### ILIJA MIKIĆ

Institute of Archaeology, Belgrade

# POPULATION OF VIMINACIUM DURING THE MIGRATION PERIOD\*

## - segment without artificially deformed skulls

UDK: 902.2:572.7"652"(497.11) 904:726.8"652"(497.11) DOI: 10.2298/STA1565107M

Original research article

e-mail: mikicilija82@gmail.com

Received: February 16, 2015 Accepted: May 15, 2015

Abstract. – In the 1980s, at the site of Viminacium – Više Grobalja, 31 artificially deformed skulls were discovered at the necropolis ascribed to the Gepids. These skulls attracted much attention from anthropologists as they represent the largest series of artificially deformed skulls in this part of Europe. Another 63 skulls, showing no traces of artificial deformation have, thus far, been disregarded, hence they will now be published in more detail and those best preserved, illustrated in this paper. In 2006, the published archaeological analysis confirmed that this site is, in fact, a case of two necropolises from the Migration Period, which were, however, spatially and chronologically linked. They were named as Viminacium II, specifically Više Grobalja 1 and Više Grobalja 2. The older necropolis (1) contained 36 skeletons, and the younger (2), 58 skeletons. This paper includes another two Viminacium necropolises from the Migration Period – the necropolis of Burdelj (i.e. Viminacium I) with 66 graves and the necropolis of Lanci (i.e. Viminacium III) with 15 graves. Simply stated, the anthropological characteristics of the skeletons from these four necropolises of Viminacium from the Migration Period – Burdelj, Više Grobalja 2 and Lanci, excluding the previously published artificially deformed skulls, demonstrate a low degree of heterogeneity.

*Key words.* – Migration Period, Viminacium, necropolis, dating, sex determination, individual biological age, paleodemography of the population, anthropomorphology.

he Gepidic necropolises at the site of Viminacium – Više Grobalja, due to the large number of well preserved artificially deformed skulls, immediately drew attention to their anthropological specificities. The older necropolis contained 26 artificially deformed skulls from a total of 36 discovered. The younger necropolis, which comprised 58 skeletons in total, had 5 artificially deformed skulls. The necropolises had been archaeologically excavated in 1979, 1984 and 1985. However, until 2006, when V. Ivanišević, M. Kazanski and A. Mastikova, based on the

archaeological criteria, separated these two spatially and chronologically linked necropolises, they had been treated as one in literature. This, of course, reflected on the anthropology as well. The anthropological revision, as a common outcome, followed in 2007.<sup>2</sup>

In 1977 and 1978, at the site of Viminacium – Burdelj, the third necropolis from the Migration Period

<sup>&</sup>lt;sup>1</sup> Ivanišević et al. 2006.

<sup>&</sup>lt;sup>2</sup> Mikić 2007; Mikić 2007a.

<sup>\*</sup> This article is the result of the project: *Viminacium, Roman city and military camp – research of the material and non material culture of inhabitants by using the modern technologies of remote detection, geophysics, GIS, digitalization and 3D visualization* (no 47018) funded by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

was excavated. It comprised 66 individual graves. The skeletons from the graves up to number 40 were not able to be extracted due to the urgent requirements of the thermal power plant, so as to make available the area of land for the purpose of expanding the facility. Consequently, these skeletons had to be left in situ. Skeletons from number 40 to number 66 were anthropologically processed, but are unpublished. They were archaeologically excavated in 1978.

The fourth necropolis from the Migration Period at the site of Viminacium – Lanci was excavated in 1979. Unfortunately, the anthropological material from it could not be processed, and all that is preserved is the associated archaeological documentation.

From an anthropological perspective, artificially deformed skulls, with their number, have predominantly attracted attention and have had a particular priority in publications. This paper includes the skulls without deformations, i.e. those with a usual morphostructure, from the sites of Više Grobalja and Burdelj. The aim of this paper is to present the anthropological profile of the population at Viminacium during the Migration Period as completely as possible, i.e. in its entirety.

### MATERIAL AND METHOD

With regard to the human osteological material from the older and the younger necropolis of Viminacium – Više Grobalja, including artificially deformed skulls, it should be noted that a suitable morphognostic overview has been published.<sup>3</sup> From this, it is clear that exactly 10 graves in the older necropolis did not contain skeletons with artificially deformed skulls. These are graves, i.e. skeleton numbers: 55, 206, 227, 1461, 1515, 1685, 1876, 1961, 2005 and 2047. The anthropological content of the younger necropolis from the site of Viminacium - Više Grobalja is completely different. Here we encounter 53 individual grave contents without artificially deformed skulls. Their designations are as follows: 97, 100, 103, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 123, 124, 125, 126, 127, 129, 130, 131, 132, 133, 135, 136, 137, 139, 140, 141, 142, 143, 144, 147, 148, 149, 150, 151, 152, 153, 154, 352, 357, 572, 573, 628, 654, 2075, 2083, 2093, 2131, 2142 and 2195.

Skeletons 40 to 66 from the necropolis of the Migration Period at the site of Viminacium – Burdelj are presented, on this occasion, for the first time. Unfortunately, due to their very poor state of preserva-

tion, only 9 skeletons could be anthropologically processed in more detail. These were the skeletons from grave numbers: 40, 55, 56, 58, 59, 62, 63, 65 and 66. Skeletons from other graves were extremely poorly, and only in traces, preserved, consequently it was only possible to ascertain that these are adult individuals of an undetermined sex and age. Only two skeletons could be anthropometrically processed (numbers 55 and 66).

The method of processing human osteological material from these three necropolises of the Migration Period at Viminacium ranges within the frameworks of the standardised methodology of biophysical anthropology. In the process of determining sex and individual age, the author used the recommendations defined, as far back as 1980, by D. Ferembach, I. Schwidetzky and M. Stloukal. All the osteometric parameters, for both the skulls and the long bones of the postcranial skeletons, were taken following the definitions of R. Martin,<sup>4</sup> and based on the redefined criteria of V. Bass.<sup>5</sup> Pathological changes, both on bones and teeth and jaw apparatus, were compared with the cases and categories described in the Atlas of paleopathological changes by A. Lovrinčević and Ž. Mikić. Also, the publication of D. J. Ortner cannot go unmentioned.<sup>7</sup>

The degree of preservation, undoubtedly, conditioned the scope of data which could be obtained by applying the aforementioned methodological principles. After the archaeological excavations, it was evident that the skulls were altogether far better preserved (or excavated) compared to the postcranial skeletons. This anthropological observation refers to all three necropolises included in this analysis.

#### **RESULTS**

As already stated, the artificially deformed skulls have been anthropologically revised and published, therefore the anthropological content of the graves that did not include artificially deformed skulls is presented in this paper. To reiterate, this is the human osteological

<sup>&</sup>lt;sup>3</sup> Mikić 2007a.

<sup>&</sup>lt;sup>4</sup> Martin, Saller 1957.

<sup>&</sup>lt;sup>5</sup> Bass 2005.

<sup>&</sup>lt;sup>6</sup> Lovrinčević, Mikić 1989.

<sup>&</sup>lt;sup>7</sup> Ortner 2003.

<sup>&</sup>lt;sup>8</sup> Mikić 2007; Mikić 2007a.

material from the older and the younger necropolis from the site of Viminacium – Više Grobalja, along with some of the preserved skeletal material from the necropolis of Viminacium – Burdelj.

If the chronological criteria and periodisation published in 2006 by V. Ivanišević, M. Kazanski and A. Mastikova are accepted, which states that Viminacium I represents the Burdelj necropolis, Viminacium II – the older and the younger necropolis at the Više Grobalja site, and Viminacium III – the Lanci necropolis, then the available anthropological material should also be presented in the same order.

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As previously mentioned, archaeological excavations were conducted at the necropolis in 1977 and 1978. The anthropologically processed skeletons excavated in 1978, from number 40 to number 66, were very poorly preserved. A total of 18 skeletons were in such a poor state of preservation that they could not even be lifted for the purposes of anthropological processing. It was only possible to conclude that these were the skeletons of adult individuals. A total of 9 skeletons were able to be anthropologically examined. They had the following number designations: 40, 55, 56, 58, 59, 62, 63, 65 and 66. From a paleodemographic point of view, the following data was obtained.

Number: 40 – male, adult,

55 - male, aged up to 45,

56 – female, aged up to 45,

58 – male, adult,

59 - female, adult,

62 - child, aged between 3 and 4,

63 – child, aged between 8 and 10,

65 - female, adult,

66 – male, aged up to 45.

Only the male skeletons numbers 55 and 66 were better preserved, thus allowing for primary skull measurements, as shown in Table 1, and the measurements

of other bones of the postcranial skeletons to be taken. The following are the osteometric diameters.

The measurements of the long bones of the postcranial skeleton (femur, humerus, tibia, ulna and radius) were obtained, using a standardised methodology, only from the preserved (left) side and are shown in Table 2.

Pathological changes were noted only on the teeth. Specifically, this was advanced caries, commonly present in both jaws. This results more from an inadequate diet rather than from age.

What should be primarily emphasised is the unusually small number of paleopathological diagnoses. For the Burdelj necropolis (Viminacium I), it has already been pointed out that there is only tooth decay (caries), present in a very advanced stage in both jaws. At the necropolises designated as Viminacium II (i.e. the older and the younger necropolis at the site of Više Grobalja), along with caries, intra vitam tooth loss and dental cysts were also observed.

Clarell are a common and	Skull number				
Skull measurement	55	66			
GL – OP	182	200			
EU – EU	144*	145			
FT – FT	90*	99			
MS – MS	-	105			
BA – B	155*	-			
PO – B	120	130			
ZY – ZY	-	140			
Upper facial height	67	65			
Orbital cavity height	40	40			
Orbital cavity breadth	35	34			
Nasal cavity breadth	26	23*			
Nasal cavity height	49	51			
GO – GO	105*	106			

<sup>\*</sup> Measurement obtained by reconstruction.

Table 1. Anthropological skull measurements Табела 1. Аншройолошке мере кранијума

NUMBER	SEX	FEMUR	HUMERUS	TIBIA	ULNA	RADIUS
55	male	492 104 52 168		420	_	_
66	male		340 70	_	_	_

Table 2. Primary anthropological measurements of long bones

Табела 2. Примарне аншройолошке мере дуйих косшију

Skull number	55	227	1685	1876	1961	2047
GL – OP	191	170	182	183	181	187
EU – EU	146	135	131	141	132	141
FT – FT	101	106	92	96	_	100
MS – MS	106	102	_	-	-	_
BA – B	151	-	_	-	-	142
PO – B	125	115	115	123	115	124
ZY – ZY	132	-	122	128	125	_
Upper facial height	74	-	70	65	68	_
Orbital cavity height	40	-	38	38	37	_
Orbital cavity breadth	33	-	33	32	31	_
Nasal cavity breadth	23	-	24	24	25	_
Nasal cavity height	54	-	52	48	51	_
GO – GO	102*	94	-	110	104	-

\* Measurement obtained by reconstruction.

Table 3. Primary anthropological measurements of the preserved skulls

Табела 3. Примарне аншройолошке мере очуваних лобања

Other diagnoses (female skeletons numbers 202 and 206) pertain to the upper half of the spinal column. Specifically, smaller exophytes were detected, in one case, on the cervical and lumbar vertebrae. In the other case, the cervical vertebrae (from the 3<sup>rd</sup> down) were mutually connected, i.e. fused into a block. These are definitely arthritic changes, <sup>9</sup> indicative of hard physical labour and poor living conditions.

Very little can be said regarding the anthropological profile of the processed skeletons from this necropolis. When viewed constitutionally-morphologically, one skull is dolichocranic, whereas the other mesocranic. From the paleodemographic perspective, it is illusory to draw any specific conclusions. Although this necropolis was completely archaeologically explored, the aforementioned circumstances at the site, along with the very poor degree of preservation, had a decisive impact on further, more detailed analysis.

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As already pointed out, the older necropolis of Viminacium II contained 26 skeletons with an artificially deformed skull, while exactly 10 had skulls with a usual and natural morphostructure. The numeric designations of these graves, i.e. the skeletons, marked as  $G_2$ , have been stated in the previous section (Material and Method). Within these graves, an equal number of male and female individuals were encountered, although with

a very pronounced deficit of children. Paleodemographically viewed, the composition is as follows:

Number: 55 – male, aged over 45,

206 – female, aged up to 40,

227 - female, aged up to 40,

1461 – female, aged up to 60,

1516 – female, aged up to 60,

1685 – male, aged up to 45,

1876 - male, aged up to 60,

1961 – undetermined sex, adult individual,

2005 – child, aged around 4,

2047 – male, aged up to 40.

It was apparent that in the anthropological content of this necropolis, which can be regarded as having been completely archaeologically excavated, four males, four females, an individual of undetermined sex and only one child, did not have any artificial deformation of the skull.

The degree of preservation of this group of skeletons, on the whole, was poor. Five male and one female skull allowed partial primary anthropological measurements, as shown further in the paper. The postcranial parts in both sexes, however, did not permit a single measurement of long bones to be taken, since they were

<sup>&</sup>lt;sup>9</sup> Ortner 2003.

noted only in the form of poorly preserved fragments. The obtained skull measurements are as follows.

The basic constitutional-morphological categorisation, i.e. the length-breadth index, shows that female skull number 227 is mesocranic, on the very border of brachycranic (79.41). The other five male skulls are relatively heterogeneous. Based on their length-breadth index, they are classified into the dolichocranic and mesocranic category, with index values ranging between 71.98 and 77.05. The best preserved are the male skulls numbers 55 and 1685, and are illustrated in the form of standardised anthropological projections in Plate 1.

Unfortunately, all postcranial skeletons from this necropolis were quite poorly preserved. Consequently, none of the long bone measurements could be obtained. The estimation of stature could not, therefore, be calculated based on any categorisation. Morphologically viewed, due to the poor state of preservation, only a minor heterogeneity could be noted, and applies solely to males.

Paleodemographically viewed, since the necropolis was completely archaeologically excavated, it can be asserted that it contained 13 male, 12 female and 10 child skeletons. Sex determination was possible in all but one skeleton of an adult individual.

Comparing lifespan of the individuals with artificial skull deformation and those presented in this paper, several conclusions can be drawn. If, for example, the average lifespan of the whole necropolis is compared (about 33 years), this group lived somewhat longer than average (about 39 years). Observed in terms of sex, males in this group lived about 44 years, while the overall male average was about 37 years. Females, on average, lived about 44 years, and within this group, about 33 years.

For children, paleodemographic calculation is meaningless, since there was only one 4-year-old in this group.

In general, this segment of the population lived approximately 6 years longer compared to the average of the entire population. Males lived about 7 years longer, with females living 11 years less than average.

This paleodemographic comment should be taken only as an introductory piece of information for several reasons. Among other things, the question remains whether the classic anthropological methods allowed for an accurate estimation of individual biological age. There is no doubt that laboratory methods would provide more reliable data. However, even in that situation, it has to be remarked that jaws with teeth were not

always preserved in all the skulls from both subgroups. Unquestionably, statistical significance also represents an extremely important criterion.

Compared with the older necropolis, the younger is more significant both by virtue of the number of the skeletons discovered and their state of preservation. It was also completely archaeologically explored, with 58 skeletons, only five of which had skulls with artificial deformation. It is worth adding that the older necropolis contained 26 such skulls, although a considerably smaller overall number.

The largest group of skeletons from the younger necropolis at this site, 53 of them, had a skull morphostructure with no traces of artificial deformation. These skeletons are distinguished by a large disproportion of sexes, along with a great deficit of children. Specifically, this part of the population comprised 27 males, 19 females, six children in the first decade of life, along with an adult individual whose sex could not be determined (due to the poor and incomplete state of preservation). Paleodemographically viewed, the composition is as follows:

Number: 97 – female, aged up to 40,

100 - female, aged over 21/23,

103 – male, aged over 40,

111 – female, adult individual,

112 – female, adult individual,

113 – male, aged over 45,

114 – male, adult individual,

115 – male, aged over 45,

116 – female, aged up to 21/23,

117 – male, aged up to 35,

118 – female, aged up to 21/23,

119 – child, aged between 4 and 6,

120 – male, aged over 40,

121 - male, aged up to 40,

123 – male, aged up to 45,

124 – female, adult individual,

125 – infant, in the 1st year of life,

126 – male, aged over 30,

127 – male, adult individual,

129 – male, aged over 45,

130 - child, aged between 2 and 3,

131 – child, aged between 2 and 3,

132 – female, aged over 45,

133 – female, aged over 45,

135 - male, aged up to 30,

136 – female, aged over 30,

137 – female, aged up to 30,

139 – female, adult individual,

140 – male, aged over 45,

141 – male, aged over 45,

142 – male, aged over 21/23,

143 – female, aged up to 30,

144 – female, aged over 21/23,

147 – child, aged between 6 and 8,

148 – child, aged up to 12/15,

149 – male, aged up to 45,

150 – undetermined sex, adult individual,

151 – male, aged around 60,

152 - male, aged over 45,

153 – female, adult individual,

154 – female, aged over 45,

352 - male, aged up to 21/23,

357 – female, aged up to 45,

572 - male, aged up to 45,

573 – male, aged up to 21/23,

628 – female, aged up to 21/23,

654 – male, aged up to 60,

2075 – male, aged up to 60,

2083 – female, aged up to 45,

2093 – male, aged up to 50,

2131 - male, aged up to 50,

2142 – male, aged between 30 and 35,

2195 - male, adult individual.

If, in the case of this necropolis, as with the previous one, the lifespan is compared, the following results are obtained. The average life expectancy in this necropolis was around 36 years of age. Males, on average, lived to about 43, whereas females to about 35 years. The average life expectancy in children was about 6 years. The group without deformed skulls lived, on average, to about 32 years. Males lived to about 40 and females to about 28 years. Their children lived, on average, to about 5 years.

A lower life expectancy is evident in this segment of the population group buried in the younger necropolis. Compared to the overall average, here it is approximately 4 years lower. In males, it is about 3 years lower, and in females about 7 years. Children lived equally long, with the difference amounting to only about a year.

Again, in the case of this necropolis, as with the previous one from the Migration Period, we repeat the comment that our results, for the same reasons, should be viewed only as an introductory piece of information, and not as a reliable criterion for the definitive separation of lifespan of the people in these specific population groups.

The population group from this necropolis, as already explained, contains skeletons which are much

NUMBER	SEX	GL-OP	EU-EU	FT-FT	MS-MS	BA-B	РО-В	ZY-ZY	N-PR	MF-EK	HEIGHT	BREADTH	N-NS	GO-GO
97	female	173	146	95	101	133	118	126	60	39	34	24	47	91
113	male	199	146	101	113	135	124	_	_	_	_	_	_	107*
116	female	180	137	95	100	144	122	_	_	_	_	_	_	98
117	male	185	140	96	107	146	118	132	67	39	31	21	50	104
121	male	191	130	90	104	152	116	131	65	39	32	25	51	104
123	male	195	136	94	_	_	_	_	_	_	_	_	-	106
129	male	188	133	98	155	_	_	_	_	_	_	_	-	_
133	male	185	138	100	_	_	_	_	_	_	_	_	_	_
136	male	182	137	98	104	142*	_	_	_	_	_	_	_	112
137	female	160	126	76	86	128	120	117*	60	34	30	23	46	84
143	male	173	133	97	_	_	_	_	_	_	_	_	-	92
144	male	167	130	94	_	_	_	_	_	_	_	_	_	89
572	male	184	126	95	_	_	111	122	63	37	29	29	47	108*
573	male	197	132	90*	147	120	_	_	70	38	31	25	54	102*
628	female	174	136	98	_	_	114	120	60	37	30	28*	43*	98*
654	male	181	138	95	_	_	114	_	_	_	_	_	_	115
2093	male	176	141	103	_	144	121	135	58	39	30	26	46	_
2131	male	193	145	99	_	135	120	127	70	37	30	24	49	110*
2142	male	180	140	100	_	_	111	131	70	41	32	28	54	_

Table 4. Primary anthropological measurements of the preserved skulls

\* Measurement obtained by reconstruction.

Табела 4. Примарне аншройолошке мере очуваних лобања

NUMBER	SEX	FEM	<b>UR</b>			HUM	IERUS	TIBIA	ULNA	RADIUS
113	male	477	100	53	170	344	86	400	278	258
117	male	450	86	48	151	322	67	_	240	_
120	male	480	98	50	164	_	_	384	_	_
121	male	509	100	52	162	360	78	408	266	_
129	male	480	94	54	172	_	_	_	_	_
136	male	475	98	52	165	344	76	389	252	275
137	female	411	75	41	138	296	59	345	228	245
141	male	502	100	52	170	346	75	409	_	275
143	male	446	84	42	135	323	66	371	250	_
144	female	404	78	40	127	289	56	335	222	242
573	male	455	95	48	155	_	_	_	_	_
628	female	_	_	_	_	295	58	_	_	_
654	male	440	95	46	150	339	70	365	_	260

Table 5. Primary anthropological measurements of long bones

Табела 5. Примарне аншройолошке мере дуйих косшију

better preserved compared to the older group. Skull measurements were obtained for 15 male and four female individuals (Table 4). Long bones of the post-cranial part were able to be measured in 10 male and three female skeletons (Table 5), thus providing the first data regarding stature in both sexes.

For the younger necropolis at the site of Viminacium – Više Grobalja, the following primary skull measurements were obtained (Table 4).

The available measurements of the long bones of the postcranial skeleton are presented in the following table, and they relate to the mean values. For the femur, they are the length and circumference of the diaphysis, along with the diameter and circumference of the head. For the humerus, they are the length and circumference, and for the tibia, radius and ulna, only the length.

Male skulls from this necropolis (15) are characterised as dolichocranial. The average value of the length-breadth index is 73.79. The variation in breadth ranges between 67.00 and 77.84. Only one skull (number 2093) is on the border of mesocrania and brachycrania (80.11).

Female skulls (four in total) are, on the whole, mesocranic. Their index values are 76.11, 78.16 and 78.75, with a mean value of 77.67. Skull number 97 is brachycranic (84.39).

Plates 2 and 3 illustrate the best preserved skulls. These are four male skulls – numbers 117, 121, 2093 and 2131. This group also includes two female skulls, numbers 97 and 137. Compared with the older necro-

polis at this site of Viminacium, the indicators obtained for both sexes are similar, although not significant enough, primarily due to a quite different number of preserved skulls. The ratio is 6 to 18, which represents a considerable disproportion.

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As already stated in the introduction, the archaeological excavations at the Lanci necropolis were conducted in 1979. As can be seen from the archaeological documentation, 15 graves were investigated. The skeletal finds from these graves, unfortunately, could not be anthropologically processed (instead, they were left in situ). Their number (15), when compared to the other three necropolises from the Migration Period at Viminacium, suggests that this most likely represents only a part of the necropolis, which was explored in the aforementioned year, rather than the entire necropolis.

### DISCUSSION AND CONCLUSION

What should first be discussed is the unusually small number of paleopathological diagnoses. For the Burdelj necropolis (Viminacium I), it has already been pointed out that there is only tooth decay (caries), present in a very advanced stage in both jaws. At the necropolises designated as Viminacium II (i.e. the older and

younger necropolis at the site of Više Grobalja), along with caries, intra vitam tooth loss and dental cysts were also observed.

Other diagnoses (female skeletons numbers 202 and 206) pertain to the upper half of the spinal column. Specifically, smaller exophytes were detected, in one case, on the cervical and lumbar vertebrae. In the other case, the cervical vertebrae (from the 3<sup>rd</sup> down) were mutually connected, i.e. fused into a block. These are definitely arthritic changes, <sup>10</sup> indicative of hard physical labour.

The question of how to explain the given situation is imposing.

The author maintains the existence of two possibilities. The first is that these three population groups, which definitely lived separately in the territory of Viminacium, were merely in very good health. The second possibility is that the very low degree of preservation of their skeletons, particularly the postcranial part, had a decisive influence on the paleopathological observations. However, these two possibilities could perhaps also be unified.

It turns out that the overall anthropological data with regard to the population at Viminacium during the Migration Period is very indicative, both in terms of comparison with the part that had artificially deformed skulls, as well as generally. Thus, for example, the obtained data pertaining to the stature of individuals with or without artificially deformed skulls from the necropolises of Više Grobalja 1 and Više Grobalja 2 can be compared. Specifically, despite the absence of the

postcranial measurements from the older Više Grobalja necropolis, it is apparent that these are males of tall stature. Males from the Burdelj necropolis were about 175 cm tall, and from the younger Više Grobalja necropolis, about 172 cm. <sup>11</sup> For females, only data for the younger Više Grobalja necropolis was obtained – about 160 cm. <sup>12</sup>

Compared to the individuals with artificial skull deformation, <sup>13</sup> certain dissimilarities are observed only in the stature of males. Females with artificial skull deformation were, on average, as tall as those without deformations – about 160 cm. However, males with deformed skulls from the younger Više Grobalja necropolis were about 165 cm tall, which shows a significant difference compared to the 172 cm average height of those with "ordinary" skulls.

In summary, it is sufficient only to cite the aforementioned cranial indices, along with the previously discussed data with regard to stature and the demographic structure of these population groups, so as to infer that the Viminacium inhabitants, buried at the necropolis of Burdelj, as well as at Više Grobalja 1 and Više Grobalja 2, were anthropomorphologically different in relation to the existing or local population. They were certainly not indigenous, although more reliable data in terms of their anthropological origins might ensue from laboratory analyses, owing to the fact that a substantial part of this human osteological material is preserved and carefully stored (Anthropologische Staatssamlung Bayerns, München).

<sup>&</sup>lt;sup>10</sup> Ortner 2003.

<sup>&</sup>lt;sup>11</sup> Breitinger 1937.

<sup>&</sup>lt;sup>12</sup> Bach 1965.

<sup>13</sup> Mikić 1999.

#### **BIBLIOGRAPHY:**

**Bach 1965** – Bach, H., Zur Berechnung der Körperhöhe aus den langen Gliedmassenknochen weiblicher Skelette, *Anthrop. Anz.* 29, 1965: 12–21.

Bass 2005 – Bass, W. M., *Human osteology: a laboratory and field manual*, 5<sup>th</sup> ed. Columbia, MO: Missouri Archaeological Society 2005.

**Breitinger 1937** – Breitinger, E., Zur Berechnung der Körperhöhe aus den langen Gliedmassenknochen, *Anthrop. Anz.* 14, 1937: 249–274.

**Fermbach et al. 1980** – Fermbach, D. Schwidetzky, I. and Stloukal, M., Recommendations for age and sex diagnoses of skeletons, *Journal of Human Evolution* 9, 1980: 517–549.

**Ivanišević et al. 2006** – Ivanišević, V., Kazanski, M. and Mastykova, A., *Les necropoles de Viminacium a l'epoque des grands migrations*, College de France – CNRS, Centre de Recherche d'Historie et Civilisations de Byzance, Monographies 22, Paris 2006.

**Lovrinčević, Mikić 1989** – Lovrinčević, A. and Mikić, Ž., *Atlas of osteopathologic changes of the historical Yugoslav populations*, Svjetlost, Sarajevo 1989.

Martin, Saller 1957 – Martin, R. and Saller, K., *Lehrbuch der Anthropologie*, 3. Aufl. Von K. Saller, Bd. I, Gustav Fischer, Stuttgart 1957.

**Mikić 1999** – Mikić, Ž., Die Gepiden von Viminacium in der Völkerwanderungszeit, Anthropologischer Beitrag. *Anthrop. Anz.* 57/3, 1999: 257–268.

**Mikić 2007** – Mikić, Ž., Nekropole seobe naroda na Viminacijumu – antropološka revizija, *Arhaika* 1, Filozofski fakultet Beograd 2007: 209–217.

**Mikić 2007a** – Mikić, Ž., Deux necropoles de la Grande migration des peuples a Viminacijum, *Balcanica* XXXVIII / 2007, Belgrade 2008: 45–50.

Ortner 2003 – Ortner D. J., *Identification of pathological conditions in human skeletal remains*, 2<sup>nd</sup> ed. Amsterdam: Academic Press 2003.

Резиме:

ИЛИЈА МИКИЋ, Археолошки институт, Београд

# СТАНОВНИШТВО ВИМИНАЦИЈУМА ТОКОМ ВЕЛИКЕ СЕОБЕ НАРОДА

- део без вештачки деформисаних лобања

*К.*вучне речи. — Велика сеоба народа, Виминацијум, некропола, датовање, полна припадност, индивидуална биолошка старост, палеодемографија становништва, антропоморфологија.

У ранијим антрополошким радовима пажња је била посвећена највише артифицијално деформисаним лобањама са локације Више гробаља. Изузетно велики број вештачки деформисаних лобања је изашао у први план, тако да су лобање са тзв. нормалном морфолошком профилацијом потиснуте у други план.

Овом приликом, све оне су антрополошки приказане, укључујући и њихове посткранијалне скелете (као анатомску целину). То су скелетни остаци са некрополе Бурдељ (Виминацијум I) као и са старије и млађе некрополе Више гробаља (означене као Виминацијум II). Виминацијум III, односно некропола на локацији Ланци, као четврта у низу из периода Велике сеобе народа, није антрополошки могла да буде прегледана, тако да су њених 15 скелета морали бити остављени *in situ* на самом локалитету.

Овом анализом се видело да је становништво Виминацијума током Велике сеобе народа било до одређеног степена

хомогено, без обзира на то што се сахрањивало у различитим некрополама. Та одређена хомогеност се испољава у подацима које смо добили (видети приложене табеле са мерним подацима и табле са илустрацијама), а који одређују његову морфоструктуру.

Наиме, показало се да су све три приказане популационе групе (или њихови делови) биле са долихокраним или
мезодолихокраним лобањама. Висина тела мушкараца кретала се око 172 цм, односно 175 цм, а жена око 160 цм. Интересантно је да су мушкарци са артифицијално деформисаним
лобањама били високи око 165 цм (подаци добијени само за
млађу некрополу Више гробаља). Укупно узевши, ово становништво није било локалног порекла. Будући да је знатан
број лобања очуван и депонован (Државна антрополошка
збирка Баварске, Минхен), савремене лабораторијске анализе би могле да дају децидан одговор на питање о њиховом
антрополошком пореклу.

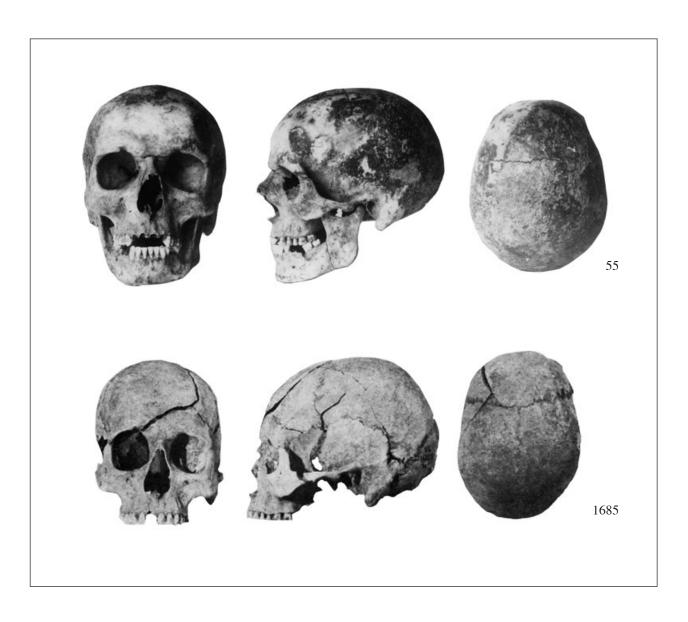


Plate I – Anthropological projections of the best preserved skulls – Viminacium, the older necropolis of the Gepids

Табла I-Ан $\overline{u}$ ро $\overline{u}$ олошке  $\overline{u}$ ројекције најбоље очуваних лобања — Bиминацијум, с $\overline{u}$ арија некро $\overline{u}$ ола  $\Gamma$ е $\overline{u}$ ида

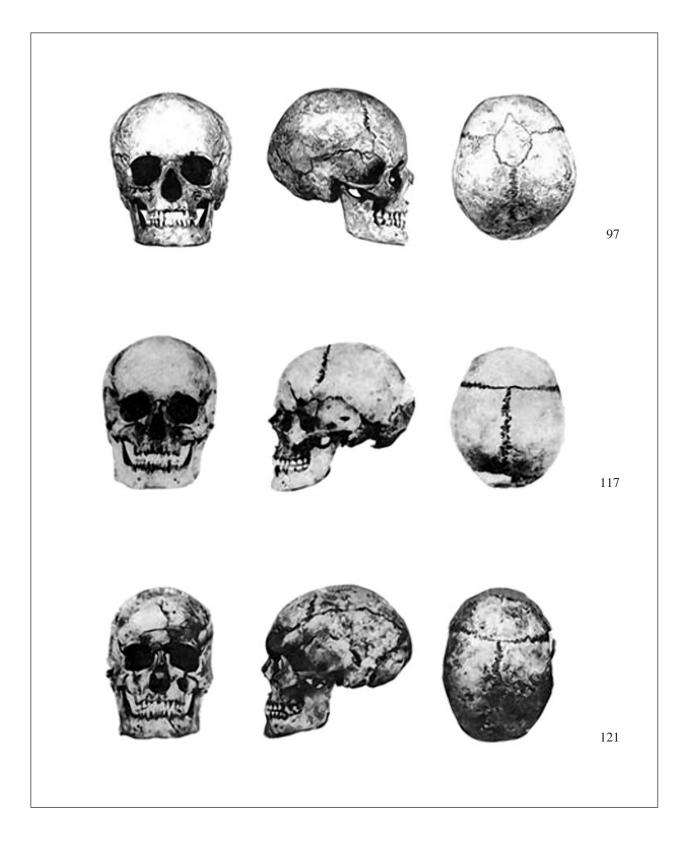


Plate II – Anthropological projections of the best preserved skulls – Viminacium, the younger necropolis of the Gepids

Табла II — Ан $\overline{u}$ ро $\overline{u}$ олошке  $\overline{u}$ ројекције најбоље очуваних лобања — Виминацијум, млађа некро $\overline{u}$ ола Ге $\overline{u}$ ида

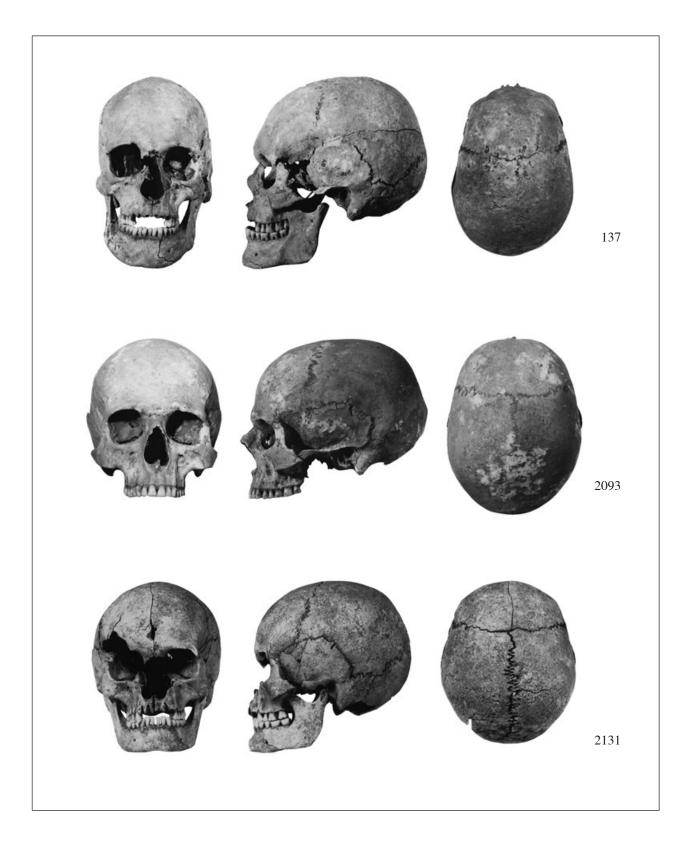


Plate III – Anthropological projections of the best preserved skulls – Viminacium, the younger necropolis of the Gepids

Табла III – Ан $\overline{u}$ ро $\overline{u}$ олошке  $\overline{u}$ роjекциjе наjбоље очуваних лобања – Виминациjум, мла $\overline{h}$ а некро $\overline{u}$ ола  $\Gamma$ е $\overline{u}$ иgа