriors from Pannonia during the Early Avar Period, one notes the fact that they belong to other types than the lunula in grave no. 1 or the two earrings in Grave no. 2 in Gâmbaş⁵⁹. We are aware of two Avar warriors' graves, one from Transylvania, in Unirea II/Vereşmor⁶⁰ and the other from Banat in Sânpetru German/Magazin⁶¹, the funerary inventory of which also included a single gold earring. But these are not lunular earrings. We have presented the two analogies only to stress the funerary practice of depositing a single precious metal earring in men's graves.

We are not aware of any Avar warrior's grave that contains as funerary inventory lunula-shaped earrings or earrings with a spiral ending. In the cemetery from Tiszafüred for example (a necropolis where a large number of lunulae were found, as compared to other Avar cemeteries), all lunular earrings were found in women's tombs exclusively and this allowed Eva Garam, the author of the monograph of the cemetery in Tiszafüred, to state that lunular earrings were artifacts typical to feminine fashion⁶². The same observations are true for earrings with grape bunch-shaped pendant,

⁵³ See the actual data in Appendix 3.

⁵⁴ For example: Cilinská 1966, 142–154; Cilinská 1973, 17–20; Cilinská 1975, 63–80; Garam 1987, 195–196; Garam 1995, 263–290.

⁵⁵ Bóna 1970, 251, 260–261; Bóna 1979, 5, 27; Bóna 1980, 31–95.

⁵⁶ Bóna 1979, 5, 27.

⁵⁷ Bóna 1979, 5, 27.

⁵⁸ Bóna 1979, 5, 27.

⁵⁹ Compare: Bóna 1970, 251, 260–261; Bóna 1979, 5, 27.

⁶⁰ Rustoiu/Ciută 2015, 111, pl. 2/9.

⁶¹ Dörner 1960, 425, fig. 4/4.

⁶² Garam 1995, 276–278.

with spiral-shaped ending, or with globular pendant⁶³. We conclude these very brief observations regarding the presence of earrings in men's tombs in the Avar world with the mention of the fact that the combined archaeological and anthropological analyses performed in Avar necropolises from the area of the Middle Danube Basin have revealed that the funerary inventory of men consisted of belts, weapons, and harness items, but also several types of jewelry items, the most frequent among them "hair brooches"⁶⁴, a type of artifact featuring in the fashion of Avar men⁶⁵. Numerous types of jewels were present in women's tombs, but also other dress accessories and items of daily or domestic use⁶⁶. It has also been noted that the graves with earring with attached grape bunch-shaped pendant and those with one of the ends bent into a spiral belonged especially to women of lower social standing in Avar society⁶⁷.

Data supporting the ritual of depositing earrings in Avar men's tombs are real and cannot be ignored. Still, the case of the two graves in Gâmbaş is different than the ones noted in the Pannonian Plain. In Gâmbaş the two deceased had not been warriors, but there could have been individuals who continued to practice the older Eurasian ritual of depositing a single earring of one type in men's tombs, even if they were not warriors. We have already noted that the DNA of the skeleton in M. 1 shows a possible Asian origin while the funerary inventory of the grave places the individual, indifferent of his/her gender, among the Avar elites.

Final considerations

The two graves that are the topic of this study belong to mature persons from the Avar community that buried its dead in Gâmbaş/Ogoarele de jos. They were buried according to Avar funerary rigor⁶⁸. The issue of the gender of the two skeletons remains incompletely solved. According to the funerary inventory the graves cannot be attributed to warriors. They were men or women buried with jewels and dress accessories. The great number of jewelry or dress accessory items in Grave no. 1/1915 and the fact that some were made out of silver support that person's special status in the Avar community from Gâmbaş. On the other hand, according to the interpretation that the types of jewelry items discovered in Grave no. 2/1915, presented above, the deceased can be said to have held a lower social standing in the Avar community from Gâmbaş.

Another problem that must be mentioned regards the topographic location of the two graves. The two graves discovered in 2015 in Gâmbaş, on the spot called Ogoarele de jos, are located 3 Km away in a straight line from the Avar cemetery in Gâmbaş/Cimitirul vechi reformat [The old Reformed cemetery], discovered in 1911 and researched in 1913⁶⁹ (Fig. 1a).

Archaeological tests and excavations were performed between the two spots with Avar graves in Gâmbaş, mentioned above, but they did not lead to the identification of any Avar graves, confirming the fact that two separate burial places existed in Gâmbaş. It is thus very likely that the two graves on the spot of Ogoarele de jos in Gâmbaş were part of a cemetery, just as it is likely they were two isolated Avar tombs. These graves and the Avar cemetery in Gâmbaş/Cimitirul reformat belong to the same chronological period, i.e. the Middle Avar Period.

It is possible that two cemeteries were in use in Gâmbaş, the first, located on spot of Cimitirul vechi reformat, a cemetery containing the tombs of Avar warriors, and the second, in the spot of

⁶³ For example: Cilinská 1966, 142–154; Cilinská 1973, 17–20; Cilinská 1975, 63–80; Garam 1995, 263–290; Sós/Salamon 1995, 52.

⁶⁴ Zábojník 2015, 291.

⁶⁵ Garam 1987, 196–197.

⁶⁶ Zábojník 2015, 291.

⁶⁷ Cilinská 1975, 76–77.

⁶⁸ For the different aspects of the funerary rite and ritual in the Avar Khaganate see for example: Garam 1987, 191–203; Pohl 1988, 163–205; Cosma 2002, 59–63; Daim 2003, 463–570; Pohl 2003, 574–584; Cosma 2013, 9–35; Cosma 2015, 251–280; Zábojník 2015, 277–291.

⁶⁹ The Avar cemetery in Gâmbaş was discovered in 1911 by I. Bodrogi, who has researched a first grave (Bodrogi 1913, 22–24). In 1913 M. Roska performed the first excavations in the area where the graves was discovered in 1911, leading to the discovery of 13 more graves with inventories specific to the Avars. M. Roska has also left a sketch of the terrain marking the two cemeteries, the Avar and the Magyar one in Gâmbaş (Gáll 2010, 293–294, fig. 2). The results of M. Roska's researches of the Avar cemetery in Gâmbaş have been published by K. Horedt (Horedt 1951, 198, r. 21; Horedt 1958, 95–100).

Ogoarele de jos, can be attributed, at least until future discoveries in that topographic spot, to the common Avar population in the Transylvanian Plateau.

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BIBLIOGRAPHY

- Bodrogi 1913 J. Bodrogi, *Alsó fehérvár megyei honfoglalás korileletek*. Az Erdélyi Múzeum-Egyesülethez dikván dorgyülésének emlék könyve. Kolozsvár 1913, 16–29.
- Bóna 1970 I. Bóna, *Avar lovassírIváncsáról*. ArchÉrt 97, 1, 1970, 243–263.
- Bóna 1979 I. Bóna, *A Szegvár-Sáboldalilovassír*. Adatok a korai avar temetkez és iszokásokhoz. ArchÉrt 106, 1, 1979, 3–32.
- Bóna 1980 I. Bóna, *Studien zum frühawarischen Reitergrab von Szegvár*. AAASH 32, 1–4, 1980, 31–95.
- Čilinská 1966 Z. Čilinská, *Slawisch-Awarisches Gräberfeld in Nové Zámky*. ArchSlov – Fontes. Bratislava 1966.
- Čilinská 1973 Z. Čilinská, *Frühmittelalterliches Gräberfeld in Želovce*. ArchSlov – Catalogi. Bratislava 1973.
- Čilinská 1975 Z. Čilinská, *Frauenschmuck aus dem 7.–8. Jahrhundert im Karpatenbecken*. SlovArch XXIII, 1, 1975, 63–96.
- Comşa 1971 M. Comşa, *Quelques données concernant les rapports des territoires nord-danubiens avec Byzance aux VI^e-VIII^e siècles (Pedants d'oreille enformed'étoile)*. Revue des Études Sud-Est Européennes IX, 3, 1971, 377–390.
- Cosma 2002 C. Cosma, *Vestul și nord-vestul României în secolele VIII-X d. H.* Ethnic and cultural interferences in the 1stmillenium B.C. to the 1stmillenium A. D. 6. Cluj-Napoca 2002.
- Cosma 2013 C. Cosma, *Războinici și suite militare în Transilvania secolelor VII-VIII d. H.* In: C. Cosma, A. Dobos, G. T. Rustoiu, A. Rustoiu, O. Oargă, *Războinici în Transilvania din epoca avară*. Cluj-Napoca 2013, 9–49.
- Cosma 2015 C. Cosma, *Avar warriors in Transylvania, Sătmar and Maramureș, Crișana and Banat. Archaeological landmarks on the political status of western Romania in the Avar Khaganate*. In: C. Cosma (Ed.), *Warriors, weapons, and harness from the 5th-10th centuries in the Carpathian Basin*. Ethnic and cultural interferences in the 1st Millennium B.C. to the 1st Millennium A. D. 22. Cluj-Napoca 2015, 251–280.
- Daim 2003 F. Daim, *Avars and Avar Archaeology. An Introduction*. In: H-W. Goetz, J. Jarnut, W. Pohl (Eds.), with the collaboration of. S. Kasche. *Regna and Gentes. The Relationship between Late Antique and Early Medieval Peoples and Kingdoms in the Transformation of the Roman World*, I. Wood (Series Editor), *The Transformation of the Roman World*, vol. 13. Leiden-Boston 2003, 463–570.
- Dörner 1960 E. Dörner, *Momînt din epoca avară la Sînpetru-German*. SCIV XII, 2, 1960, 423–433
- Gáll 2010 E. Gáll, *Márton Roska și cercetarea arheologică a secolelor X-XI*. SCIVA 61, 3–4, 2010, 281–306.
- Garam 1979 É. Garam, *Das Awarzeitliche Gräberfeld von Kisköre*. Fontes Archaeologici Hungarie, Budapest 1979.

- Garam 1987 É. Garam, *Der awarische Fundstoff im Karpatenbecken und seine zeitliche Gliederung*. In: B. Hänsel (Hrsg.), *Die Völker Südosteuropas im 6. Bis 8. Jahrhundert Südosteuropa Jahrbuch*. München/Berlin 1987, 191–202.
- Garam 1995 É. Garam, *Das Awarzeitliche Gräberfeld von Tiszafüred*. Cemeteries of the Avar period (567–829) in Hungary 3. Budapest 1995.
- Grigorov 1999 V. Grigorov, *Obecite v starob'lgarskata kulturana sever ot Dunav*. Archeologiya XL, 3–4, 1999, 21–42.
- Grigorov 2007 V. Grigorov, *Metalninchitotsrednovecovna Bilgaria (VII – XI v) / Metal jewelry from medieval Bulgaria*. Sofia 2007.
- Horedt 1951 K. Horedt, *Ceramica slavă din Transilvania*. SCIV II, 2, 1951, 189–218.
- Horedt 1958 K. Horedt, *Contribuții la istoria Transilvaniei. Sec. IV – XIII*. București 1958.
- Kiss 1977 A. Kiss, *Avar Cemeteries in County Baranya*. Cemeteries of the Avar period (567–829) in Hungary 2. Budapest 1977.
- Kovrig 1975 I. Kovrig, *The Szob Cemetery*. In: E. Garam, I. Kovrig, J. Gy. Szabó, Gy. Török (Eds.), *Avar finds in the Hungarian National Museum. Cemeteries of the Avar Period (567–829) in Hungary 1*. Budapest 1975, 157–208.
- Mesterházy 1990 K. Mesterházy, *Bizánci és balkániere detütárgyak a 10–11 századi magyar sírletekben, I*. FolArch XLI, 1990, 87–115.
- Pásztor 1997 A. Pásztor, *Typologische Untersuchungen der früh- und mittelawarenzeitlichen Perlen aus Ungarn*. In: U. Von Freeden, A. Wiczorek (Hrsg.), *Perlen. Archäologie, Techniken, Analysen. Akten des Internationalen Perlensymposium in Mannheim vom 11. Bis 14. November 1994. Kolloquium zur Vor- und Frühgeschichte*. Band. 1, Bonn 1997, 213–230.
- Pásztor 2015 A. Pásztor, *IV. 1. Kopf- und Armschmuck*. In: G. László (Ed.), *Das awarenzeitliche Gräberfeld in Csakbereny-Orondpuszta*. Monumenta avarorum archaeologica 11, Budapest 2015, 119–154.
- Pohl 1988 W. Pohl, *Die Awaren. Ein Steppenvolk in Mitteleuropa 567–822 n. Chr.* München 1988.
- Pohl 2003 - W. Pohl, *A non-Roman empire in Central Europe: The Avars*. In: H-W. Goetz, J. Jarnut, W. Pohl (Eds.), with the collaboration of S. Kasche. *Regna and Gentes. The Relationship between Late Antique and Early Medieval Peoples and Kingdoms in the Transformation of the Roman World*, I. Wood (Series Editor), *The Transformation of the Roman World*, vol. 13. Leiden-Boston 2003, 571–595.
- Rustoiu, Ciută 2015 G. T. Rustoiu, M. Ciută, *An avar warrior's grave recently discovered at Unirea-Vereșmort (Alba county)*. In: C. Cosma (Ed.), *Warriors, weapons, and harness from the 5th–10th centuries in the Carpathian Basin. Ethnic and cultural interferences in the 1st Millennium B.C. to the 1st Millennium A. D.* 22. Cluj-Napoca 2015, 107–127.
- Schmid 2015 M. M. E. Schmid, *Das Gräberfeld von Rákóczifalva in Zentralungarn und die Chronologie des spätaawarenzeitlichen Fundmaterials*. Universitätsforschungen zur prähistorischen Archäologie. Band 272. Aus dem Institut für Vor- und Frühgeschichtliche Archäologie und Provinzialrömische Archäologie der Universität München. Verlag Dr. Rudolf Habelt GmbH. Bonn 2015.
- Sós, Salamon 1995 Á. Cs. Sós, Á. Salamon, *Cemeteries of the Early Middle Ages (6th–9th Centuries A.D.) at Pókaszpetk*. Budapest 1995.
- Stanciu 2000 I. Stanciu 2000, *Despre ceramica medievală timpurie de uz comun, lucrată la roată rapidă, în așezările de pe teritoriul României (secolele VIII-X)*. ArhMed III, 2000, 127–191.
- Staššikova-Štukovská 1999 D. Staššikova-Štukovská, *K výskytu lunulo výchnaušnic s hviezdiovýmpriveskom v severnejčasti Karpatskejkotliny*. In: Al. Avenarius, Z. Ševčíková (Eds.), *Slovensko a Európskyjuhovýchod. Medzikultúrnevztahy a kontexty (Zborník k životnému Tatiany Štefanovičovej)*. Bratislava 1999, 250–298.
- Szabó 1975 J. Gy. Szabó, *The Pilismarót Cemetery*. In: E. Garam, I. Kovrig, J. Gy. Szabó, Gy. Török (Eds.), *Avar finds in the Hungarian National Museum. Cemeteries of the Avar Period (567–829) in Hungary 1*. Budapest 1975, 241–281.
- Teodor 1995 D. Gh. Teodor, *Cercei cu pandantiv stelat din secolele VI-VIII d. Hr. În spațiul carpato-dunăreano-pontic*. ArhMold XVIII, 1995, 187–206.
- Winkler et al. 1977 I. Winkler, M. Takacs, Gh. Păiuș, *Necropola avară de la Cicău*. AMN XIV, 1977, 269–283.

Zábojnik 2015

J. Zábojnik, *Zum Verhältnis zwischen Archäologie und Anthropologie am Beispiel frühmittelalterlicher Gräberfelder aus dem Mitteldonauraum (7.–10. Jahrhundert)*. In: O. Heinrich-Tamáska, H. Herold, P. Straub und T. Vida (Hrsg.), „Castellum, civitas, urbs“ – Zentren und Eliten im frühmittelalterlichen Ostmitteleuropa – Centres and Elites in Early Medieval East-Central Europe. Castellum Pannonicum Pelsonense, Bd. 6, hrsg. v. Archäologischen Institut des Geisteswissenschaftlichen Forschungszentrums der Ungarischen Akademie der Wissenschaften, dem Geisteswissenschaftlichen Zentrum Geschichte und Kultur Ostmitteleuropas e. V., dem Balatoni-Museum. Budapest, Leipzig, Keszthely, Rahden/Westf 2015, 277–291.

Appendix 1

Morphological analysis of the human bone material in Tomb no. 1/2015
(macroscopic and morpho-taxonomic analyses)

Sándor Gál Szilárd

The preservation state of the human bones is precarious, as ca. 65–70% of the skeleton is missing. I have identified small skull fragments (the skull cap and the facial area), small fragments from the frontal bone (glabella), small fragments of the parietal bone, the occipital bone (the outer occipital protuberance is little developed), one fragment of the temporal bone, the mastoid process (the right side – is massive and wide, I noted traces of Br. –from an earring), one small fragment from the inner acoustic pore, and I was only able to analyze the ecto and endo-cranial sutures over a small part (the lambdoid suture is relatively closed). From the facial area: small fragments of the mandible (the left side and one fragment of the right ramus). The situation of the teeth: M2 and M3 (quadrant 3 in the alveolus), PM1 and PM2 (quadrant 4 in the alveolus), teeth that had fallen post mortem: I1, I2 (quadrant 3), I1, (quadrant 4), C (quadrant 3 and 4). The teeth are worn (especially the frontal incisors), with caries (Caries) on M 2 and M3 (quadrant 3, the mesial part), I2 (quadrant 3, on the upper part of the root), C (quadrant 4), calculus features on C (3) and M2, M3 (3). Dental scheme: 2123.

I have identified several small bone fragments from the post-cranial skeleton, from the long bones: the diaphysis of a femur (in poor state) and the diaphysis of a humerus. The surface of the bones is eaten by the acidity of the soil, the thickness of the cortical layer varies between 2 and 3mm.

Gender determination: there are few measurable signs for a precise gender. The signs observed on the skull (the glabella, the outer occipital protuberance, the mastoid process) show male signs, but a precise determination is risky in the absence of the rest of the skeleton (the pelvic area).

Age estimate: the degradation phases of the teeth (considering the primitive nutrition during that era – for example the use of primitive hand mills) indicates that the individual died between the age of 30 and 40 (Adultus).

Through macroscopic analyses I have identified an animal bone, probably from a bird – funerary offering (?).

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Appendix 2

Report of the anthropological analysis of the bone material in
Gâmbaş – Grave 2 complex 159

Claudia Radu

The skeleton is poorly represented and the state of conservation of the preserved bones is also poor, in some cases so much so that one cannot observe the surface of the bones. Some of the fragments were reconstructing using orange dental silicone. On the basis of the morphology of the cranial characters (one could only observe the mastoid process, the supraorbital edge, and the glabella) I have determined the individual's gender as possibly male. The absence of diagnostic elements for the determination of age did not allow for a more accurate estimation beyond that of aged adult. The teeth have not been preserved, but on the maxilla and the mandible one notes that the individual had lost all his teeth antemortem, as the alveolar area had been remodeled. A number of 11 joint elements were analyzed for the presence of osteoarthritis. Among them, both temporal-mandibular articulations, the right sternum-clavicular articulation, the right glenoid cavity, the bones of the right hand, the distal right femur, the left glenoid cavity and the bones of the left leg (n=8) display degenerative modifications of a low to moderate degree. Out of the three long bones the surface of which could be analyzed, none showed sub-periosteal inflammations. No pathological porosity was observed on the skull cap or the orbital plateau. An osteoma is located on the frontal bone. On the same bone, above the glabella, I have also noted a (healed) antemortem trauma inflicted with a blunt object. The size of the lesion is 12.41 × 6.55 mm. On the mandible, in the area of the right menton but lingual, I have noted a lesion (approx. 5.5 mm) that might represent a trauma inflicted perimortem, considering the morphology of its margins and the way in which the bone broke (the upper surface of the bone became detached). The stature could not be calculated as none of the long bones has been preserved intact.

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Appendix 3

Date of molecular anthropology: Gâmbaş – Grave no. 1–2

Ioana Rusu

The experimental process performed in order to access the genetic information preserved by the bone remains of the two individuals from Gâmbaş was done in sterile conditions, in the laboratories for DNA sample processing of the Institute of Interdisciplinary Researches in Bio-Nano-Sciences.

The extraction of old DNA molecules was performed according to the protocol described by Dabney [1], obtaining a sufficient quantity of endogenous DNA for one of the samples, Gâmbaş 229 – Grave 1, the one for which the biological material employed as source for the isolation of the nucleic acids consisted of powder from the dental tissue. I have tested several sets of specific suspensions for amplifying certain nuclear genetic markers in order to establish this individual's gender, but no conclusive results were reached. This may be due to the presence of the nuclear genome in only two copies per cell, while the maternally inherited DNA is located in the human organism at the level of the mitochondria that can be found in large numbers in the majority of the cells. I have amplified the two hypervariable regions of the mitochondrial genome using eight sets of suspensions designed to amplify short DNA sequences that tend to be more abundant in archaeological specimens due to post-mortem degradation [2].

The genetic polymorphism of individual C229 Gâmbaş at level HVR-I (16223T, 16292T) and HVR-II (73G, 189G, 195C, 204C, 207A, 263G) reflects the presence of mutational motifs specific to mitochondrial haplogroup W, and thus the individual can be included in this material line with a probability of 100%. Haplogroup W most probably originates in the Near East, towards the *Last Glacial Maximum*, and in the current population of Europe it is more common in the eastern half of the continent (e.g. Romania 6.5%), though high frequencies are also encountered, sporadically, in northern Europe as well (e.g. Finland 4%)[3]. A database that includes 15 medieval populations from Eurasia indicates that the highest frequencies of haplogroup W were observed among the Byzantine Turks, a medieval population from Poland, a population from Hungary that dates to the time of the conquest of the Carpathian Basin, and a medieval group from Island.

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1. J. Dabney, M. Knapp, I. Glocke, M. T. Gansauge, A. Weihmann, B. Nickel. *Complete mitochondrial genome sequence of a Middle Pleistocene cave bear reconstructed from ultrashort DNA fragments*. Proc Natl Acad Sci U S A. 2013;110(39):15758–63.

2. M. N. Gabriel, E. F. Huffine, J. H. Ryan, M. M. Holland, T. J. Parsons. *Improved MtDNA sequence analysis of forensic remains using a "mini-primer set" amplification strategy*. J Forensic Sci. 2001; 46(2):247–53.

3. A. Olivieri, M. Pala, F. Gandini, B. Hooshiar Kashani, U. A. Perego, S. R. Woodward. *Mitogenomes from two uncommon haplogroups mark late glacial/postglacial expansions from the near east and neolithic dispersals within Europe*. PLoS One. 2013;8(7):e70492.

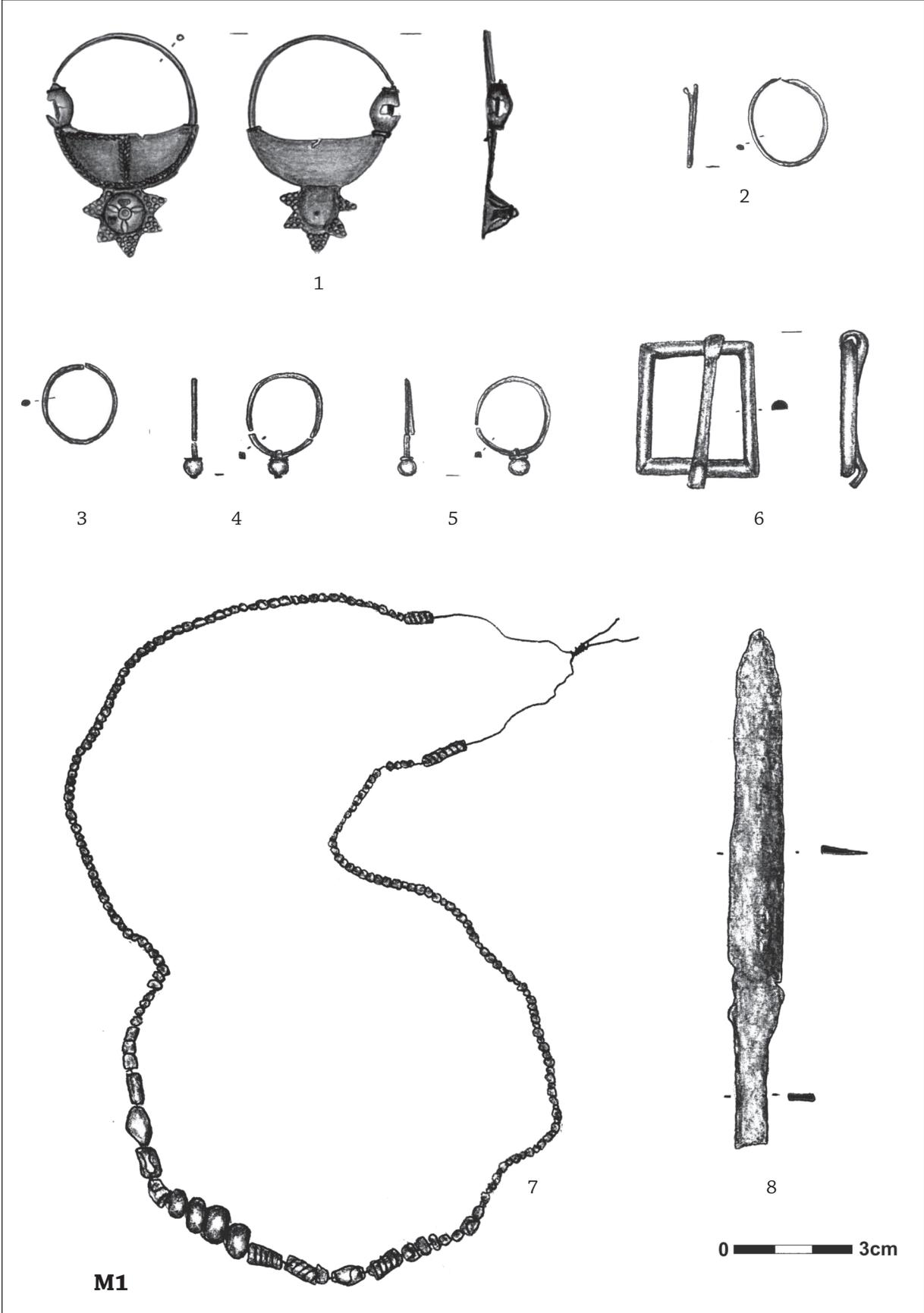


Plate 1. Grave 1: funerary inventory.



Plate 2. Grave 1: funerary inventory (photo).

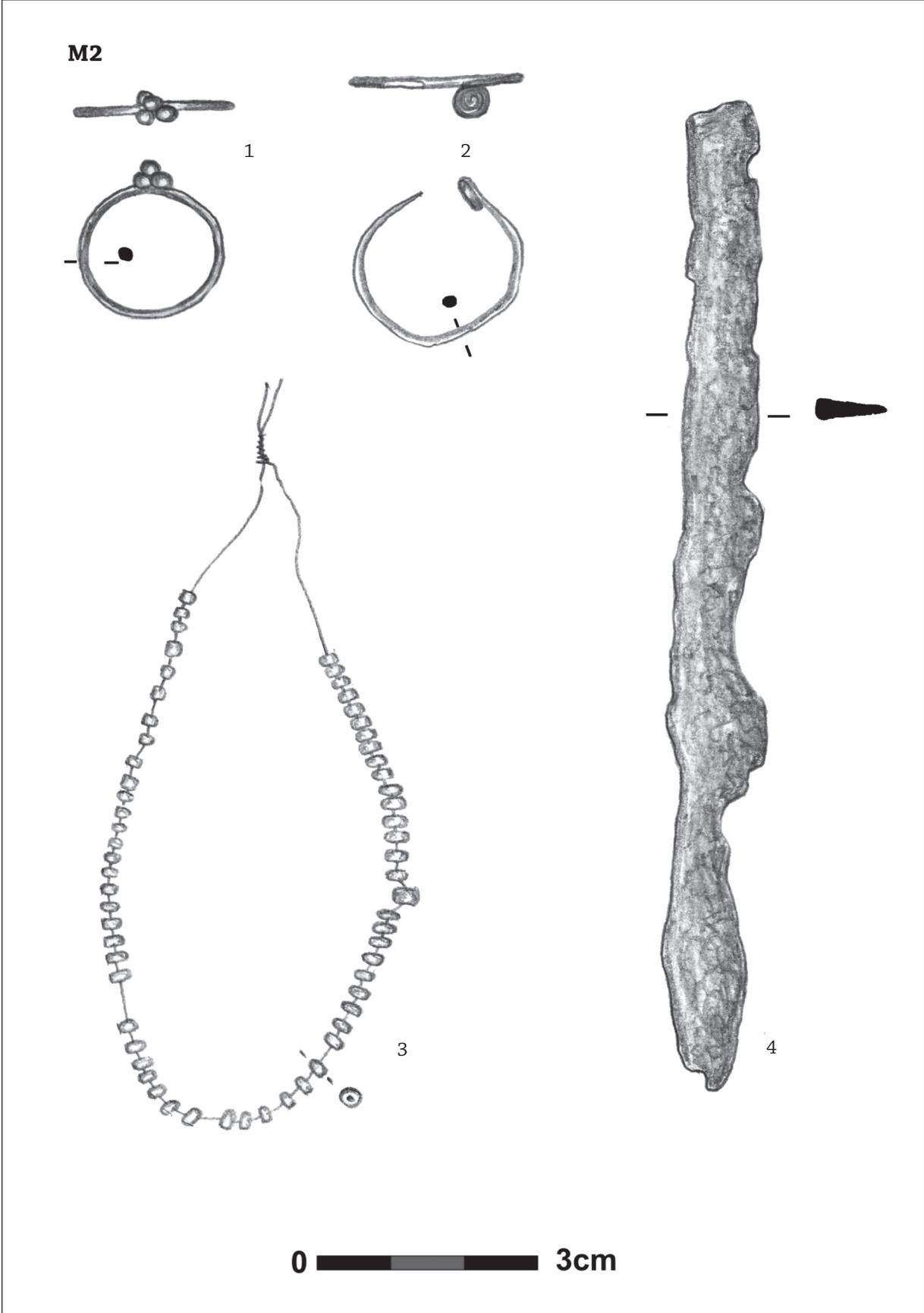


Plate 3. Grave 2: funerary inventory.



Plate 4. Grave 4: funerary inventory (photo).

Abbreviations

AAASH	Acta Archaeologica Academiae Scientiarum Hungaricae. Budapest.
Acta Ant et Arch Suppl	Acta Antiqua et Archaeologica Supplementum. Szeged.
AAC	Acta Archaeologica Carpathica. Krakow.
ACMIT	Anuarul Comisiunii monumentelor istorice. Secția pentru Transilvania. Cluj.
ARA	Annual Review of Anthropology. Stanford.
ActaArchHung	ActaArchHung Acta Archaeologica Academiae Scientiarum Hungaricae. Budapest.
AEM	Archäologische Epigraphische Mitteilungen aus Österreich-Ungarn. Heidelberg.
AIIA Cluj	Anuarul Institutului de Istorie și Arheologie. Cluj-Napoca.
AISC	Anuarul Institutului de Studii Clasice. Cluj-Napoca.
AMP	Acta Musei Porolissensis. Zalău.
ATF	Acta Terrae Fogarasiensis. Făgăraș.
ATS	Acta Terrae Septemcastrenses. Sibiu.
Agria	Agria. Annales Musei Agriensis. Az egri Dobó István Vármúzeum évkönyve. Eger.
AnB S.N.	Analele Banatului. Timișoara.
AMS.CEU	Annual of Medieval Studies at CEU. Budapest.
ACN	Archaeological Computing Newsletter. Florence.
ArchÉrt	Archaeologiai Értesítő. A Magyar Régészeti és Művészettörténeti Társulat tudományos folyóirata. Budapest.
ArchJug	Archaeologia Iugoslavica. Beograd.
ArhPregled	Arheološki Pregled. Arheološko Društvo Jugoslavije. Beograd.
ArchSlovCat	Archaeologia Slovaca Catalogi. Bratislava.
Archaeológiai Közlemények	Archaeológiai Közlemények. A hazai Műemlékek Ismeretének Előmozdítására. Budapest.
ArchKorr	Archäologisches Korrespondenzblatt. Mainz.
ArhMold	Arheologia Moldovei. Iași.
AMN	Acta Musei Napocensis. Cluj-Napoca.
AMP	Acta Musei Porolissensis. Zalău.
ArchRozhl	Archeologické Rozhledy. Praga.
ArhMed	Arheologia Medievală. Cluj-Napoca, Brăila, Reșița.
ASMB	Arheologia Satului Medieval din Banat. Reșița 1996.
AVSL	Auftrage des Vereins für siebenbürgische Landeskunde, Wien.
Banatica	Banatica. Reșița.
BAM	Brvkenthal Acta Mvsei. Sibiu.
BAR Int. Ser.	British Archaeological Reports. International Series. Oxford.
BCMI	Buletinul Comisiunii Monumentelor Istorice. București.
BCȘS	Buletinul Cercurilor Științifice Studentești. Arheologie – Istorie – Muzeologie. Alba Iulia.
BG	Botanical Guidebooks. Kraków.
BerRGK	Bericht der RömischGermanischen Kommission. Frankfurt a. Main.
BHAB	Bibliotheca Historica et Archaeologica Banatica. Timișoara.
BHAUT	Bibliotheca Historica et Archaeologica Universitatis Timisiensis. Timișoara.
BMB. SH	Biblioteca Muzeului Bistrița. Seria Historica. Bistrița Năsăud.
BMÉ	Bihari Múzeum Évkönyve. Berettyóújfalu.
BMI	Buletinul Monumentelor Istorice. București.
BMN	Bibliotheca Musei Napocensis. Cluj-Napoca.
BMMK	A Békés Megyei Múzeumok Közleményei. Békéscsaba.
BMMN	Buletinul Muzeului Militar Național. București.
BThr	Bibliotheca Thracologica. Institutul Român de Tracologie. București.

CAB	Cercetări Arheologice în București. București.
CAH	Communicationes Archaeologicae Hungariae. Budapest.
Carpica	Carpica. Muzeul Județean de Istorie și Arheologie, Bacău.
CAMNI	Cercetări Arheologice. Muzeul de Istorie al R. S. România/Muzeul Național de Istorie. București.
CIL	<i>Corpus Inscriptionum Latinarum</i> . Berlin.
CCA	<i>Cronica cercetărilor arheologice (din România)</i> , 1983-1992 <i>sqq.</i> (și în variantă electronică pe http://www.cimec.ro/scripts/arh/cronica/cercetariarh.asp).
Classica et Christiana	Classica et Christiana. Iasi.
CRSCRCR	Coins from Roman sites and collections of Roman coins from Romania. Cluj-Napoca.
Crisia	Crisia. Muzeul Țării Crișurilor, Oradea.
Dacia N.S.	Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle serie. București.
Danubius	Danubius - Revista Muzeului de Istorie Galati. Galați.
DDME	A Debreceni Déri Múzeum Évkönyve. Debrecen.
DolgCluj	Dolgozatok az Erdélyi Nemzeti Érem- és Régiségtárából, Klozsvár (Cluj).
DolgSzeg	Dolgozatok. Arbeiten des Archäologischen Instituts der Universität. Szeged.
EphNap	Ephemeris Napocensis. Cluj-Napoca.
EMEÉ	Az Erdélyi Múzeum-Egyesület Évkönyve. Cluj-Napoca.
EMÉ	Erdélyi Múzeum Évkönyve. Cluj-Napoca.
EAZ	Ethnographisch-Archäologische Zeitschrift. Berlin.
FADDP/GMADP	Führer zu archäologischen Denkmälern in Dacia Porolissensis/Ghid al monumentelor arheologice din Dacia Porolissensis. Zalău.
File de Istorie	File de Istorie. Bistrița.
FolArch	Folia Archaeologica. Budapest.
Forsch. u. Ber. z. Vor- u. Frühgesch. BW	Forschungen und Berichte zur Vor- und Frühgeschichte in Baden-Württemberg.
GPSKV	Gradja za proučavanje spomenika kulture Vojvodine. Novi Sad.
GSAD	Glasnik Srpskog Arheološkog Društva. Beograd.
HOMÉ	A Herman Ottó Múzeum Évkönyve. Miskolc.
HTRTÉ	Hunyadvármegye Történelmi és Régészeti Társulat Évkönyve. Déva (Deva).
JAMÉ	A nyíregyházi Jósa András Múzeum Évkönyve. Nyíregyháza.
JahrbuchRGZM	Jahrbuch des RömischGermanischen Zentralmuseums Mainz.
JAHA	Journal of Ancient History and Archaeology. Cluj-Napoca.
Lohanul	Lohanul. Revistă culturală științifică. Huși.
MCA	Materiale și Cercetări Arheologice. București.
MCA-S.N.	Materiale și Cercetări Arheologice-Serie Nouă. București.
MA / MemAnt	Memoria Antiquitatis. Piatra Neamț.
MFME	A Móra Ferenc Múz. Évkönyve. Szeged.
MFME StudArch	A Móra Ferenc Múzeum Évkönyve, <i>Studia Archaeologica</i> . Szeged.
MN / MuzNat	Muzeul Național. București.
NumAntCl	Numismatica e antichitàclassiche. Milano.
Opitz Archaeologica	Opitz Archaeologica. Budapest.
Opuscula Hungarica	Opuscula Hungarica. Budapest.
OM	Orbis Mediaevalis. Arad, Cluj-Napoca.
OTÉ	Orvos- Természettudományi Értesítő, a Kolozsvári Orvos-Természettudományi Társulat és az Erdélyi Múzeum-Egylet Természettudományi Szakosztálya.
Palaeohistorica	Acta et Communicationes Instituti Archaeologici Universitatis Groninganae.
PamArch	Památky Archeologické. Praha.
Past and Present	Past and Present. Oxford.
PIKS/PISC	Die Publikationen des Institutes für klassische Studien/ Publicațiile Institutului de studii clasice. Cluj-Napoca.
PBF	Praehistorische Bronzefunde. Berlin.
PMÉ	Acta Musei Papensis – Pápai Múzeumi Értesítő.
PZ	Prähistorische Zeitschrift. Berlin.

ReDIVA	Revista Doctoranzilor în Istorie Veche și Arheologie. Cluj-Napoca.
Revista Bistriței	Revista Bistriței. Bistrița.
RevMuz	Revista Muzeelor. București.
RIR	Revista Istorică Română.
RMM-MIA	Revista Muzeelor și Monumentelor. Seria Monumente istorice și de artă. București.
RMMN	Revista Muzeului Militar Național. București.
RESEE	Revue des Études Sud-Est Européennes. București.
Ruralia	Ruralia. Památky Archeologické – Supplementum. Praha.
RVM	Rad Vojvodjanskih Muzeja. Novi Sad.
Sargetia	Sargetia. Muzeul Civilizației Dacice și Romane, Deva.
Savaria	Savaria. A Vas megyei Múzeumok Értésítője. Szombathely.
SCIV(A)	Studii și Cercetări de Istorie Veche. București.
SCN	Studii și Cercetări Numismatice. București.
SlovArch	Slovenská Archeológia. Nitra.
SIA	Studii de Istoria Artei. Cluj Napoca.
SIB	Studii de istorie a Banatului. Timișoara.
SKMÉ	A Szántó Kovács János Múzeum Évkönyve. Orosháza.
SMIM	Studii și Materiale de Istorie Medie. București.
SMMA	Szolnok Megyei Múzeumi Adattár. Szolnok.
SMMIM	Studii și Materiale de Muzeografie și Istorie Militară. București.
Starinar	Starinar. Arheološki Institut. Beograd.
Stratum plus	Stratum plus. Archaeology and Cultural Anthropology. Kishinev.
StCl	Studii Clasice. București.
StComBrukenthal	Studii și comunicări. Sibiu.
StudArch	Studia Archaeologica. Budapest.
StudCom	Studia Comitatus. Szentendre.
Studii și Comunicări	Studii și Comunicări. Arad.
StudUnivCib	Studia Universitatis Cibiniensis. Sibiu.
StudCom – Vrancea	Studii și Comunicări. Muzeul Județean de Istorie și Etnografie Vrancea. Focșani.
StudŽvest	Študijne Zvesti Arheologického Ústavu Slovenskej Akademie Vied. Nitra.
Symp. Thrac.	Symposia Thracologica. București.
Századok	Századok. A Magyar Történelmi Társulat Folyóirata. Budapest.
TIR L34	D. Tudor, <i>Tabula Imperii Romani</i> . București 1965.
Tempora Obscura	Tempora Obscura. Békéscsaba 2012.
Tibiscus	Tibiscus. Timișoara.
VAH	Varia Archaeologica Hungarica. Budapest.
VIA	Visnik Institutu arkheolohii. L'viv.
Ziridava	Ziridava. Arad.
ZSA	Ziridava Studia Archaeologica. Arad.
w.a.	without author