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RESULTS OF ARCHAEOLOGICAL-ANTHROPOLOGICAL STUDIES OF MASS BURIALS IN VIMINACIUM – GRAVE IN THE SHAPE OF A WELL IN THE HANDICRAFT CENTRE / THE PEĆINE NECROPOLIS*

ABSTRACT

This paper is the second of its kind, about archaeological-anthropological analyses of mass burials excavated in Viminacium during the 20th century. It includes burials in graves in the shape of a well, originally intended for the handicraft centre that was used for making pottery vessels and bricks. In the well itself, the remains of 29 individuals were discovered. There were five burial layers. According to the stratigraphical and anthropological analyses, the authors have tended to give the most plausible explanation about the usage of the well as for burial purposes. The finds discovered within the well indicate that the burials were possibly performed during the second half of the 3rd or at the beginning of the 4th century.

KEYWORDS: VIMINACIUM, NECROPOLIS, GRAVE, MASS BURIAL, CRAFT CENTRE.

During the protective excavation in 1982/1983, within square VII of the handicraft centre in Viminacium, a cylindrical well was excavated, its sides built of green stone bound with lime mortar containing lots of sand. It had a round cross-section, with its outer diameter measuring 1.90 m and its inner one 1.10 m. It was partly destroyed during mechanisation works, making it impossible to determine the depth from the top of the well.¹

¹ The article results from the project: *IRS - Viminacium, Roman city and military legion camp – research of the material and non material culture of inhabitants by using the modern technologies of remote detection, geophysics, GIS, digitalisation and 3D visualisation (no 47018)*, funded by the Ministry of Education, Science and Technological Development

Since it was the area of the handicraft centre, a well was to be expected in this location. Its presence is explained with the production of pottery vessels and its necessity within a handicraft centre had already been mentioned by ancient authors (Vitruvije 2006:40). The material discovered within the well gives testimony to its long usage, not only while it was being used for the purposes of the handicraft centre, but also in the long period after the pottery production, when it was used for burials. Five burial layers with the osteological remains of 29 individuals were discovered.²

of the Republic of Serbia.

² As mentioned in the original field documentation, during the excavation, sixteen burial levels were

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The stone used for building was square shaped. The quality of the construction was maintained, even in the lower part, although close to the bottom, fragmented sandstone was noticed, while the pieces of green stone were roughly shaped. After each 0.90 m of green stone squares, they were levelled with two rows of bricks bound with mortar. The width of the levelling layer was 0.18 m, while the width of the mortar was 2 to 3 cm. This construction method was applied down to a depth of 8.35 m. From that depth downwards, the well was plastered only with pieces of carved green stone without mortar. Down to a depth of 9.40 m, the well was built with large green stone blocks, while from this depth downwards, there was no construction and it was dug directly into the soil. Flooding prevented further research of the lower levels.

STRATIGRAPHY OF THE WELL (Table 1, Pl. I, II, III, IV)

THE STARTING LEVEL (CROSS-SECTION I)

Down to a depth of 1.05 m there was a layer of brown soil with fragmented bricks, tegulae and imbreces, as well as fragments of different pottery vessels. Several fragments of animal bones and teeth were also discovered.

THE FIFTH BURIAL LAYER

1.05 m – G 2282 A and B (CROSS SECTION II) – The deceased was laid on its right side in a crouching position. The skull and long bones remained preserved. The legs were bent. The preserved skeleton length measures 0.87 m. Laboratory anthropological analysis revealed that there were two skeletons of male individuals, which, due to the bones inclining through the layers and their poor state of preservation, remained unclear during the field research.

discovered, although, after a detailed stratigraphical study, it was concluded that there were five burial layers and five filling layers.

1.20 m – G 2303 (CROSS SECTION III) – In the north-west part of the well, under the feet of deceased G 2282, there was a damaged skull deposited on fragmented bricks and tegulae. Beneath it, were the long bones of the deceased.

1.70 m – G 2357 (CROSS SECTION IV, V) – Situated in the south-eastern part of the well, the deceased was laid on its left side in a crouched position. Its head was placed on its left cheek, facing south-east. The right arm was bent, hand on the pelvis, while the left arm was also bent, with the hand next to the head. The preserved skeleton length measures 0.90 m. It was orientated SW-NE. Next to the skull and the right knee there was a horse skull.

1.95 m – G 2377 (CROSS SECTION VI) – The deceased was laid on its right side in a crouched position, on pieces of green stone and fragmented bricks. Its left arm was bent and placed under the pelvis, while its right arm was placed next to the pelvis. The preserved skeleton length measures 0.80 m. It was orientated NW-SE.

THE FILLING LAYER

2.10 – 2.60 m (CROSS SECTION VII) – after removing G 2377, at a depth 2.10, a soil level was discovered with fragmented bricks and tegulae.

THE SECOND BURIAL LAYER

2.60 m – G 2433 (CROSS SECTION VIII) – Situated in the SE part of the well, the deceased was placed on its right side, in a crouched position. Its arms were bent and the hands placed close to where the missing skull would have been. The preserved skeleton length measures 0.70 m. It was orientated E-W.

2.70 m – G 2434 (CROSS SECTION VIII) – Situated in the NW part of the well, the deceased was placed on its right side, in a crouched position. The preserved skeleton length measures 0.97 m. It was orientated N-S, with a deviation of 35° of the northern part towards the east.

2.80 m – G 2478 (CROSS SECTION IX) – Situated in the NE part of the well, the deceased was placed on its left side. The head was resting on its left cheek. Its arms were bent at the wrists, which

were probably tied and placed under the pelvis. The preserved skeleton length measures 0.92 m. It was orientated E-W.

2.90 m – G 2479 (CROSS-SECTION IX) - The deceased was placed on its left side with the head is resting on the right cheek, facing west. Its right arm is slightly bent and placed next to the body, while the bones of the left arm were dislocated. Its left leg is slightly bent, while the right one is also bent, with the lower leg pointing backwards. The preserved skeleton length measures 0.93 m. It is orientated NW-SE.

2.90 m – G 2480 (CROSS-SECTION X)-It is situated in the NW part of the well. As well as the fragmented skull, the chest and arm bones remained preserved, with the arms bent and placed on the stomach. The preserved skeleton length measures 0.70 m. It is orientated NW-SE.

2.90 m – G 2525 (CROSS-SECTION X)-It is positioned to the SE of G 2480. As well as the fragmented skull, the chest and arm bones also remained preserved.

3.10 m – G 2526 (CROSS-SECTION X)-Some 40 cm from G 2525, two femurs were discovered and, to the south of them, a skull, while the remaining long bones were discovered within the southern part of the well.

THE FILLING LAYER

At a depth of 3.20 m (CROSS-SECTION XI), a layer with fragmented bricks was discovered. During the cleaning of this surface, a fragmented bronze nail was unearthed. In the NW corner of the well, an iron nail with wood remains was discovered. Over the whole surface, red fired shards of different pottery vessels were discovered. As well as fragmented bricks, smaller fragments of tegulae with the stamp LEG VII CL were also found.

THIRD BURIAL LEVEL

3.30 m – G 2711 (CROSS-SECTION XII)-The deceased was placed on fragmented bricks and tegulae, on its right side, in a crouching position. Its head was resting on the right cheek, facing south. Its bones were partially placed under

the head of the deceased. Its left arm was bent, with the hand next to the skull, while the bones of its right arm were placed under the skull. The preserved skeleton length measures 0.69 m. It is orientated N-S.

3.50 m – G 2712 (CROSS-SECTION XII) – It was placed to the south of G 2711. It is an infant skeleton placed on fragmented bricks and tegulae. The skull and leg bones were partly preserved and dislocated. The preserved skeleton length measures 0.30 m. It is orientated E-N.

3.70 m – G 2727 (CROSS-SECTION XIII) – It was situated in the northern part of the well. The deceased was found in a soil layer with a small number of fragmented bricks. The skull, placed on a brick pillow, remained preserved, while the remaining bones (long and corporal bones) were discovered to the south-east of the skull and the pelvis next to the north-eastern side of the well. It partially covers skeleton G 2728.

3.70 m – G 2728 (CROSS-SECTION XIII) – It was placed to the north-west of the skull G 2727 and was a female individual, laid on her back, with her legs bent and facing backwards. The arms were bent, hands on the pelvis, while her head was laid on several brick fragments. It was orientated NW-SE.

3.70 m – G 2729 A and B (CROSS-SECTION XIII) – It was situated in the southern part of the well. The head was positioned face downwards. Under the mandibula, there was an iron nail. The skull, as well as all the other preserved bones, was fragmented. The leg bones were sharply bent, placed close to the chest and, therefore, discovered below the skull of the deceased. The skeleton was orientated W-E. Anthropological analysis revealed that there were two skeletons, one belonging to a woman aged between 30 and 35 years, while the other was a child aged between 12 and 15 years. Due to the bones inclining through the layers and their poor state of preservation, this remained unclear during the field research.

3.80 m – G 2744 (CROSS-SECTION XIV) – It was placed in the northern part of the well. It

is a child aged between 6 and 8 years. The head was placed facing upwards. Next to its left side, was the upper left arm, while to the north were the bones of the right arm. To the east, on a brick, were the long leg bones. Across the femurs, were two bones of the lower arms, on which there were two fragmented bronze arm rings (C 7653, C 7654). On a bronze cover made of thin sheet, there were visible traces of textile. A fragment of a round iron object with traces of wood was also unearthed (C 7655).

4.00 m – G 2745 (CROSS-SECTION XIV, XV) – It was situated in the eastern part of the well. The head was resting on its right cheek, facing NE. The leg bones were placed next to the eastern side, while the arm bones were placed to the south of the skull. Next to the skull, were the small bones of the deceased female individual.

4.00 m – G 2746 (CROSS-SECTION XIV) – The head of the deceased, a female individual, was resting on the left cheek, facing east. To the west of it, a deformed fragmented bronze needle (C 7656) was discovered.

4.00 m – G 2754 (CROSS-SECTION XIV) – It was positioned in the south-eastern part of the well. The head was placed facing upwards. Next to it, close to the western edge, were the vertebrae and fragmented lower arm bones, while further to the west of these, there were parts of the pelvis and femurs. It was a male individual. Between the bones, a bronze belt-ring with a thorn in very poor condition was unearthed (C 7657).

4.00 m – G 2755 (CROSS-SECTION XIV) – It was situated to the west of G 2744, next to the western edge of the well. The head was placed facing downwards. The bones of the left arm were next to the skull, while to the east of this there were the pelvis bones and a femur. It was a female individual.

4.20 m – 2784 (CROSS-SECTION XV) – A skull remained preserved, placed on a fragmented brick and facing upwards, while the remaining bones were discovered in the northern part of the well, to the west of the fragmented brick. It

is male individual. Between the bones were the following finds: a bronze ring (C 7658), a fragmented bronze arm-ring (C 7659) and part of an arm-ring with a bronze coating (C 7669).

4.40 m – G 2760 (CROSS-SECTION XV) – To the south of G 2745 there was a fragmented tegula and, next to it, were parts of a skull and arm bones. It was a child aged between five and six years.

4.40 m – G 2761 (CROSS-SECTION XV) – Next to a fragmented skull calotte, there were several parts of the mandibula. Next to the skull, there were fragmented arm bones. It was a child aged between five and six years.

THE FILLING LAYER

At a depth of 4.60 m (CROSS-SECTION XVI), a layer made of fragmented bricks and tegulae was discovered.

THE FOURTH BURIAL LAYER

4.80 m – G 2779 (CROSS-SECTION XVII) – The deceased was placed on its left side, on a base made of fragmented tegulae, bricks and pieces of green stone. Its head was placed on its left cheek, facing west. The right arm was sharply bent and placed next to the skull, while the left arm was slightly bent. Over it, there were two bigger tegula fragments. The right leg was bent at a right angle, while the left arm was also bent and pulled towards the pelvis. It was an female adult individual. The preserved skeleton length measures 0.85 m. It is orientated SE -NW.

5.00 m – G 2790 (CROSS-SECTION XVIII) – The deceased was placed on its left side, on a base made of fragmented tegulae and bricks. Its head was placed facing upwards and tilted to the left. The right arm was slightly bent and placed on the knee of the left leg, while the left arm was sharply bent, with the hand next to the skull. The legs were sharply bent. It was a female individual. The preserved skeleton length measures 0.90 m. It is orientated SW-NE, with a deviation of 10° of the south-western part towards the south.

In this burial layer, there were fragments of bigger pottery vessels, mostly fired red, as well as

one hexagonal floor brick.

THE FILLING LAYER

At a depth of 5.10 m (CROSS-SECTION XIX), under G 2790 and the base made of fragmented bricks and tegulae, a skeleton of a dog was unearthed. The dog's bones were discovered in the middle of the well, placed in a N-S direction. They were laid on a base made of densely packed fragmented bricks, tegulae and pieces of green stone. The skull was discovered in the northern part of the well and placed on the base. To the south of it were the scapulae and the bent leg bones. The preserved skeleton length measures 0.65 m. At the southern wall of the well, next to the dog's bones, were four small fragments of a human skull. To the NE of the dog's skull, there was a fragment of a cow's long bone. Under the layer consisting of fragmented bricks and tegulae, there is a layer of dark soil. In this layer, there were several pottery shards.

5.50 – 5.70 m (CROSS-SECTION XX) – Layer of fragmented tegulae, bricks and imbreces. In the southern part of the surface, there was green stone with traces of mortar.

5.70 – 6.20m (CROSS-SECTION XXI) – Layer consisting of pieces of green stone, fragmented bricks and tegulae. In the northern half of the well, bigger pieces of green stone and mortar were discovered.

6.20 – 6.30 m (CROSS-SECTION XXII) – Layer with fragmented bricks and tegulae. At this depth, in the southern half of the well, there was a dog's burial, while in the northern part, there were several sandstones. The skeleton was orientated W-E with a deviation of 15° of the western part towards the north. Only the skull was not preserved. The preserved skeleton length measures 1.00 m. Numerous fragments of red and light red fired pottery were discovered.

6.30 – 6.60 m (CROSS-SECTION XXIII) – Layer consisting of large brick and tegula fragments, as well as smaller pieces of green stone. Pottery shards of red fired vessels, mostly parts of the belly, rims and handles, were discovered. It is

a layer of brown soil with many pottery shards.

6.60 – 7.00 m (CROSS-SECTION XXIV) – Layer of fragmented bricks and tegulae with traces of mortar, under which there is a layer of brown soil with pottery shards and fragments of bricks, burned tegulae and slag.

7.00 – 7.40 m – Layer of fragmented bricks and tegulae. The bigger brick fragments were discovered next to the well's edge, while the smaller ones were in the middle. In the central part, a human long bone was discovered. In the soil layer beneath the surface there was a large amount of pottery shards of red fired clay.

7.40 – 7.65 m (CROSS-SECTION XXV) – Layer of fragmented bricks and tegulae. In the SW half of the well, on a surface made of bricks, there was an animal skeleton orientated approximately NE-SW. The preserved skeleton length measures 0.75 m. Next to its legs, there was a fragment of thin bronze sheet.

7.65 – 8.25 m (CROSS-SECTION XXVI) – Layer with brick and tegula fragments, as well as shards of different red fired vessels. The bases of the vessels were either pierced in the middle or bulged and mostly burned. Beneath the forelegs of the animal skeleton in the NW part of the well, there was an iron object – C 8543 – probably the blade of a knife. In the layer of brown soil with fragmented bricks and tegulae, an animal mandible was also discovered.

8.25 m (CROSS-SECTION XXVII) – Layer of fragmented bricks and tegulae – next to the side of the well there were fragmented human and animal femurs. Next to the western well edge, there were several human bones and next to the other walls, there were also some bones..

8.35 -8.85 m (CROSS-SECTION XXVIII) – From a depth of 8.35 m downwards, the well was not built of green stone bound with mortar, but only of green stone. The layers consist of soil with fragmented bricks, tegulae and pieces of green stone with traces of mortar.

THE FIFTH BURIAL LAYER

8.85 m – G 3022 (CROSS-SECTION XXX)

– On a base of fragmented bricks and tegulae, bones of a dislocated skeleton were discovered – skull fragments next to the western edge and the chest and arm bones orientated N-S. Some bones were also discovered in the middle of the well. Whilst lifting the skeleton, next to the eastern well edge, a bronze nail with a calotte shaped head was found. In the SW part of the well, next to the arm bones, a bigger iron nail was unearthed.

9.00 – 9.40 m – Beneath the basic made of bricks and tegulae, in the western well part, the lower pelvis of a cow was discovered. In the soil layer, pieces of green stone, fragmented bricks, pottery vessels and animal bones were found.

9.40 – 9.70 m – In the middle of the well, apart from bigger tegulae and green stone fragments, a human femur was also discovered. Since the well was not sturdily constructed beyond this point, the archaeological excavation was stopped at a depth of 9.70 m.

In the well itself, 1,267 pottery shards were discovered, out of which 58 were typologically determinable. Ten types could be distinguished: two bowl types, two pot types, four plate types and two amphorae types (Plates V and VI). The types which were discovered only within this complex are the bowl type I/62 and the plate type III/9. (Raičković, 2007: 17). Generally, the types discovered here can be dated into the period from the middle of the 2nd to the beginning of the 4th century. Parallels were discovered mostly among the pottery types from Singidunum.

The anthropological content of this grave built in the shape of a well was examined directly after the archaeological excavation. After the excavation in 1982, twelve skeletons were examined. Their archaeological and, therefore, also their anthropological numeration is as follows: 2282(A and B), 2303, 2357, 2377, 2433, 2434, 2478, 2480, 2525 and 2526. In 1983, another eighteen skeletons were examined: 2711, 2712, 2727, 2728, 2729 (A and B), 2744, 2745, 2746, 2754,

2755, 2760, 2761, 2779, 2784, 2790 and 3022. It should be mentioned straight away that 27 skeletons were excavated and examined. During the anthropological analysis, next to skeletons 2282 and 2729, the remains of another two skeletons were detected and were, thus, numbered 2282 (A and B) and 2729 (A and B). Yet another question emerges and that is how to treat those skeletons which were detected only later. Should they be interpreted as double or single burials? In the context of this mass burial, we consider it impossible to speak of double graves, but only of one single mass burial with 29 people of different genders and ages, including infant age. Moreover, we also consider that the numeration should not be changed or re-numerated; meaning that skeletons numbers 2282A and 2282B, as well as 2729A and 2729B will remain in use.

After the archaeological excavation in 1982, the anthropological content of this grave in the shape of a well was ready for osteological examination. It was the same in 1983. After mechanical cleaning, washing and drying, anatomic-morphological units were formed, which also allowed numbers 2282B and 2729B to be established.

The main feature of this group of skeletons is its poor state of preservation, resulting in the fact that only five skeletons could be examined, even in the slightest detail. Their skulls were anthropologically analysed in detail and illustrated (using standardised projections).

The recommendations of several authors (Ferembach, Schwidetzky and Stloukal 1980, Brothwell 1981, Lovejoy 1985 and Buikstra and Ubelaker 1994) were used for determining gender and the individual biological age of the adult individuals, including some corrections. When it comes to infant age, tooth growth was used (Ubelaker, 1978), along with the length of the long bones (Sundick 1978).

All of the anthropological measurements were taken according to methodological rules systematised by R. Martin (Martin and Saller 1957), further re-defined by V. Bass (1995).

DEPTH (m)	BURIAL LAYER	FILLING LAYER	ANTHROPOLOGICAL DATA	ZOOLOGICAL DATA
0.00 – 1.05		LAYER OF BROWN SOIL WITH FRAGMENTS OF BRICKS, TEGULAE AND POTTERY VESSELS		SEVERAL FRAGMENTED ANIMAL BONES AND TEETH
1.05 – 2.10	FIFTH BURIAL LAYER 4♂ + 1♀		5 SKELETONS 4♂ + 1♀	NEXT TO G 2357, TWO HORSE SKULLS
2.10 – 2.60		LAYER OF BROWN SOIL WITH FRAGMENTS OF BRICKS AND TEGULAE		
2.60 – 3.10	FOURTH BURIAL LAYER 6♂ + 1♀(?)		7 SKELETONS 6♂ + 1♀(?)	
3.10 – 3.30		LAYER OF BROWN SOIL WITH FRAGMENTED BRICKS, TEGULAE AND POTTERY VESSELS		
3.30 – 4.60	THIRD BURIAL LAYER 2♂ + 4♀ + 7N + 1N(?)		14 SKELETONS 2♂ + 4♀ + 7N + 1N(?)	
4.60 – 4.80		LAYER OF BROWN SOIL WITH FRAGMENTED BRICKS AND TEGULAE		
4.80 – 5.10	SECOND BURIAL LAYER 2♀		2 SKELETONS 2♀	

5.10 – 8.85		LAYER OF BROWN SOIL WITH FRAGMENTED BRICKS AND TEGULAE, IMBRECES, GREEN STONE, SANDSTONE AND POTTERY VESSELS		LAYER WITH CANINE BURIALS (4 INDIVIDUALS) AND COW BONES
8.85 – 9.00	FIRST BURIAL LAYER 1♂(?)		1 SKELETON 1♂(?)	
9.00 – 9.40		LAYER OF BROWN SOIL WITH FRAGMENTED BRICKS AND TEGULAE IMBRECES AND POTTERY VESSELS		COW'S PELVIS AND VERY FRAGMENTED ANIMAL BONES

Table 1 – Synchronised table

Paleodemographically observed, the following results listed in Table 3 were gained for the 29 skeletons.

As seen, twelve male, seven female and eight infant skeletons were anthropologically identified, while for two individuals it was not possible to determine their gender (Table 2). It is interesting that the infant age moves within the span of several months to the end of the first decade of life. The only exception is skeleton number 2784, belonging to an older infant (not subadultus). The age of the male skeletons ranges within the span from the beginning of the third decade to the end of the sixth decade of life, while the age of the female skeletons spans to the end of the fifth decade of life. Since one is here dealing with a “selected part of a certain population”, it is considered that further paleodemographic nuancing would be pointless.

The results of the paleo-pathological examination were not extensive. It is important to stress that no traces of traumas were discovered in this

group of 29 skeletons of different genders and ages. Most of the observations refer to the jaws and teeth. Irregular abrasion was noticed, cavities of different degrees and locations, along with periodontitis and cysts. Tooth loss was either intravital or postmortal.

Senile osteoporosis was discovered only on the oldest skull of this group – number 2754, a male skull, aged about 60 years. As the illustrations show (see Fig. 3), this senile osteoporosis is symmetrically and equally present in the zone of both parietal tori, so that it can be named *Osteoporosis senilis simetrica parietalis* (Mikić 1977).

As for the morphostructure of this group of skulls, one can only speak about its one part that was sufficiently preserved for this kind of examination. As already stated, five skulls were suitable for a detailed examination. These are the skulls numbered 2729, 2745, 2754, 2779 and 2790 (Figs. 1-5). Their primary skull measurements are given in Table 3. As its content shows, all five

Grave No.	Gender	Age	Comments
2282A	male	up to 21/23 years	
2282B	male	up to 45 years	
2303	male	adult	
2357	male	adult	
2377	female	around 30 years	
2433	male	adult	
2434	male	up to 21/23 years	
2478	male	up to 45 years	
2479	male	up to 45 years	
2480	female (probably)	up to 30 years	
2525	male	up to 40 years	
2526	male	between 30 and 40 years	
2711	infant	between 3 and 4 years	
2712	infant	early months of life	
2727	infant	between 6 and 8 years	
2728	female	up to 21/23 years	
2729A	female	between 30 and 35 years	skull illustrated (Fig. 1)
2729B	infant	between 12 and 15 years	
2744	infant	between 6 and 8 years	
2745	male	30 to 40 years	skull illustrated (Fig. 2)
2746	female	up to 21/23 years	
2754	male	over 45 years	skull illustrated (Fig. 3)
2755	female	between 30 and 35 years	
2760	infant	between 5 and 6 years	
2761	infant	between 5 and 6 years	
2779	female	over 45 years	skull illustrated (Fig. 4)
2784	gender undetermined, probably an older infant		
2790	female	up to 45 years	skull illustrated (Fig. 5)
3022	male (probably)	up to 40 years	

Table 2 – Viminacium/Pećine – grave in the shape of a well in the handicraft centre – paleodemographic results of the skeletal analyses.

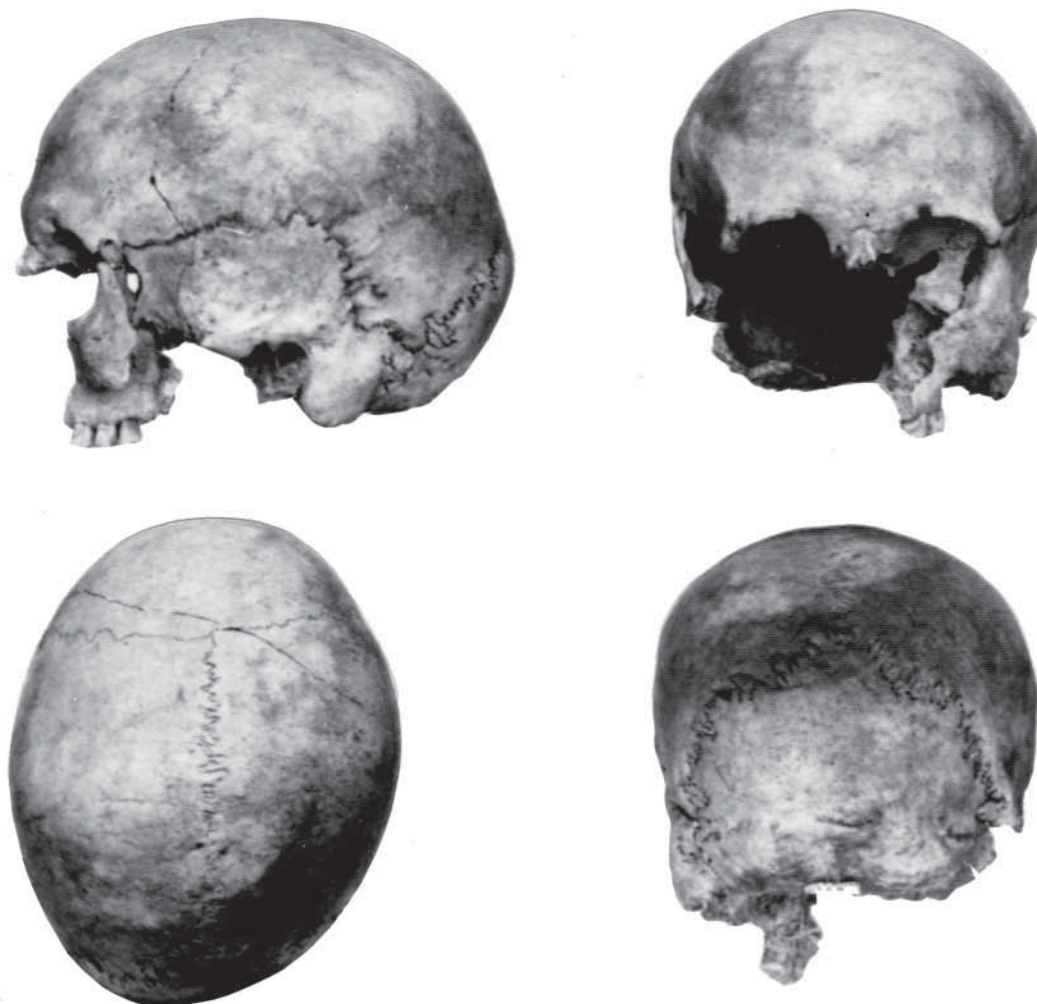


Fig. 1 Skull G-2729

of the skulls were not entirely anthropologically measured and the primary skull measurements were only partially obtained. The cerebral part was omitted, which was the best preserved part on all of the skulls.

What is, visually, most striking is their differences, despite the small number of the preserved samples (less than 20% of the whole group). This heterogeneity is best illustrated with the length-width index of the cerebral skull part. The values of this index showed diametric results, according to the gender specification. Male skulls belong to the meso-cranial group (from 77.8 to 79.4), while the female ones belong to the brachi-cranial group (from 80.6 to 84.6). However, the results gained

from thirty identified skeletons are very difficult to interpret morphologically. The presence of brachi-cranial skulls affords special attention, as it could possibly indicate the movements of the local population (with female skeletons).

As far as the post cranial skeleton parts from this group are concerned, their poor state of preservation must be underlined. Basically, during their preparation, the proximal and distal parts of the long bones were so damaged that none of the anthropological dimensions could be obtained. Due to this, no data about corporal growth was obtained. Furthermore, the reason for such a poor state of preservation is most likely the permanently high humidity level inside the well.

skull number	2729	2745	2754	2779	2790
gender	female	male	male	female	female
individual age	30-35 years	30-40 years	about 60 years	over 45 years	up to 45 years
maximum length (G-OP)	185	180	175	176	170
maximum width (EU-EU)	147	140	137	149	137
min. forehead width (FT-FT)	96	96	98*	95	92
height BA - B	138	138	-	131	130
height PO - B	123	118	126	112	110
facial width (ZY – ZY)	-	126	-	122	117
height of the upper face (N – PR)	-	69	-	75	63
height of the eye-socket	-	38	-	39	35
width of the eye-socket	-	30	-	34	30
width of the nasal opening	-	25	-	25	22
nose height (N – NS)	-	47	-	54	45
mandibular width (GO – GO)	-	-	-	101	99

* Anthropological measurement obtained through reconstruction.

Table 3 – Viminacium / Pećine – grave in the shape of a well in the handicraft centre – primary anthropological measurements of the preserved skulls.

CONCLUSION

It is obvious that one is here dealing with a well that originally served the handicraft centre for pottery and brick production and not as a so-called grave in the shape of a well, similar to those excavated at the southern Viminacium cemeteries and belonging to the Celtic funerary tradition (Golubović 2008). The necropolis is situated only several hundred meters away and the building material either for the graves (bricks) or for the fu-

nerary cult (different vessel types) was produced in the handicraft centre.

There are no doubts regarding the primary function of the well, but when it comes to its usage for funerary purposes, we can only speculate on the most plausible explanation. Since it was discovered during the excavations conducted in the 1980's, the material did not undergo any physical-chemical analyses which could have been performed in more recent times. Furthermore, human osteological material from over 13,000 in-



Fig. 2 Skull G-2745

humation and cremation graves could not be completely stored and, as a result, some data has been partially lost. Based on to what we currently have at our disposal, the entire osteological material examined here does not show any traces of deliberate traumas, therefore indicating that there was no sacrificing. The idea of an epidemic emerges spontaneously, given that although it is close to the necropolis, an object like this well ensures isolation. If we consider burial levels and the buried individuals, the first burial level would be the most difficult one to explain. The question is if it is actually a burial or an accident that occurred while the well still possessed its original function. Was it known that somebody fell into the well,

thus making it unusable, since it became infected (with polluted water), or the “unfortunate” individual disappeared in the well with no one suspecting that he/she fell inside? This can, certainly, only be presumed. The fact that between the first and the second burial level there is a filling level of almost four metres indicates that the well was used as a rubbish-pit. Unfortunately, the material found in the filling level is not chronologically sensitive and does not, therefore, give any indication of the length of the period in which the filling took place. However, above it the burial levels are much denser and with a demographic content of the buried individuals that makes for the possible hypothesis that there might have been an epidem-

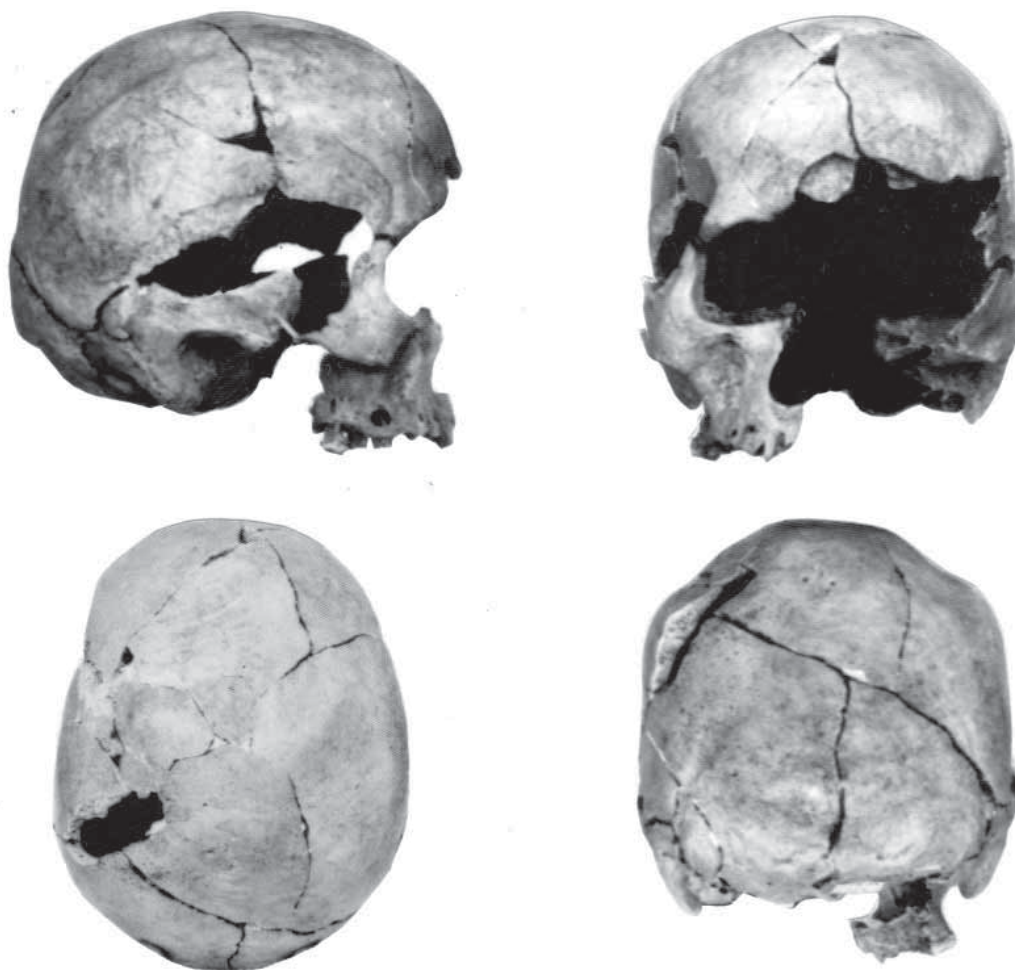


Fig. 3 Skull G-2754

ic. Even here, the material does not offer the possibility of a more precise chronological determination, although it might be indirectly concluded that it was the second half of the 3rd and the beginning of the 4th century. The buried individuals were carefully laid down in the well, but when it comes to personal belongings and possible grave-goods, one is still dealing with only a few simple objects. This indicates that they most likely belonged to the lowest social stratum, with limited material means. The discovery of a new, similar well used for burials would possibly resolve at least some of the doubts which remained after the research was concluded at the end of the 20th century. Since Viminacium was the capital of Upper Moesia and, therefore, possessed the largest ne-

ropolis, it is not impossible to expect a similar discovery, which would offer more answers to the postulated questions.

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Fig. 4 Skull G-2779

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Fig. 5 Skull G-2790

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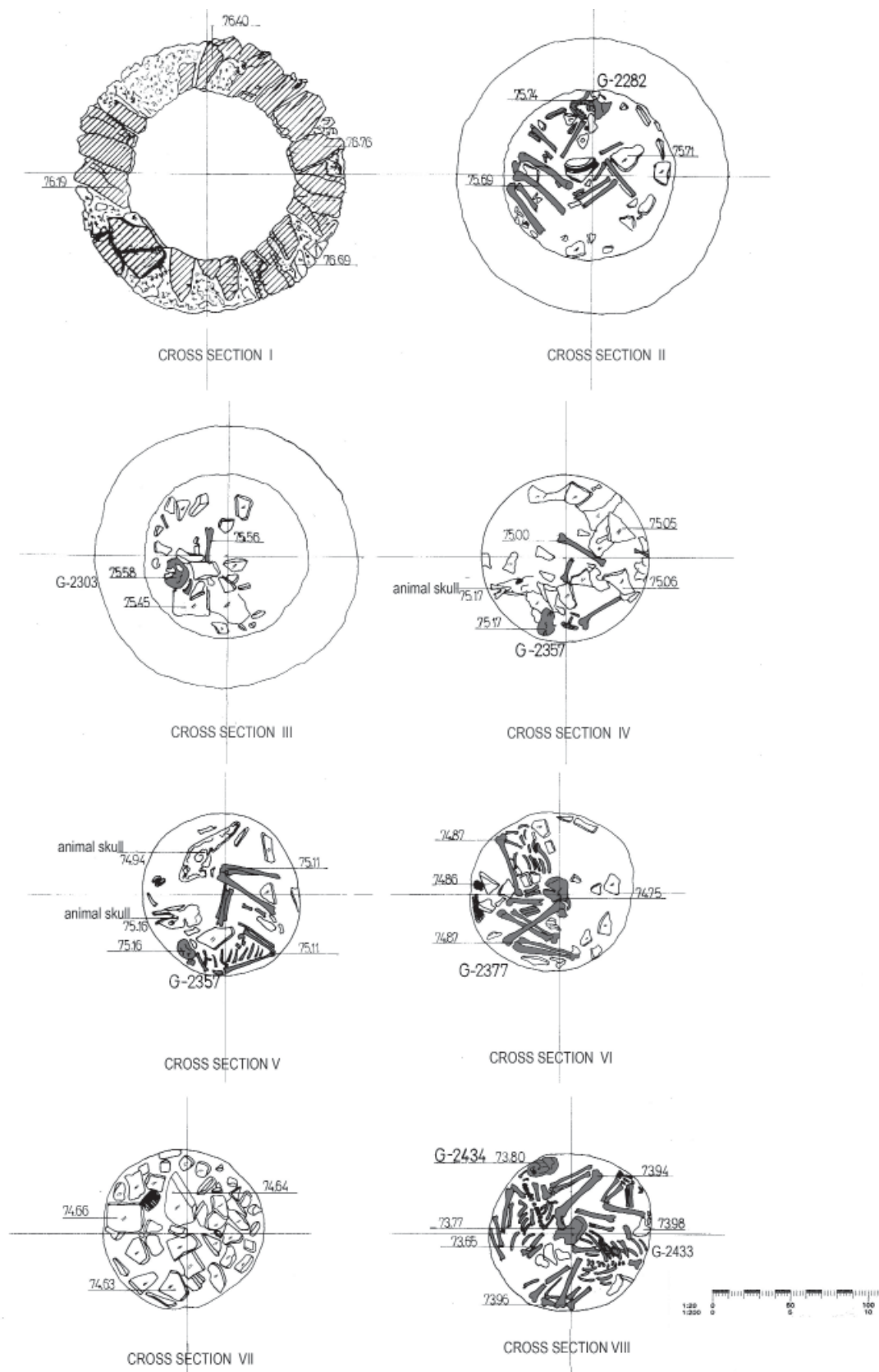


Plate I - Cross-sections of the well I-VIII

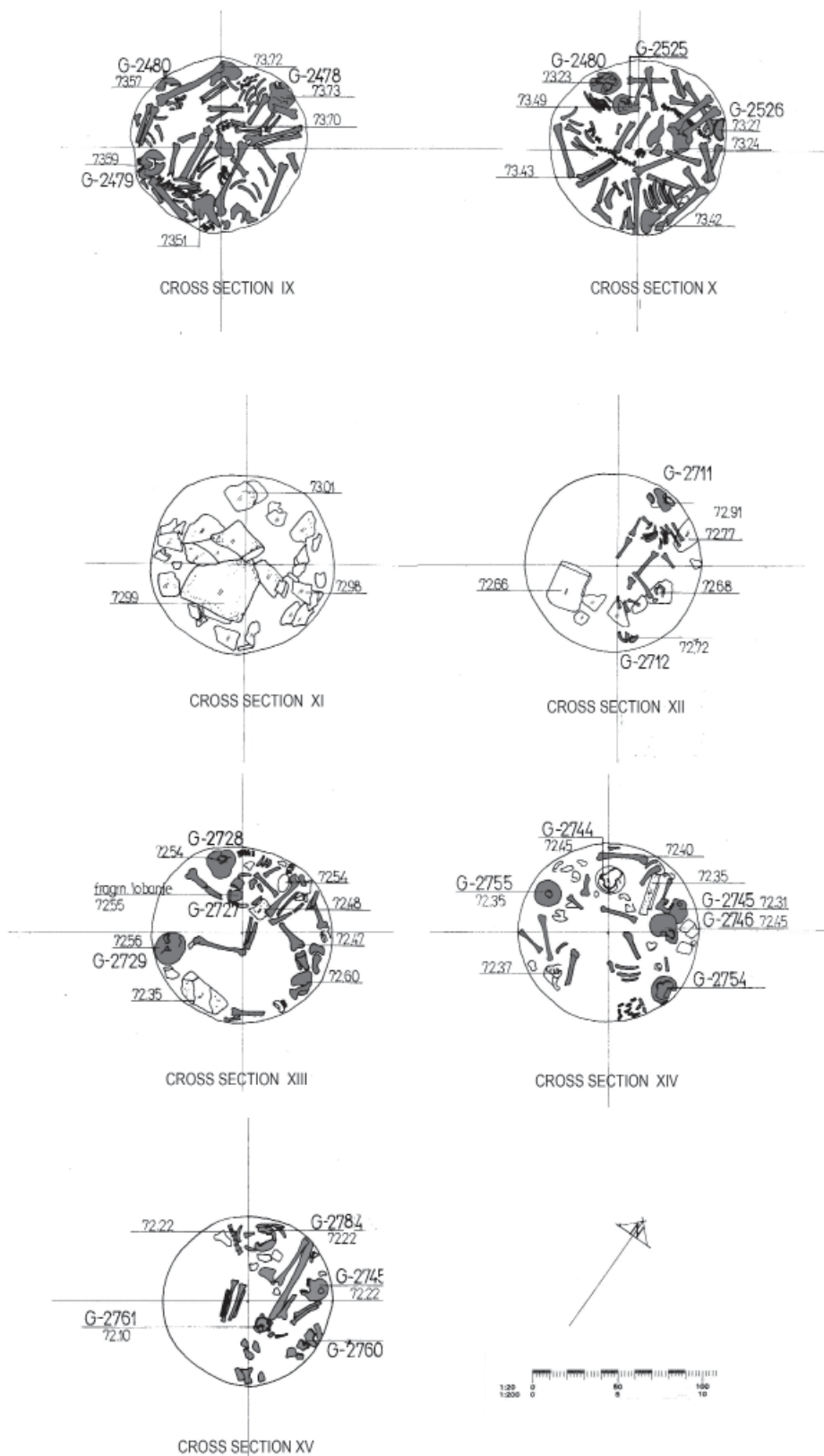


Plate II - Cross-sections of the well IX-XV

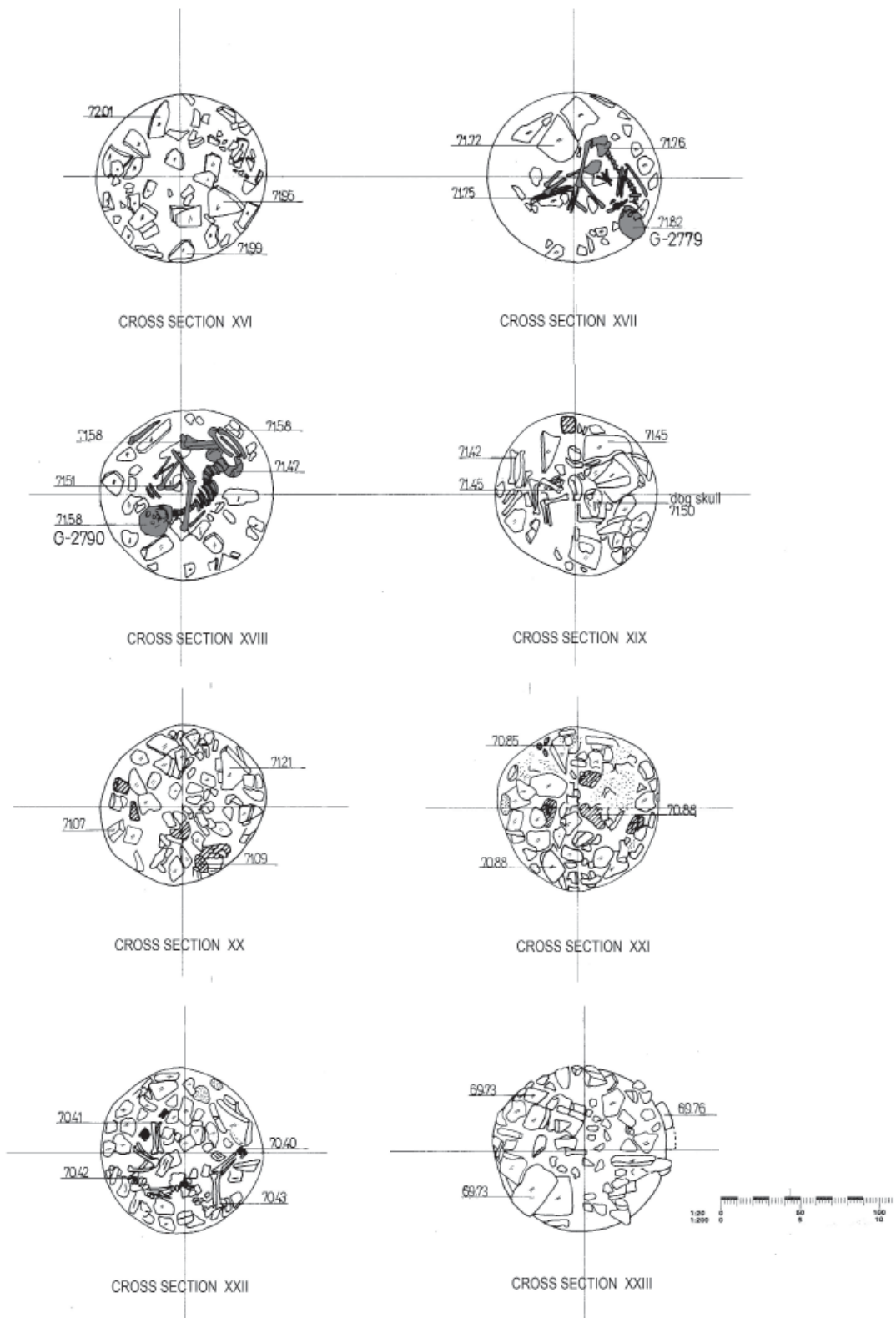


Plate III - Cross-sections of the well XVI-XXIII

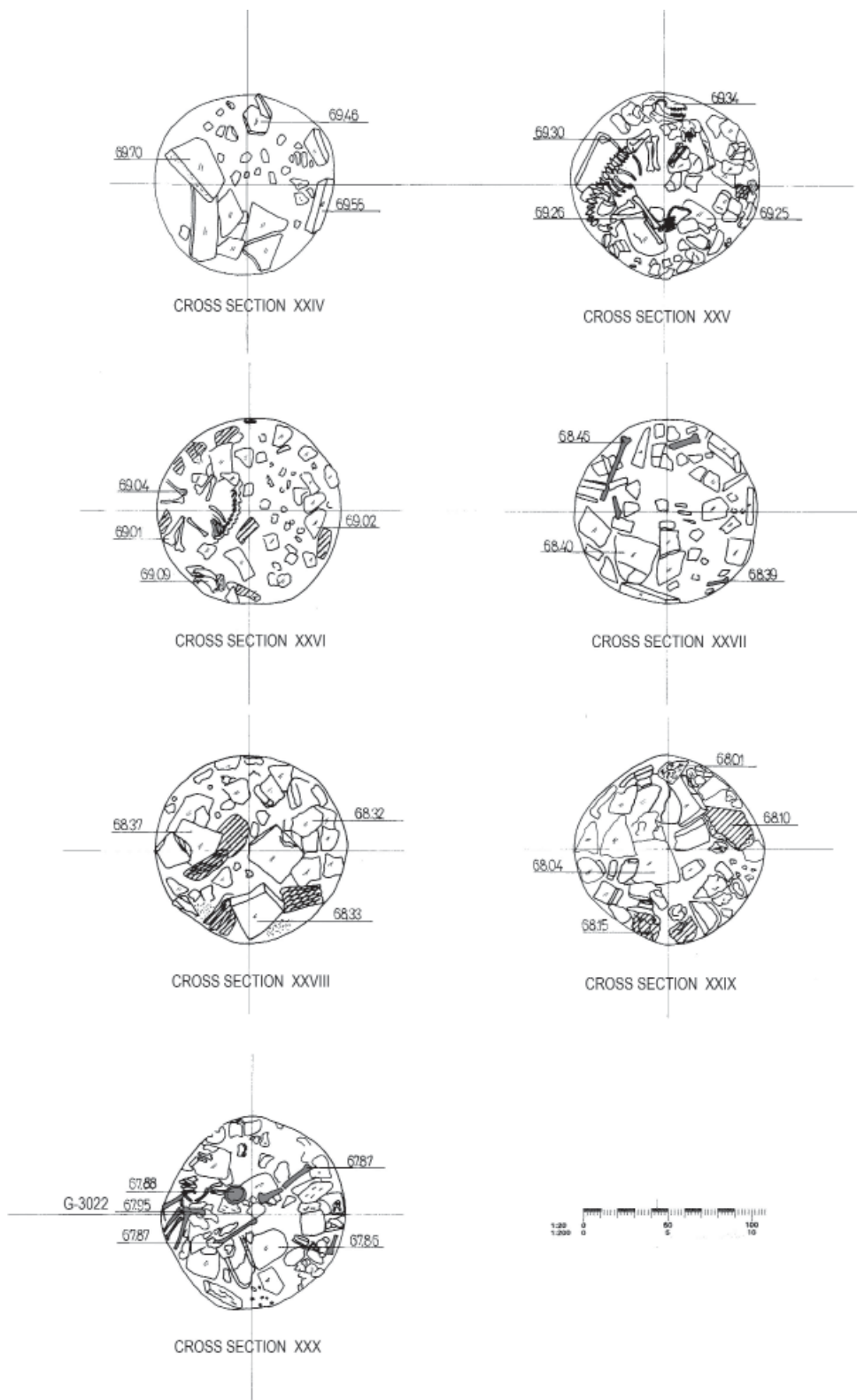


Plate IV - Cross-sections of the well XXIV-XXX

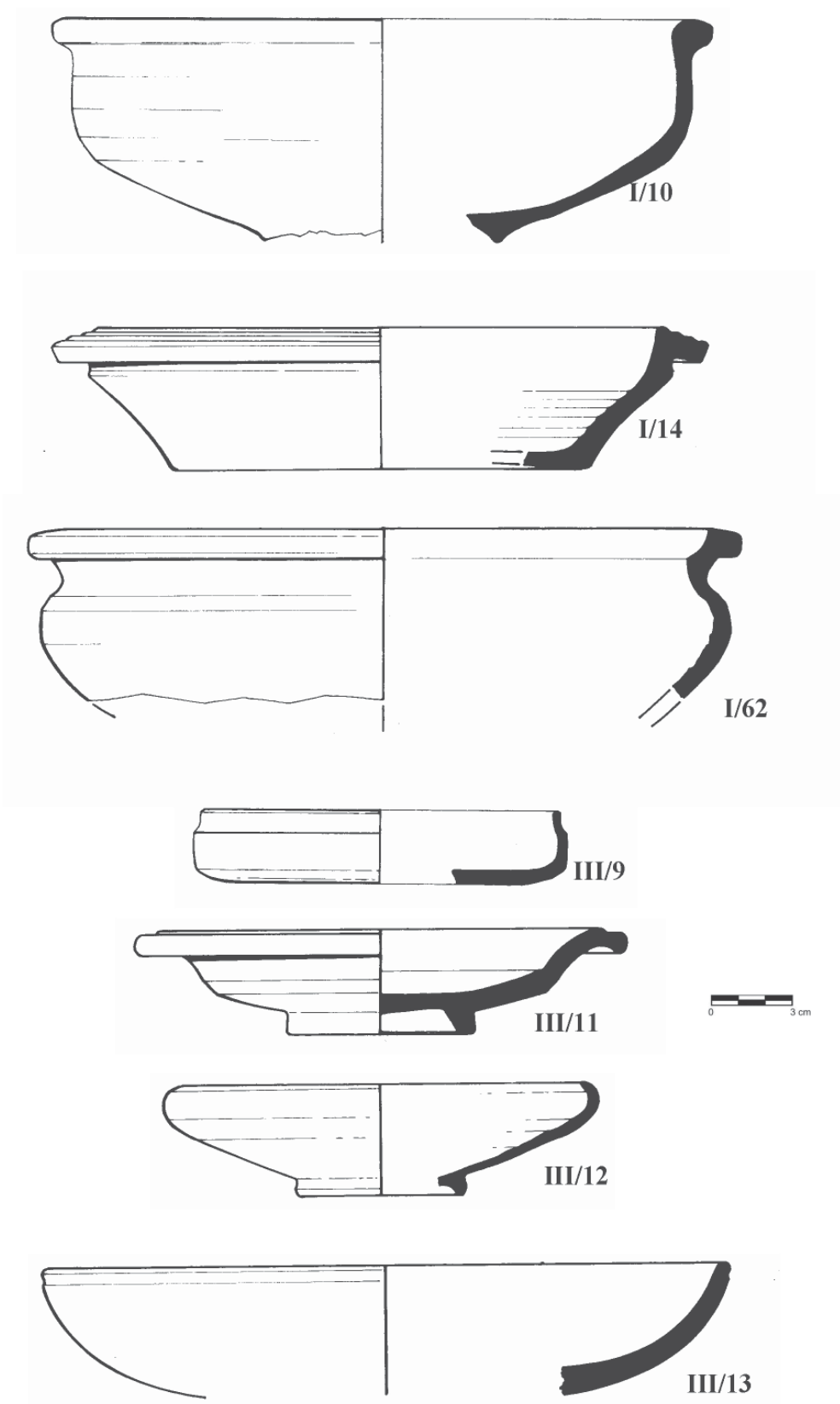


Plate V - Bowls and plates types found in the well

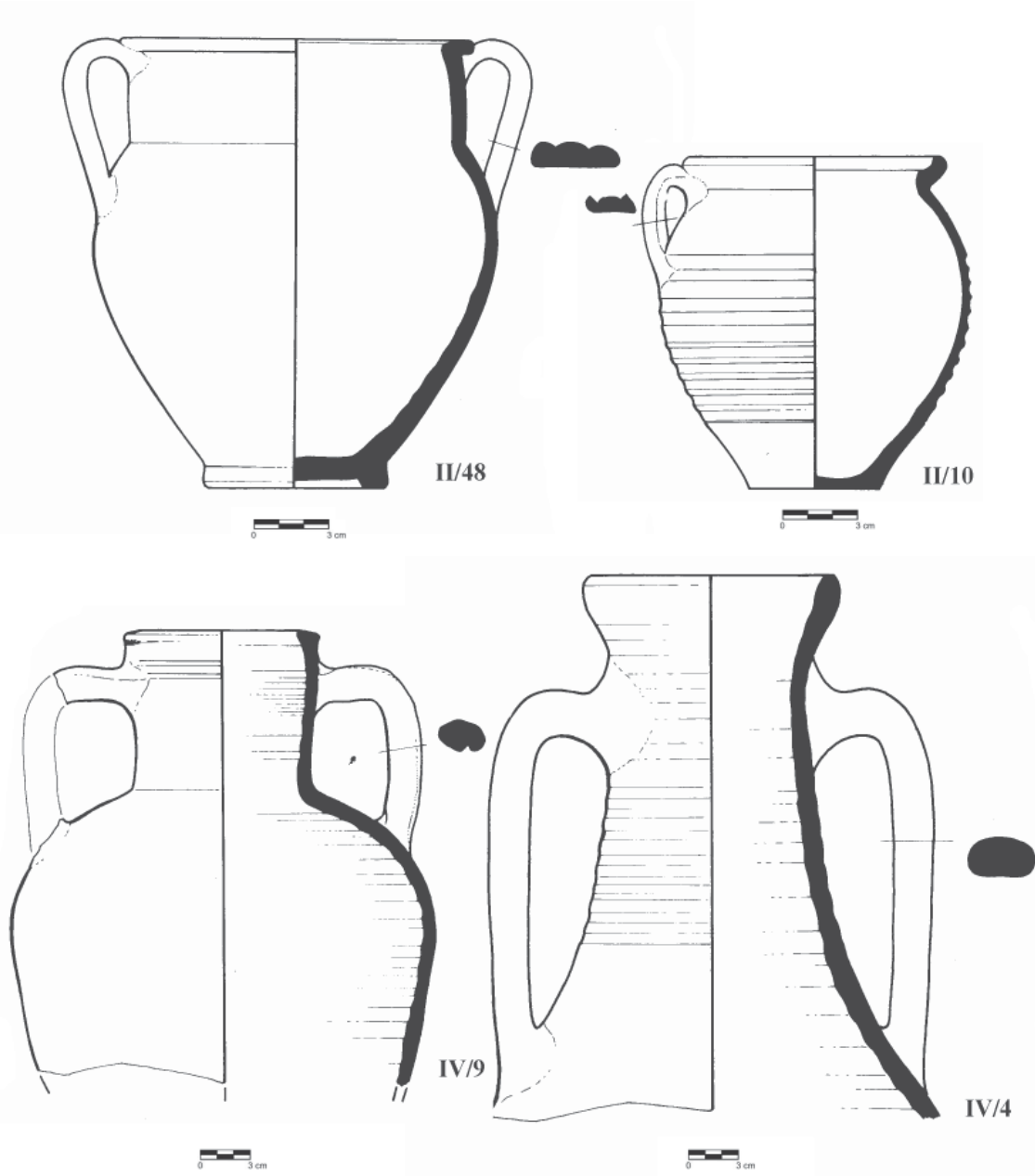


Plate VI - Pots and amphorae types found in the well

REZIME
REZULTATI ARHEOLOŠKO-ANTROPOLOŠKIH STUDIJA O GRUPNOM SAHRANJIVANJU U VIMINACIJUMU – GROBNI BUNAR U ZANATSKOM CENTRU / NEKROPOLA PEĆINE

KLJUČNE REČI: VIMINACIJUM, NEKROPOLA, GROB, GRUPNO SAHRANJIVANJE, ZANATSKI CENTAR.

Rad predstavlja drugi u nizu arheološko-antropoloških analiza grupnih grobova istraženih na Viminacijumu tokom XX veka i obradjuje sahrane u bunaru koji je prvobitno služio za potrebe zanatskog centra, odnosno izradu keramičkih posuda i opeka. U samom bunaru su nađeni skeletni ostaci 29 osoba. Ustanovljeno je pet slojeva sahranjivanja. Autori su na osnovu stratigrafskih i antropoloških analiza pokušali da daju najprihvatljivije tumačenje o upotrebi bunara u pogrebne svrhe. Materijal nađen u bunaru ukazuje na to da su sahrane mogle biti izvršene u drugoj polovini III ili početkom IV veka.

Bunar je bio cilindričnog oblika, zidan od komada zelenog škrljca vezanih krečnim malterom sa dosta peska. Bio je kružnog preseka, spoljnog prečnika 1.90 m, a unutrašnjeg 1.10 m i delimično oštećen radom mehanizacije, tako da nije moglo biti ustanovljeno na kojoj dubini bunar počinje. Istražen je do dubine 9.40 m od koje se javlja zdravica. Pojavljivanje vode je onemogućilo dalje istraživanje. Materijal nađen u bunaru svedoči o njegovoj dužoj upotrebi ne samo u vreme kada je korišćen za potrebe zanatskog centra, već i u dužem periodu nakon prestanka keramičke proizvodnje kada su u njemu vršene sahrane. Ustanovljeno je da postoji pet slojeva sahranjivanja u kojima su nađeni osteološki ostaci 29 individua.

Na osnovu antropoloških analiza može se zaključiti da na celom pregledanom osteološkom materijalu nisu konstatovani tragovi namernih trauma iz čega proizilazi da nije bilo nikakvih

žrtvovanja. Ideja o epidemiji se tako spontano nameće. Iako blizu nekropole, objekat kao što je bunar obezbeđuje izolaciju. Ako bi posmatrali nivo sahranjivanja i sahranjene individue, prvi nivo sahranjivanja bi bio najproblematičniji za tumačenje. Pitanje je uopšte da li se radi o sahrani ili nesrećnom slučaju koji se možda odigrao još u doba kada je bunar bio u primarnoj funkciji. Da li je bilo poznato da je neko upao u bunar i time ga izuzeo iz upotrebe jer je postao infektivan (sa neupotrebljivom vodom), ili je nesrećni čovek nestao u bunaru, a da niko nije posumnjao da je upao u njega? Naravno, možemo samo da pretpostavljamo. Činjenica da je između prvog i drugog sloja sahranjivanja sloj ispune skoro 4 m ukazuje na to da je u tom periodu bunar korišćen kao otpadna jama. Nažalost, materijal nađen u ispuni nije hronološki osetljiv i ne daje indicije o tome koliko je period punjenja mogao biti dug. Ali nakon njega slojevi sahranjivanja su mnogo gušći i sa takvim demografskim sastavom sahranjenih da nam dopušta hipotezu da se možda radilo o epidemiji. Naravno, ni ovde nam materijal ne daje mogućnost preciznijeg hronološkog opredeljenja, ali mogli bi posredno zaključiti da se radi o drugoj polovini III veka ili početku IV. Sahranjene individue su pažljivo spuštane u bunar, ali što se tiče ličnih stvari i eventualnih grobnih priloga, opet su u pitanju skromni predmeti. To ukazuje na to da se moralo raditi o najnižem socijalnom sloju stanovništva, veoma slabe materijalne moći. Verovatno da bi nalaz nekog novog, sličnog bunara iskorištenog za sahrane, mogao da razjasni bar neke od nedoumica koje su ostale nakon istraživanja ovog tokom prošlog veka. S obzirom da je Viminacijum bio najveći grad Gornje Mezije i samim tim morao imati i najveću nekropolu, nije nerealno očekivati još neki sličan nalaz koji bi uspeo da nam pruži više odgovora.