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(HERAUSGEBERINNEN)

GAMZIGRAD-STUDIEN I

ERGEBNISSE DER DEUTSCH-SERBISCHEN FORSCHUNGEN IM UMFELD DES PALASTES ROMULIANA

RGK

GERDA VON BÜLOW / SOFIJA PETKOVIĆ
(HERAUSGEBERINNEN)

GAMZIGRAD-STUDIEN I

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HERAUSGEGEBEN VON
GERDA VON BÜLOW UND SOFIJA PETKOVIĆ

MIT BEITRÄGEN VON
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The Results of Archaeological Research in the South Tower of the West Gate of Later Fortification of *Felix Romuliana* (Tower 19)

By Sofija Petković

The archaeological site Gamzigrad, near Zaječar in Eastern Serbia is famous for its complex of the imperial palace *Felix Romuliana* and memorial – funeral monuments on the Magura Hill, built by Emperor Galerius at the beginning of the 4th century, inscribed on the List of the World Cultural Heritage Sites by UNESCO in 2007[1] *(fig. 1)*.

Systematical archaeological investigations of the Late Roman fortified imperial palace at site Gamzigrad had started in distant 1953. These excavations were conducted until 1967 by the Institute of Archaeology of Serbian Academy of Sciences and Art (SASA), under the direction of Đorđe Mano-Zisi and Đorđe Stričević. From 1970 the director was academician Dragoslav Srejović and investigations were conducted by the Committee for archaeology of SASA, and from 1997 coordinator of the project has become the director of the Institute of Archaeology: first Petar Petrović (1996–1997) and later Miloje Vasić (1998–2007). The field director of archaeological research at Gamzigrad was Sofija Petković (2002–2008) and later Stefan Pop-Lazić (from 2009).

The greatest contribution to the investigation and interpretation of this site was that of D. Srejović. He first stated the hypothesis, and then confirmed it by the archaeological arguments, that Gamzigrad was *Felix Romuliana*, the palace and memorial complex dedicated to the emperor Galerius and his mother Romula. The finds including the fragment of archivolt with inscription *Felix Romuliana*, the pilaster from the East gate of the fortification with the representation of tetrarchs, the fragments of the porphyry statue, especially the head, of emperor Galerius, consecration tumuli and mausoleums of Galerius and Romula, and the *tetrapylon* at Magura along with the attractive architectural remains of earlier and later fortifications, palaces (Palace I and Palace II), *horreum*, two temples, a sacral building – "Romula's *triclinium*", and the Galerius' *thermae* at Gamzigrad represent reliable supports for the Srejović's interpretation.

At this site there are six archaeological horizons confirmed by archaeological research: 1. Prehistoric horizon (Early Neolithic, Bronze Age and Iron Age), 2. Roman settlement and fortification (2nd–3rd century AD), 3. Roman imperial palace (the end of the 3rd–beginning of the 4th century AD), 4. Late Roman fortification and necropolis (the end of the 4th–middle of the 5th century AD), 5. Early Byzantine fortification (the end of the 5th–beginning of the 7th century AD), and 6. Medieval settlement and necropolis (the end of the 9th–end of the 11th century AD).

Stratigraphic data and interpretation of rebuilding of earlier structures of Galerius' *Romuliana* as well as new structures constructed from the second half of the 4th until the beginning of the 7th century are most extensively published in the catalogue of the exhibition in the Gallery of SASA in 1983 and in the monograph on imperial mausoleums and consecrate *tumuli* on the Magura Hill (east of the Gamzigrad's palace) published by the Center for Archaeological Investigations of Faculty of Philosophy in Belgrade in 1994, on the occasion of the exhibition devoted to the Roman imperial towns in Serbia in the Gallery of SASA in 1993[2].

It could be said that the authors of the monograph from 1994 have developed and to the lesser extent modified the stratigraphy of the Late Roman cultural layers at Gamzigrad proposed by D. Srejović and Đorđe Janković in the first publication from 1983[3].

The later archaeological research at Gamzigrad confirmed the existence of a Roman settlement prior to the beginning of the construction of Galerius' palace at the beginning of the 4th century. Sporadic data collected during

1 The recent publications on Gamzigrad gave a general picture of this archaeological site (Vasić 2007; Popović 2011).

2 Srejović 1983; Srejović / Vasić 1994.

3 Janković 1983a; Janković 1983b. Đ. Janković, who has joined the archaeological excavations at this site, is the author of the chapters considering the Late Roman Gamzigrad.

Fig. 1. Air-photo of *Felix Romuliana*, from the South.

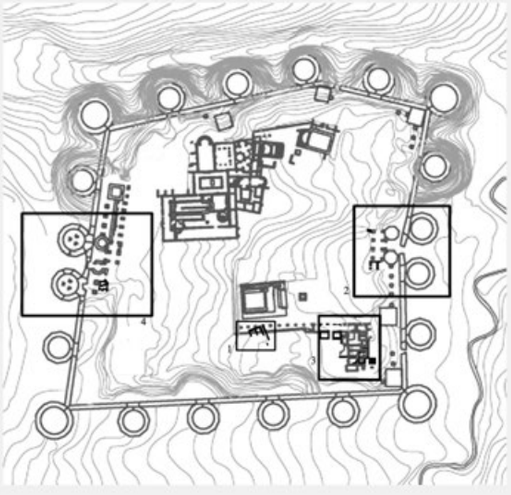


Fig. 2. A plan of *Felix Romuliana* with the buildings prior to Imperial Palace.

earlier excavations are thought to be the remains of a 3rd century farm (*villa rustica*). However, the analyses of objects that were partially discovered during the 1980's: in the "Large temple" Sector (building 1)[4], under the Southern tower of the earlier fortification (Tower I) in the East gate Sector (building 2), and in front of the entrance to the Southern tower of the earlier *Felix Romuliana* fortification (Tower 19) (building 4), as well as recent archaeological research of the earlier building in the *thermae* sector (building 3), shed new light on Roman Gamzigrad[5] *(fig. 2)*.

The continuity of life in *Felix Romuliana* in the period from the 2nd to the beginning of the 7th century AD has been indicated by the archaeological evidence. The continuity was probably caused by the economic and military situation in the province of *Moesia Superior* and later *Dacia Ripensis* where this site was located.

The province of *Dacia Ripensis* was formed on the territory of *Moesia Superior* after the Roman withdrawal from *Dacia* at the time of emperor *Aurelianus* (272 AD), when all economic activities, mainly mining and metallurgical, in that province came to an end. This relates to the establishment of new fortifications and settlements at the end of the 3rd century in *Dacia Ripensis*[6]. Nevertheless, the archaeological traces of the Roman mining and metallurgy in this province are rather frequent but insufficiently and often scantily studied and published. Finds of metal slag and dross, metallurgical furnaces, casting molds, casting

4 The name "Large temple" used in the article refers to the large sacral construction in the southern part of *Felix Romuliana*, also referred to in literature as the "Temple of Jupiter". However, finds of decorative plastic and sculptures suggest that the temple was dedicated to the tetrarchic imperial cult of Iovii and Herculii.

5 Buildings were marked with numbers 1–4 according to the chronology of their construction.

6 Tomović 2000, 155–156.

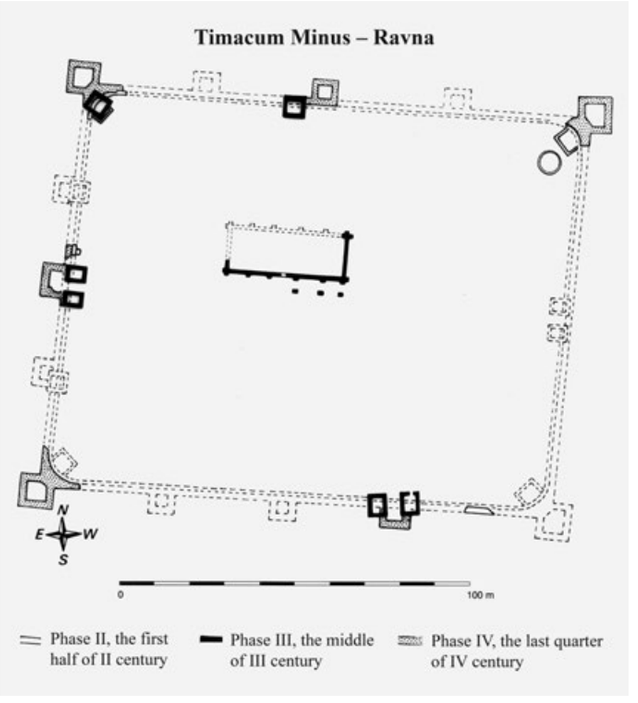


Fig. 3a. A plan of *Timacum Minus*, phases II, III and IV of fortification.

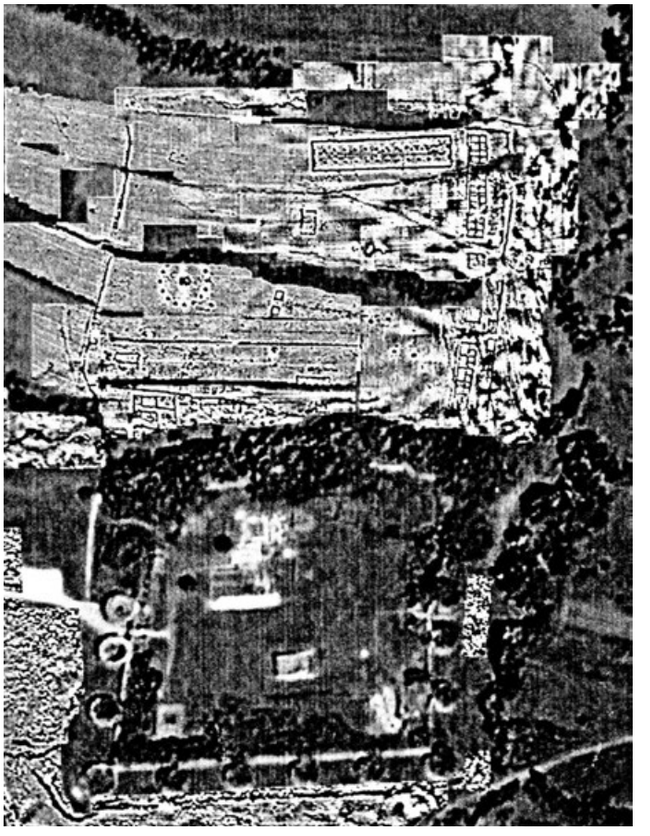


Fig. 3b. A graphic representation of geophysical survey of the fortified settlement north of *Felix Romuliana.*

vessels, semi-finished items, castings, and the like, have been recorded at almost every Roman site[7]. Generally, the mining regions were independent, i. e. exterritorial, although the *metalli Aureliani* were within the borders of *Dacia Ripensis*[8]. Besides, the smaller units of mining regions, *territoriae metallorum*, each had their own centre for processing and distribution[9]. According to results of new archaeological research one of these centres was on the site of Gamzigrad, but we are still unable to identify the name of this rather large urban agglomeration (*civitas, municipium*)[10].

The wealth of the local elite in *Dacia Ripensis* depended to a great extent on the mining and the gold extraction from the river beds[11]. One of these mining and metallurgical centres was the settlement at Gamzigrad prior to Galerius' palace. It could be supposed that it was one of the earliest Roman archaeometallurgical settlements in Eastern Serbia. There were attempts to identify Gamzigrad as *Municipium Aureliani*, later *Aureliana*, established during the reign of Emperor *Marcus Aurelius* (161–180 AD)[12]. It should be noted that the archaeometallurgical component of the Roman settlement and the type of earlier fortification relate Gamzigrad to the site of Ravna near Knjaževac (okr. Zaječar, RS)[13]. The earlier fortified Roman settlement, discovered by geophysical survey, to the north of *Felix Romuliana* was similar to the first phase of the stone fortification of *Timacum Minus.* Also, the earlier fortification of *Felix Romuliana* was alike the second phase of stone fortification of *Timacum Minus*. These facts indicate the dating of the earlier Roman settlement to the 2nd–3rd centuries and the earlier fortification in Gamzigrad in the second half of the 3rd century AD *(figs 3a–b)*.

Evidently, archaeometallurgical activities continued in the Late Roman *Felix Romuliana*, after the Imperial palace was abandoned, namely in the last quarter of the

7 Petković 2009.

8 Dušanić 1980, 32–35; Dušanić 1996, 224; Jovanović 2004, 171–173.

9 Dušanić 1980, 34.

10 Mano-Zisi 1956. The first archaeologist who excavated Gamzigrad assumed that it had been an archaeometallurgical center, probably *Municipium Aurelianum* or *Aureliana*.

11 Petrović 1995; Tomović 2000; Petković 2009, 189–194.

12 Petković 2009, 192–194.

13 Petrović 1995; von Bülow 2011, 159–163 figs 7a–7b.

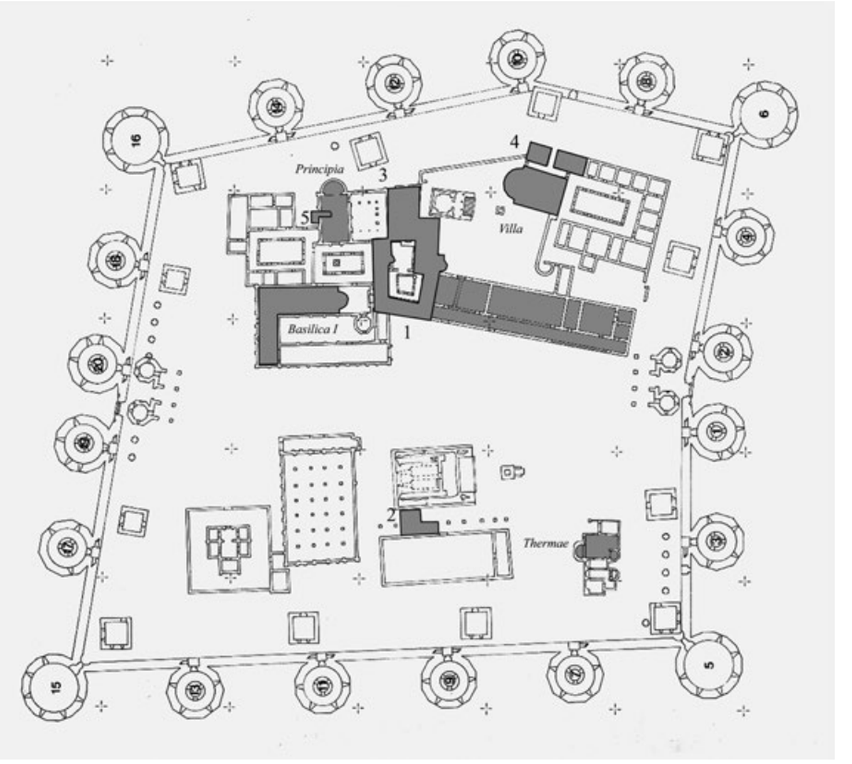


Fig. 4. A plan of the Late Roman *Felix Romuliana* (from the end of the 4th to the second half of the 5th century).

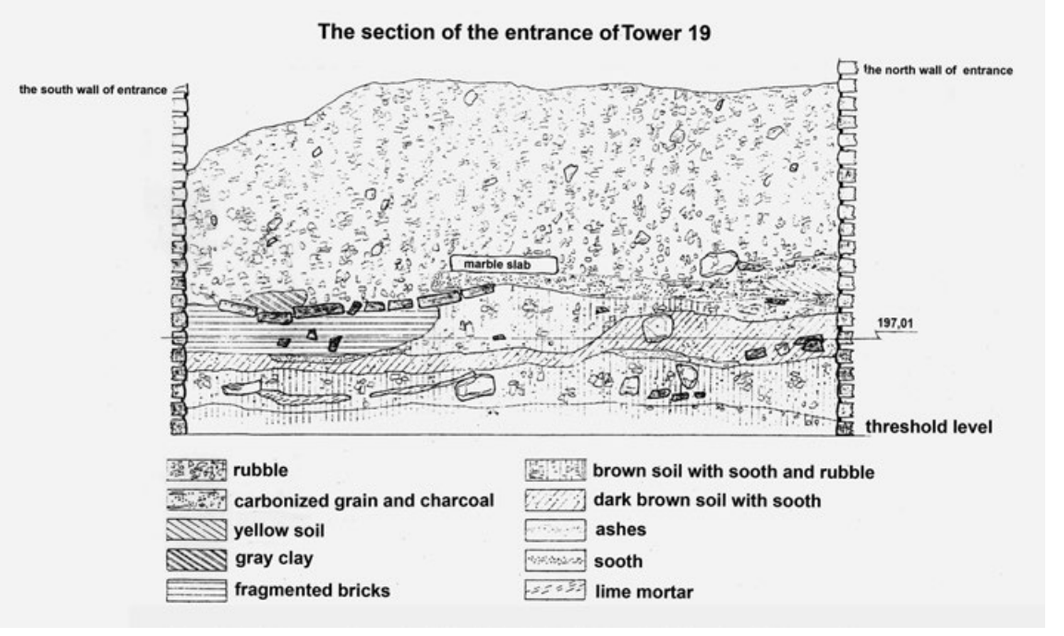


Fig. 5. *Felix Romuliana.* A section of cultural layers inside the entrance of Tower 19, from the interior of the fortification.

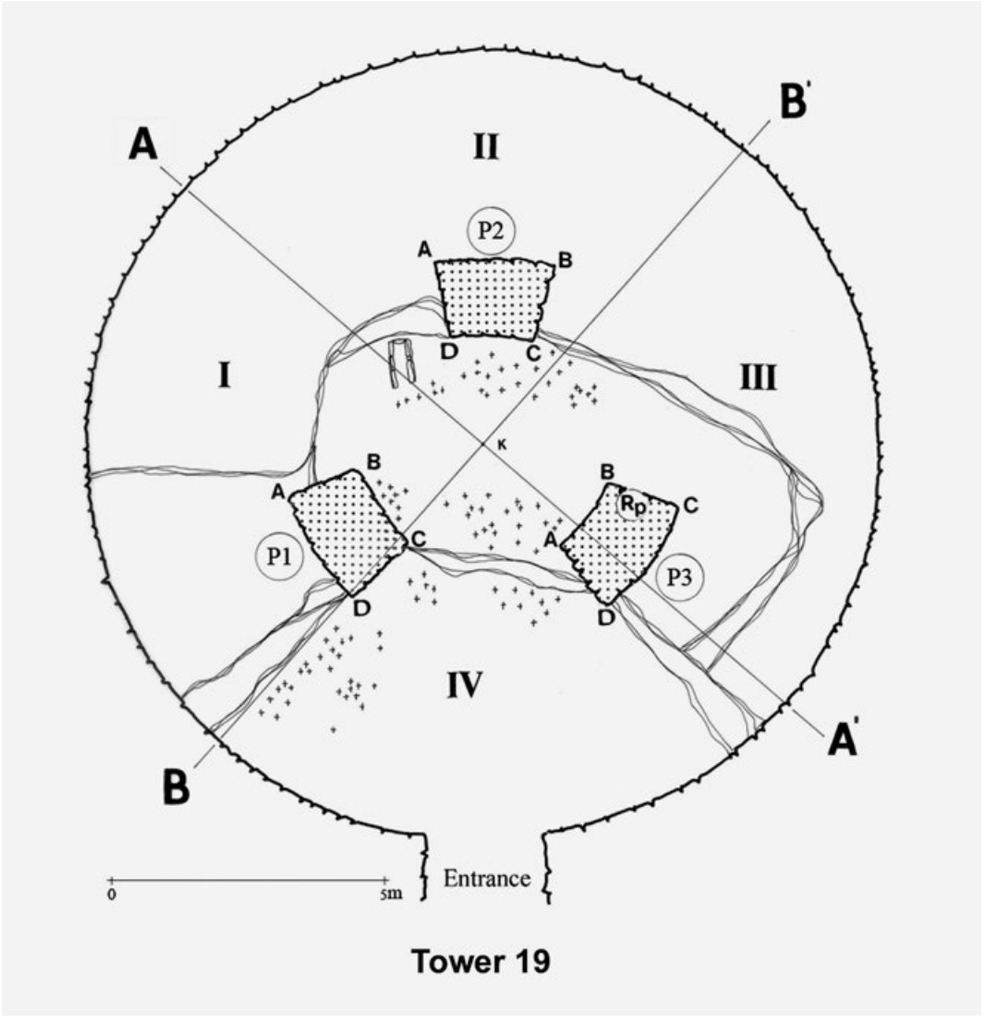


Fig. 6. *Felix Romuliana* A plan of the interior of Tower 19.

4th century[14]. In contrast to the previous period (3rd century), when non-ferrous metals had been processed, most of these activities were related to black metallurgy (smelting and casting iron and smithy). Apart from the metallurgy, the economy of the Late Roman *Felix Romuliana* was distinctly rural, with developed local agriculture[15], cattle breeding and hunting. From an economic perspective the *Felix Romuliana* of the 4th–5th centuries was a self-sufficient, fortified settlement with a rural population on the surrounding farms, much like a medieval castle *(fig. 4)*.

It's not surprising that the uniqueness and importance of *Felix Romuliana* overshadowed archaeological finds from the time prior to the building activity of Galerius as well as the period after that. However, during 65 years of investigation Gamzigrad has proved to be a complex multi-layered archaeological site. The short-lived glory of the imperial *Felix Romuliana* in the first decade of the 4th century was followed by the Late Roman period, beginning at the last quarter of the 4th century[16].

Archaeological investigations in the south tower of the west gate of later *Felix Romuliana* fortification commenced in 1986 in order to prepare this structure for conservation and presentation and to acquire relevant data about construction of the fortification. Since then, the up-

14 Petković / Živić 2006; Petković 2011c, 169–171; 177–178 figs 134–135; 137–138.

15 Medović 2008, 151–152.

16 Petković 2011a, 113–116, 118–120; Petković 2011b, 267–271; Petković 2011c, 167–168.

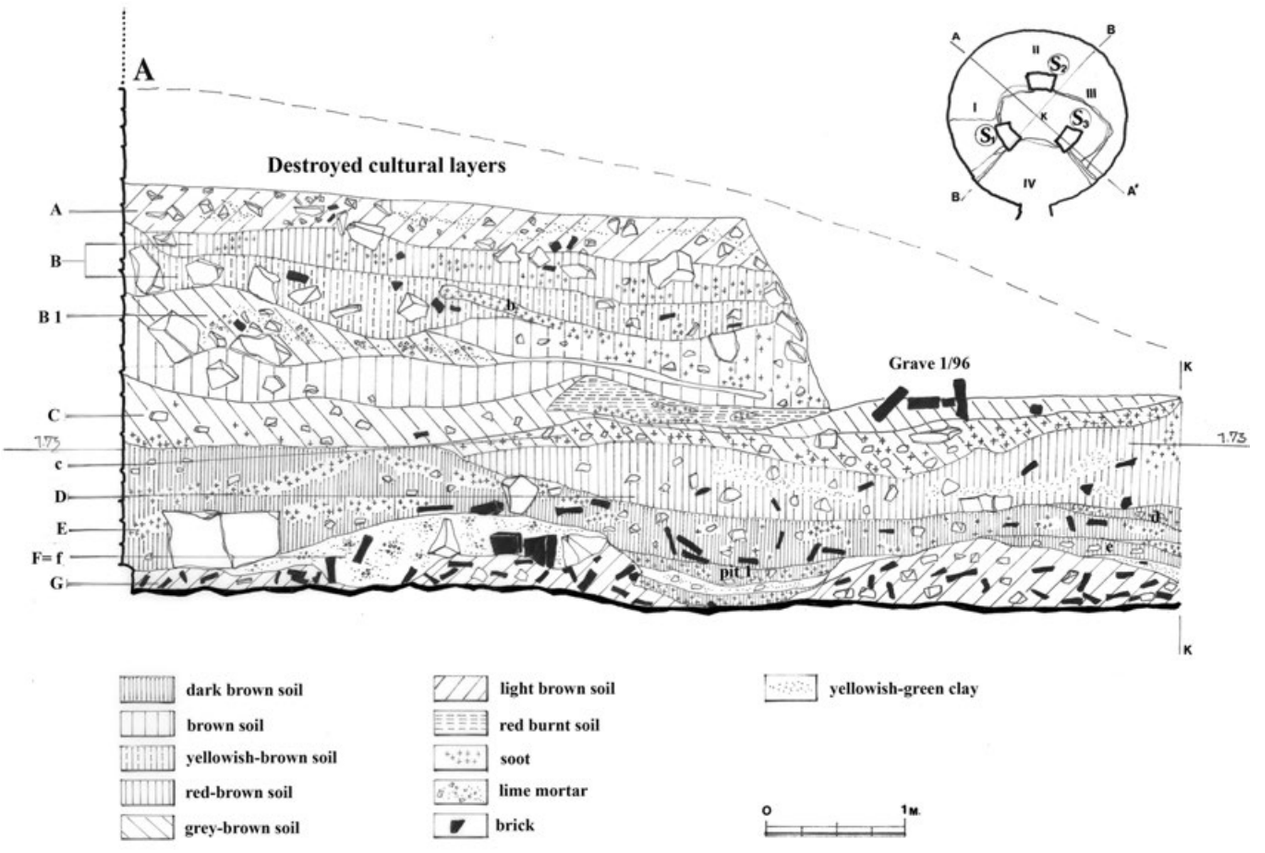


Fig. 7a. *Felix Romuliana*. Section AK of cultural layers in Tower 19.

per layers inside the tower, mainly consisting of building rubble as a result of destruction, were at times excavated. In 1996 the entrance and central part of the tower were unearthed to make an easier approach to the interior of the structure, but unfortunately, during these works the upper cultural layers were destroyed *(fig. 5)*. Between 1986 and 1996 a small quantity of archaeological artefacts was also discovered, dating mostly from the Late Roman period, i. e. from the time of 4th–6th centuries.

Since 1997 the systematical excavation of the south tower of the west gate have started and in that purpose it was divided in four identical segments *(fig. 6)*: segment I in the south, segment II in the west, segment III in the north and segment IV, which included a tower entrance, in the east. This division of the internal area of the tower was supposed to accomplish comprehensive stratigraphic data, which could be also controlled on the cross-sections (AA' and BB') of cultural layers.

In the campaign of archaeological excavations in 1997, segment I was investigated and in 1998 segment III. The reports on these investigations were published in the excavation chronicle of the journal "Starinar" for 1997 and 2000[17]. These short reports have already revealed a complex stratigraphy of cultural layers in the south tower of the west gate and suggested a possibility for chronological determination of habitation horizons in this structure.

The investigators encountered many layers of various contents in the segments I and III of the south tower of the west gate: layers of building rubble, sand soil, yellow clay, layers of burnt soil, soot, and ash, and the like, all of them representing levelling, filling in, destruction, and proper cultural layers. By their opinion, there were eleven cultural layers (I–XI) in the segment I and even fourteen layers (I–XIV) in the segment III above the virgin soil inside the Tower 19, consisting of sterile clay. Vesna Bikić and Josip Šarić classified these layers in the three habitation horizons: I. horizon dating to the end of the 3rd and first

17 Bikić / Šarić 1997, 203–208; Bikić / Šarić 2000, 280–282.

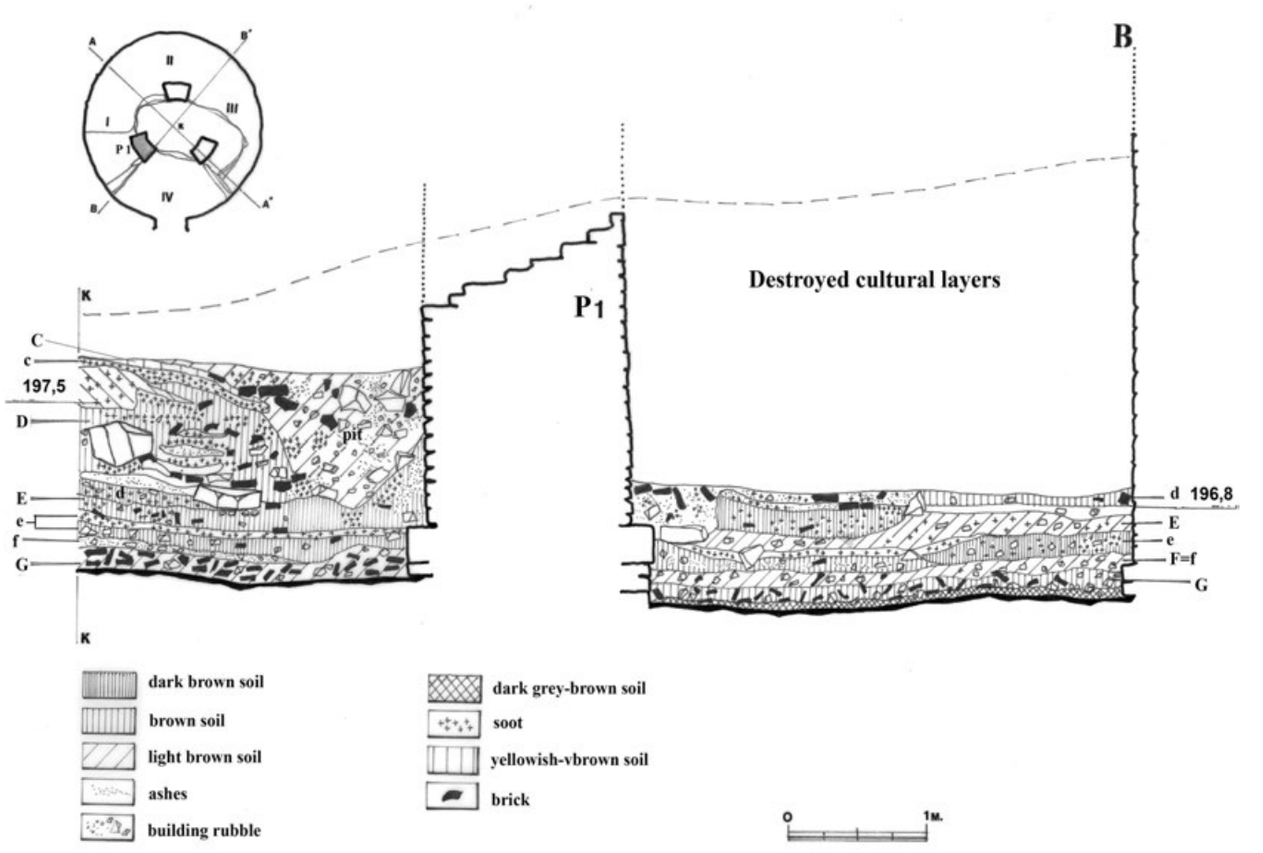


Fig. 7b. *Felix Romuliana*. Section BK of cultural layers in Tower 19.

quarter of the 4th century, II. horizon to the final quarter of the 4th and first half of the 5th century, and III. horizon to the end of the 5th and the 6th century. These horizons comprised many features identified as hearths, one habitation investigated in the segment I and one habitation partially investigated in the segment III. They also concluded that later layers dating to the 7th century and the medieval period were destroyed in the course of earlier works in the tower.

Many unfavourable circumstances, as irregular and insufficient funding of the project in the following years, have caused an interruption of investigations in Tower 19. Finally, the conditions for resuming the excavations in this structure were provided in 2002[18].

In the campaign of archaeological excavations in 2002 in Tower 19 we set a few objectives of investigation:

Investigation of the cultural layers and structures in segment II and their fitting into existing stratigraphy of cultural layers and habitation horizons previously confirmed in Tower 19;

Discovering of the floor level i. e. floor substructure inside the Tower 19 in order to establish a method and date of its construction;

Discovering of the foundation zone of pillars 1, 2, and 3 in order to establish a method of their construction;

Investigation of the preserved cultural layers in the central section of the tower, between pillars 1, 2, and 3;

Investigation of the preserved cultural layers in segment IV.

Besides the realisation of set tasks, rather unexpectedly, the excavations in 2002 brought a large amount of archaeological artefacts from relatively small investigated area

18 The coordinator of the project of SASA was M. Vasić, the director of the Institute of Archaeology, Belgrade, the field director of research was S. Petković, Institute of Archaeology, Belgrade, the members of the expert team were: Maja Živić, custodian of the National museum in Zaječar, Miroslav Vujović, assistant-teacher of Archaeology at the Faculty of Philosophy, Belgrade, and Pero Praštalo, custodian of the Regional museum in Knjaževac.

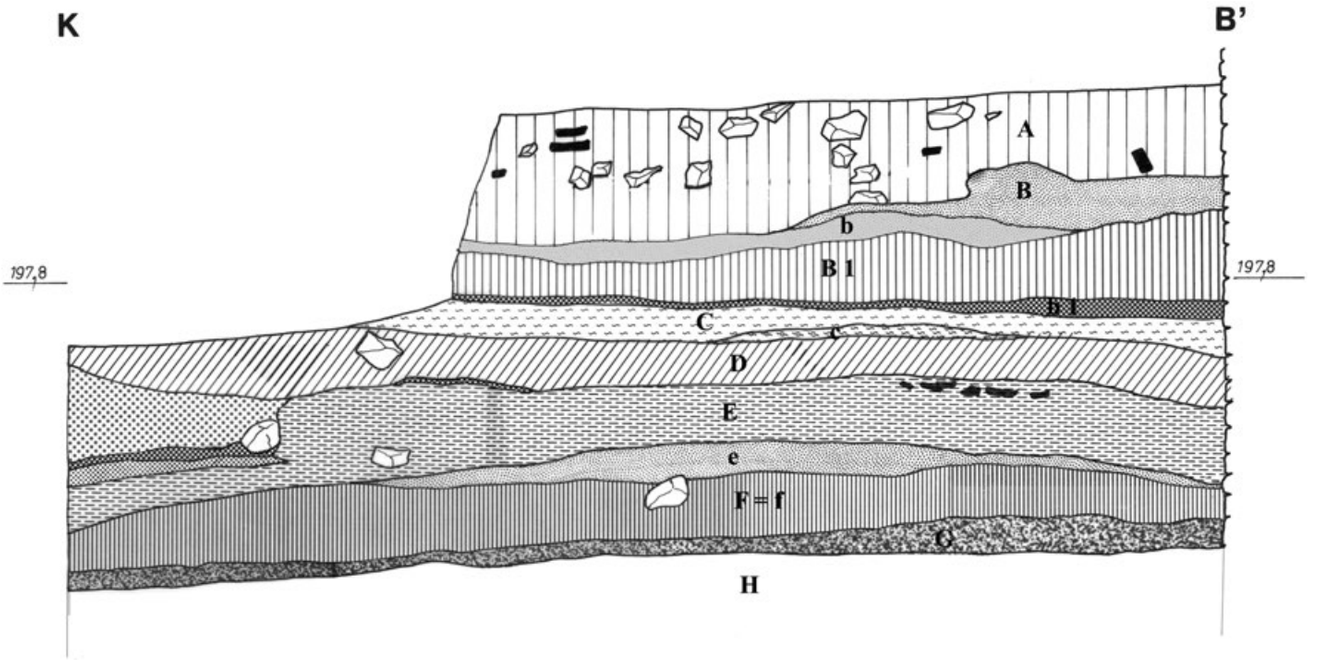


Fig. 7c. *Felix Romuliana.* Section B'K of cultural layers in Tower 19.

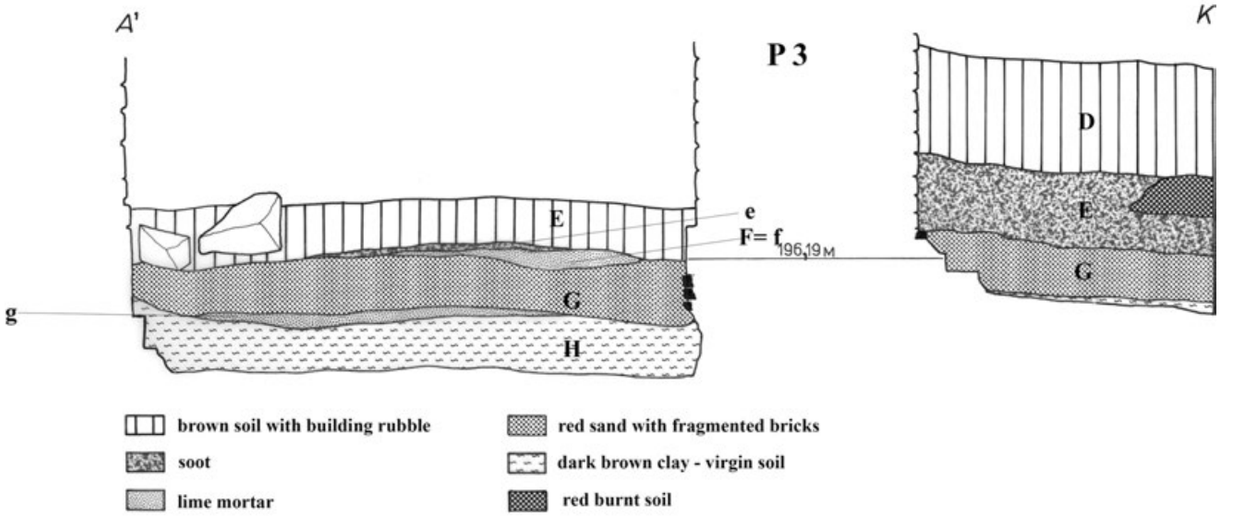


Fig. 7d. *Felix Romuliana.* Section A'K of cultural layers in Tower 19.

within the segment II (about 46.54 m^2) to light as well as undamaged portions of the cultural layers within segment IV and in the central section of the tower, between the pillars. In the course of this campaign over 850 artefacts were discovered, mostly iron objects, tools, weapons, and semi-finished products, then 28 bronze and iron fibulae, 84 bronze coins, 22 whetstones, fragments of marble wall facing, architectural plastic and sculpture, tools and items of bone and antler, among them 12 antler combs, 10 ceramic oil-lamps, and plenty of fragments of glass and

pottery vessels[19]. This made more precise chronological determinations of the cultural layers and horizons investigated within segment II possible. In addition, within this segment, in three horizons dating from the final quarter of the 4th and the beginning of the 5th century, we encountered seven furnaces. Some of them were blacksmith furnaces, forges, and one of them was most probably a smelting furnace. Some of these furnaces had been renovated two or three times and this is a confirmation of strong metallurgical activity in Tower 19, along with the layers of intensively burnt soil, soot, and ash, proving a destruction of these levels of inhabitation in conflagration.

The stratigraphy of the cultural layers in the Tower 19 is mostly based on the excavations within the segment II. It relates to the layers accumulated above a sterile layer of yellowish-gray clay, marked as layer H. The foundations of the south tower of the west gate of *Felix Romuliana* were dug into this layer, which follows a natural slope of the terrain from the west towards the east.

Stratigraphy of the cultural layers accumulated on top of the virgin soil is as follows *(figs 7a–d)*:

Layer G consists of gray sand-soil with large amount of *tegulae* and *imbrices*, gravel, and smaller fragments of debris. It is 20 to 30 cm thick above the level height of 195.96 m. In this layer, which is in fact the drainage layer under the floor substructure of Tower 19, there were no archaeological finds except few fragmented iron nails, few atypical fragments of pottery vessels, and few animal bones. Considering sloping of the terrain, the drainage layer that prevented retaining of water in the tower was necessary. The abundance of building rubble from the walls and towers of the earlier fortification was used for this purpose.

Layer F, formed on the top of previous drainage layer and about 30 cm thick, consists of lime mortar with small pieces of broken stone and pebbles. It was actually a substructure of the tower floor, which was most probably paved with *tegulae*. However, within the segment I and segment III we did not encounter the traces of floor, but the floor substructure, preserved in the entire area of segment II and in the undamaged section of segment IV, was joined to the upper surface of the base of pillars 1, 2, and 3, constructed of ashlars bonded with lime mortar *(fig. 8a)*. Otherwise, bases of pillars were on top of the drainage layer G *(fig. 8b)*.

It is important to mention that the thickness of layer F in the Tower 19 varies, depending on the slope of terrain, so within the segment IV, towards the tower entrance this layer is thicker and along the west section of the tower wall, within segment II, it is less thick.

Level e, 5–10 cm thick, is lying immediately above the mortar substructure of the floor and consists of backfill of reddish-brown clay with small pieces of mortar *(fig. 9)*. It was accumulated above the mortar floor substructure, after levelling of debris of the decayed tower walls and backfilling with reddish-brown soil. At this level the interior of Tower 19 was divided with walls of dry masonry. Also, the porches were added, confirmed by traces of wooden posts in the ground level, as well as recesses for beams in the tower wall and pillars. On this level few furnaces of rectangular or circular plan were recorded. They had floor paved with bricks and fragments of bricks and their upper domed construction was made of pieces of stone and brick joined with clay. At level e there are four furnaces discovered in the segment I (hearths 3/97, 4/97, 5/97, and 6/97)[20], two in the segment III (hearths 8/98 and 9/98)[21] and four such ovens in the segment II (furnaces 4/02, 5/02, 6/02, and 7/02).

The remains of the structure of trapezoid ground plan were investigated at level e in the segments I and II. It consisted of two walls made of rough stone joined with yellow clay, leaning in the west onto the tower wall and in the east on the west wall of the pillar 2. Thus, a section of the tower wall, 3.80 m long, constituted the west wall of the structure, a section of the west side of pillar 2, 1.50 m long, constituted its east wall, while towards north and south the structure had two dry walls, one 4.10 m and another 4.25 m long. Within this structure were two furnaces: in the central zone was the furnace 4/02 and next to the tower wall was the furnace 6/02 *(figs 10–12)*.

Furnace 4/02 is square on plan (1.00 m × 0.60 m) with a firebox in the west and a domed roof made of broken stone and bricks joined with yellow clay *(fig. 10)*. The floor of this furnace was paved with four *tegulae.* The upper section of the furnace collapsed into the interior, which was filled with soot and ash. In the interior atypical fragments of pottery vessels, iron objects, a fragment of bowl made of light-green glass decorated with applied dark blue dots, and a fragment of whetstone had been discovered. The function of this furnace could not have been established for certain, but we supposed it to be a blacksmith's oven.

19 See the Catalogue of finds below and Conrad / Premk in this volume, 213–244; Vasić in this volume, 205–212.

20 The furnaces discovered in the segments I and III were refered to as "hearths" by researchers. Bikić / Šarić 1997, 204. In fact these were bases / floors of furnaces with an upper construction / dome destroyed in fire and leveled before the construction of the next level d.

21 Documentation of the Institute of Archaeology in Belgrade, No. 157/1, Romuliana 1998, Tower 19, Sketch 3.

Fig. 8a. *Felix Romuliana*. The interior of Tower 19 with mortar floor substructure preserved in segments II and IV.

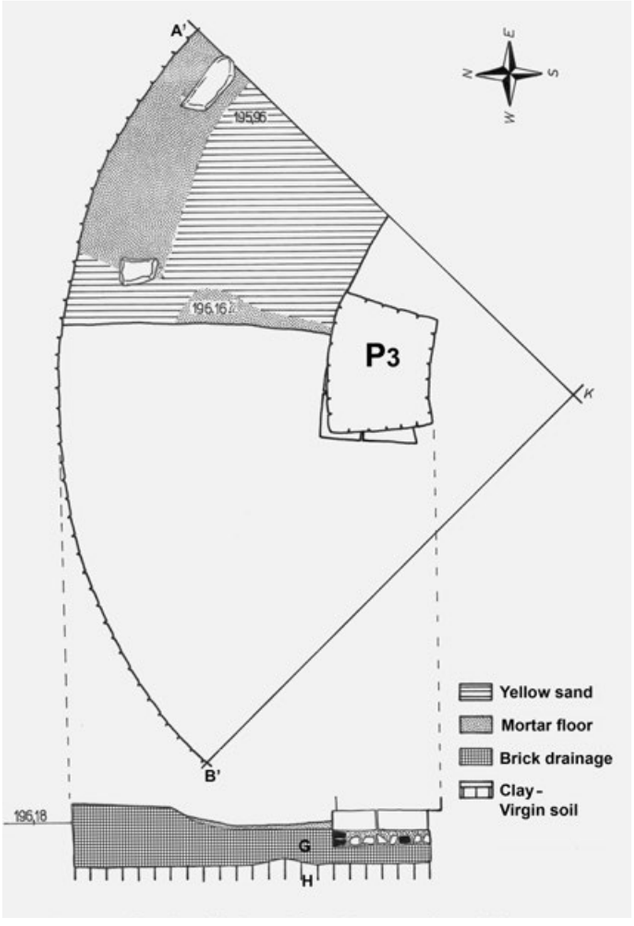


Fig. 8b. Felix Romuliana. Segment III, section of level f, layer G and layer H.

It could be dated, according to findings of coins, into the second half of 4th century[22].

Furnace 6/02 leaning onto the tower wall was circular in ground plan, about 1 m in diameter, and most probably, it had a domed roof made of fragments of stone and bricks joined with yellow clay and a firebox in the east *(fig. 11)*. The floor of furnace 6 was paved with fragments of *tegulae* and the area around it was covered with ash and soot. Underneath this floor and a layer of burnt soil, about 5 cm thick, beneath it, the remains of an earlier furnace-floor, also paved with *tegulae*, were encountered *(fig. 12)*. There were no archaeological finds inside the renovated furnace 6.

Furnace 5/02, rectangular in ground plan (0.75 m × 1.25 m), was discovered at the same level but to the north of described structure and next to the tower wall. The floor of this furnace was paved with *tegulae*, and the firebox was in the east *(fig. 13)*. Unfortunately, there are no data about the upper structure of this furnace. Many iron objects, including chisel, borer, knife, wedges, nails and clamps, and their fragments were found inside the furnace 5, so we could assume that it was a blacksmith's furnace. Around the furnace 5 and towards profile B'K of

22 Vasić in this volume, 211 Cat. 67–68. The coin of Arcadius (Cat. 69) derives, probably, from the later layer D.

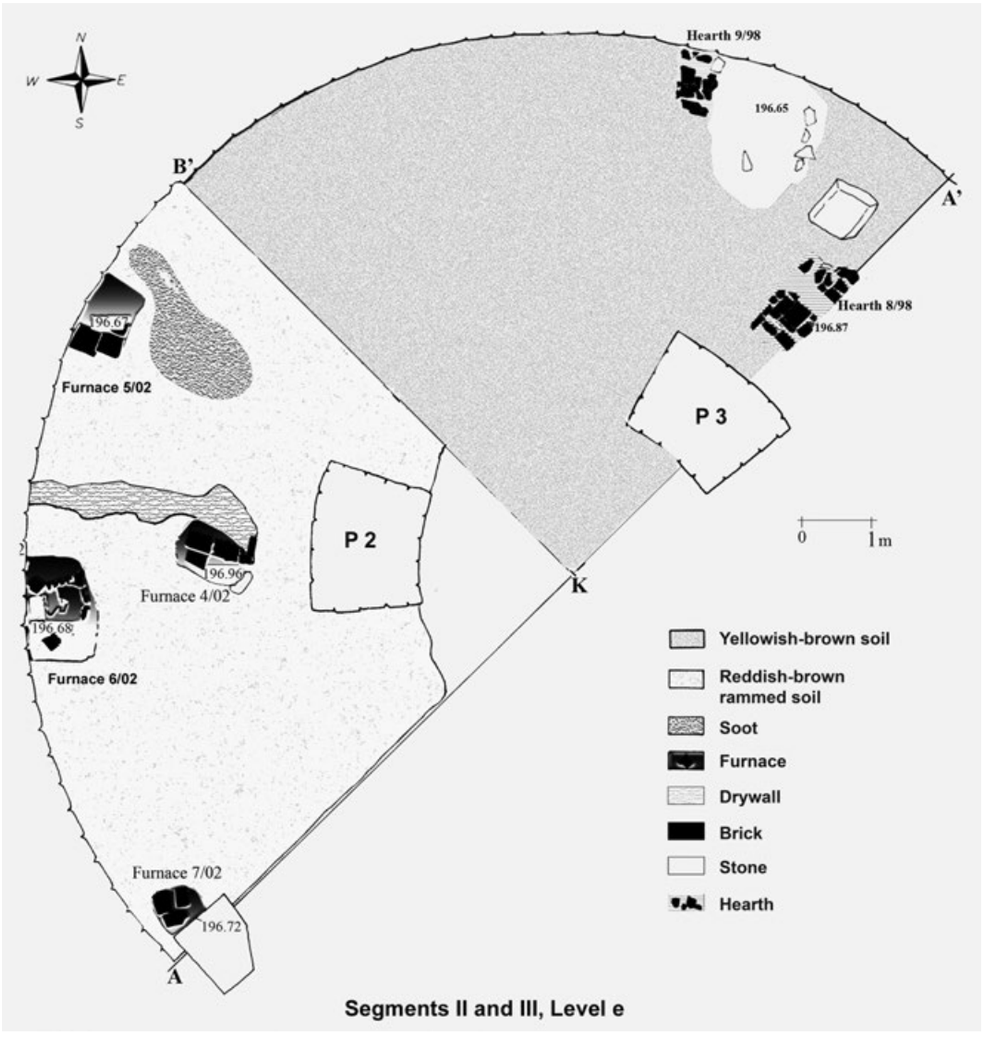


Fig. 9. *Felix Romuliana*. A plan of the segments II and III on the level e.

segment II, i. e. segment I, a zone of burnt soil, ash, and soot, perhaps the traces of conflagration provoked by the fire from this furnace that destroyed the entire level e in Tower 19, could be noticed. The types of ceramic vessels discovered in the space between furnaces 4 and 5, on level e, can be dated in the 4th–first half of 5th century[23].

Furnace 7/02 was discovered to the south of the structure with furnaces 4/02 and 6/02, between the tower wall and a large stone block fallen from the tower gallery. This furnace had been restored twice. Initially, it was square in ground plan (a = 0.75 m), its firebox was facing east, and the floor was paved with *tegulae* and an overlaying mortar substructure of the tower *(fig. 14 a)*. Subsequently, the furnace of circular layout (R = 0.80 m), paved with fragments of *tegulae* and with firebox in the north, was constructed on the same spot *(fig. 14 b)*. Finally, in the corner between stone block and tower wall, a furnace of circular ground-plan (R = 0.60 m), with a floor paved with *tegulae* and firebox in the north was built *(fig. 14 c)*. Between the renovated floors of this furnace lenses of burned earth with ash and soot, 6–8 cm thick, were encountered. Although we do not have enough data about the upper structure of the furnace 7/02, on the basis of a large amount of iron objects found inside it and in its vicinity, among which the most interesting are cowbells, it could be assumed as a blacksmith's oven. Also, beneath the earliest furnace floor, the types of ceramic vessels, dated from the 3rd to the mid-5th

23 Conrad / Premk in this volume, 227 Cat. 1; 2; 4; 9–11.

Fig. 10. *Felix Romuliana*. Furnace 4/02 in the segment II, level e, from the south.

Fig. 11. *Felix Romuliana*. Furnace 6/02 in the segment II, level e, from the east.

Fig. 12. *Felix Romuliana.* A cros section of furnace 6/02, from the east.

Fig. 13. *Felix Romuliana*. Furnace 5/02 in the segment II, level e, from the east.

century were found[24]. Two coins were found in furnace 7: a coin of Emperor Valens, minted 364–375 AD, between the first and second floor, and a coin of Constantius, minted 355 / 361 AD, on its top[25].

Layer E, about 60 cm thick, covers the level e. It consists of yellowish-brown soil with traces of fire, lenses of soot, ash, and burnt soil, and smaller fragments of building rubble *(fig. 7 c)*. This was the layer of levelling after fire, and it could be dated, on the basis of finds, at the final third or quarter of the 4th century[26].

Level d *(fig. 15)* was formed on the top of layer E, and it is characterised by the floor of reddish-yellow packed earth, investigated within the segment II, partially within the segment I and in the central zone of the tower, where the trace of a large post, which most probably supported a roof construction, was registered. Furnace 3/02 was situated within this structure.

Furnace 3/02 had a rectangular ground plan (1 × 0.75 m) and floor paved with *tegulae.* The firebox, probably in the east, and the elements of upper construction are unfortunately missing. It is possible that this structure was in the north outlined by dry wall. The foundation of some kind of wall could be noticed next to the north edge of the furnace. Many fragments of iron objects were discovered in the furnace 3/02, so it could be assumed that it was a blacksmith furnace. The ceramic vessels found in this furnace are dated in the 4th–beginning of 5th century[27].

24 Conrad / Premk in this volume, 226 Cat. 3; 232 Cat. 58.

25 Vasić in this volume, 211 Cat. 77–78.

26 Cat. nos 5; 7; 9–13; 16; 20–22; 34–35; Vasić in this volume, 206; 209–211 Cat. 26– 66; 70–76 Graphs 1–2; Conrad / Premk in this volume, 271–231 Cat. 1–50.

27 Conrad / Premk in this volume, 231 Cat. 51; 53–55.

Fig. 14a. *Felix Romuliana*. Furnace 7/02 in the segment II, level e, from the east.

Fig. 14b. *Felix Romuliana*. Furnace 7/02 in the segment II, level e – the first renewal, from the east.

Fig. 14c. *Felix Romuliana*. Furnace 7/02 in the segment II, level e – the second renewal, from the east.

Also at level d the remains of another structure were discovered within the segment III and in the central zone of Tower 19. This structure was outlined by dry wall between pillars 2 and 3 in the south *(fig. 15–16)* and dry wall between pillar 3 and the north section of the tower wall in the east *(fig. 15)*. Inside this structure there was a furnace of rectangular plan (hearth 7/98). Dry wall foundation, about 1 m thick, was dug in the layer E. This structure could be dated by two coins: one found inside the drywall, minted in 330–335 AD, and another found at the crown of this wall, minted in 387 / 395 AD[28].

Furnace 2/02 was investigated at the level d within the segment II, next to the section B'K *(fig. 17)*. This furnace, with a circular ground plan, 1.25 m in diameter, was to the west of the structure in segment III. Its floor was paved with the fragments of *tegulae* and a domed roof was made of broken stone and brick fragments joined with clay. The firebox was in the west. Intensively burnt soil below and around the furnace 2/02 indicates exceptionally high temperature tied to its function. A large amount of slag, ash, and carbonised wood as well as bronze and iron objects, were discovered in this furnace[29]. It could be assumed that the furnace 2/02 was used for smelting. This furnace was renovated twice, which is confirmed by the lenses of burnt soil conspicuous in the cross section.

To the north of the structure with furnace 3, next to the west tower wall in segment II, remains of the floor paved with *tegulae* were discovered and next to the pillar 2 two large postholes of the posts that supported some kind of porch.

Level d also perished in conflagration so the layer D, about 30 cm thick, consists of yellowish-brown soil with traces of fire, lenses of soot, ash, and burnt soil.

Finds from the layer D do not differ greatly from the finds discovered in the preceding layer. Besides similar types of coins and fibulae (Cat. nos 3; 6, 8; 14, 19; 23–24) and one comb of antler with arched handle (Cat. 32), there was an exceptional comb with three-sided handle decorated with a pair of horses' proteomes and sheath decorated in the same manner (Cat. 31). This comb together with other finds corroborates dating of layer D in the final decades of the 4th and the beginning of 5th century[30].

Level c is represented by fragments of floor made of greenish-yellow packed clay, about 5 cm thick, which was encountered on the top of layer D *(fig. 18)*. Fragments of

28 Vasić in this volume, 208 Cat. 15–16.

29 Among them a Late La Tène fibula (Cat. 1), obviously intended to be smelted.

30 Vasić, in this volume, 206; 208–209 Cat. 17–22, Graph 3; Conrad / Premk in this volume, 231–232 Cat. 56–88.

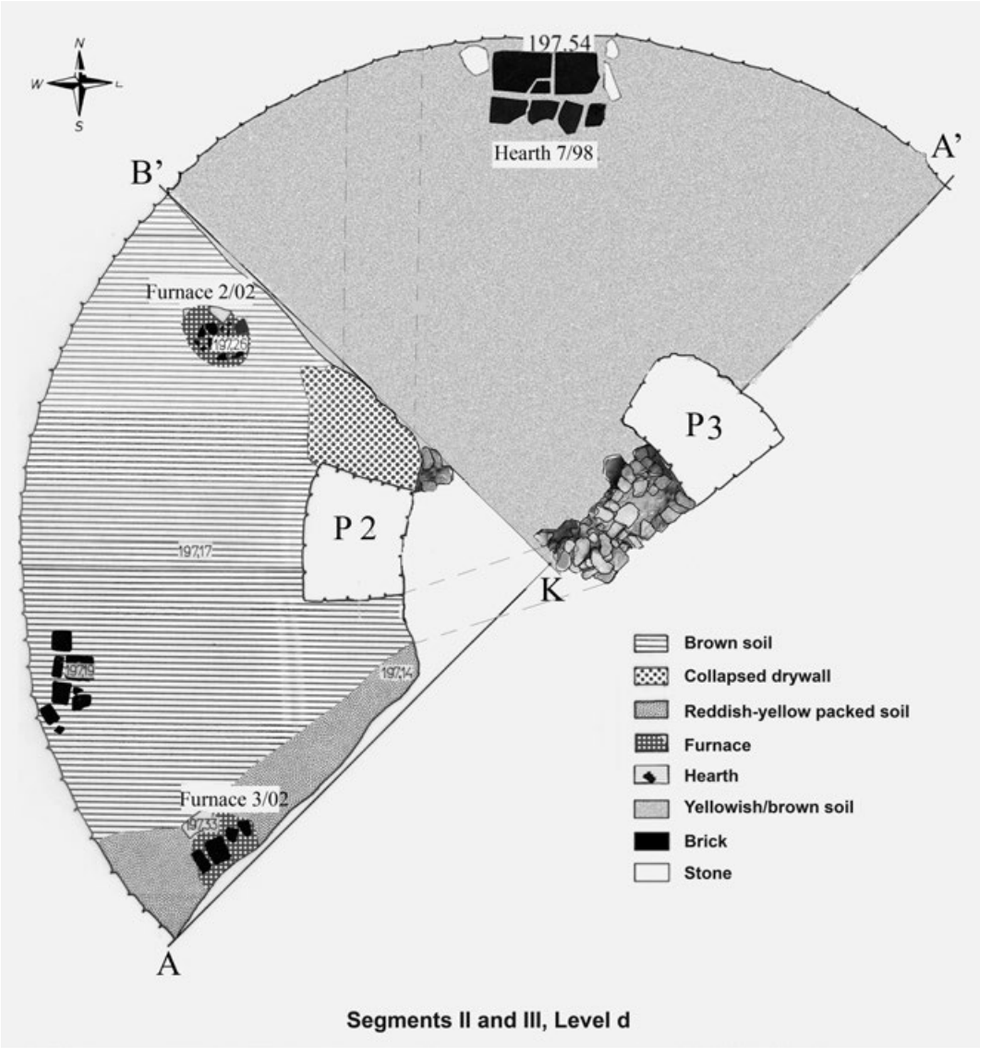


Fig. 15. *Felix Romuliana.* Plan of the segments II and III on the level d.

Fig. 16. *Felix Romuliana*. The south drywall between the pillars 2 and 3 of the structure in the segment III, level d (leaning to the pillar 3), from the north.

Fig. 17. *Felix Romuliana*. Furnace 2/02 in the segment II, level d, from the north.

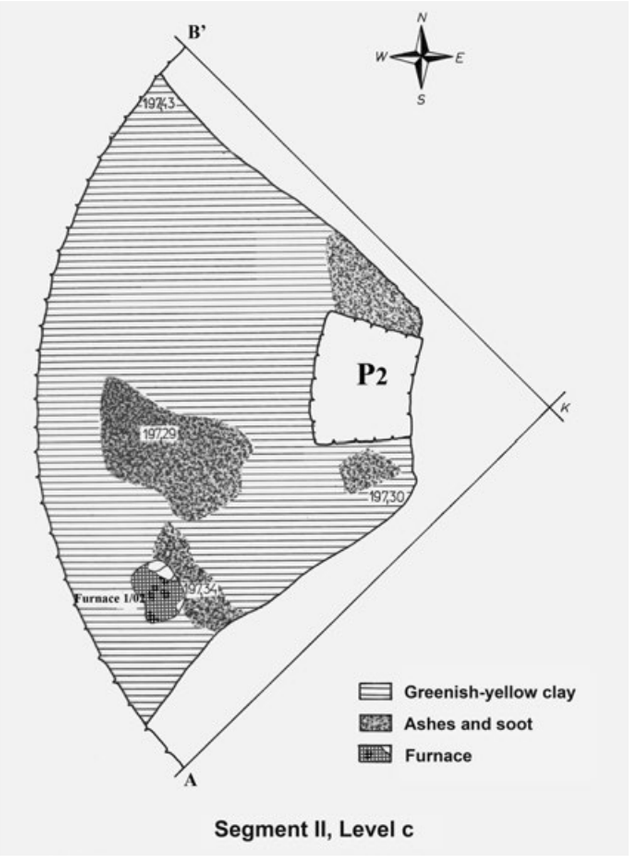


Fig. 18. *Felix Romuliana*. Plan of the segment II on the level c.

Fig. 19. *Felix Romuliana*. Furnace 1/02 in the segment II, level c, from the north.

floor belonged to the structure situated in the south half of segment II and probably partially in the segment I. This structure has once extended from the western internal tower wall along the south side of pillar 2 up to the central zone of the tower. Within this structure, close to the profile AK, a collapsed furnace 1/02 was discovered.

Furnace 1/02 is of rectangular ground plan (0.90 × 0.60 m). It was built of fragments of *tegulae* and broken stone joined with clay. The floor of the furnace is burnt earth; the firebox was in the east, and in the front of it was a small pit filled with ash. Next to the southwest corner of the furnace a fragmented bowl, dated in the 4th–first half of 5th century was discovered *(fig. 19)*[31].

Layer C, about 25 cm thick, consists of gray-brown soil with soot. It is a cultural layer accumulated on the top of level c. This layer abounded in fragments of pottery and glass vessels as well as in animal bones. Tools, like iron objects and whetstones, the 4th century bronze coins, a fragment of a bronze bulbous crossbow fibula (Cat. 15), and fragments of ceramic lamps made on potter's wheel were also found in this layer. On the basis of archaeological finds and stratigraphy, this layer could be dated in the end of the 4th and the beginning of the 5th century[32].

Level b1 was created on the top of layer C, consisting of backfill of yellowish-brown soil with intensive traces of fire, soot, ash, and burnt soil. This level was ascertained next to pillar 2 in segment II and in the central zone of the tower while along the inner tower wall in segments I, III, and IV a great concentration of building rubble mixed with brown earth was discovered *(fig. 20)*. Next to the profile AK, a rather large elliptical pit (3 × 0.75 m), filled with ash and soot, was registered. The smaller part of this pit was within the segment I, and it was dug into layer C and level c, destroying them. In the segment III a rectangular hearth floor, consisting of burned soil, with dimensions of 1.20 × 1 m was found. This level undoubtedly perished in a large conflagration as it is confirmed in the layer on top of it (layer B1). On this level, besides two coins from

31 Conrad / Premk in this volume, 235 Cat. 92.

32 Vasić in this volume, 206; 208 Cat. 4–14 Graph 4; Conrad / Premk in this volume, 235–237 Cat. 89–106.

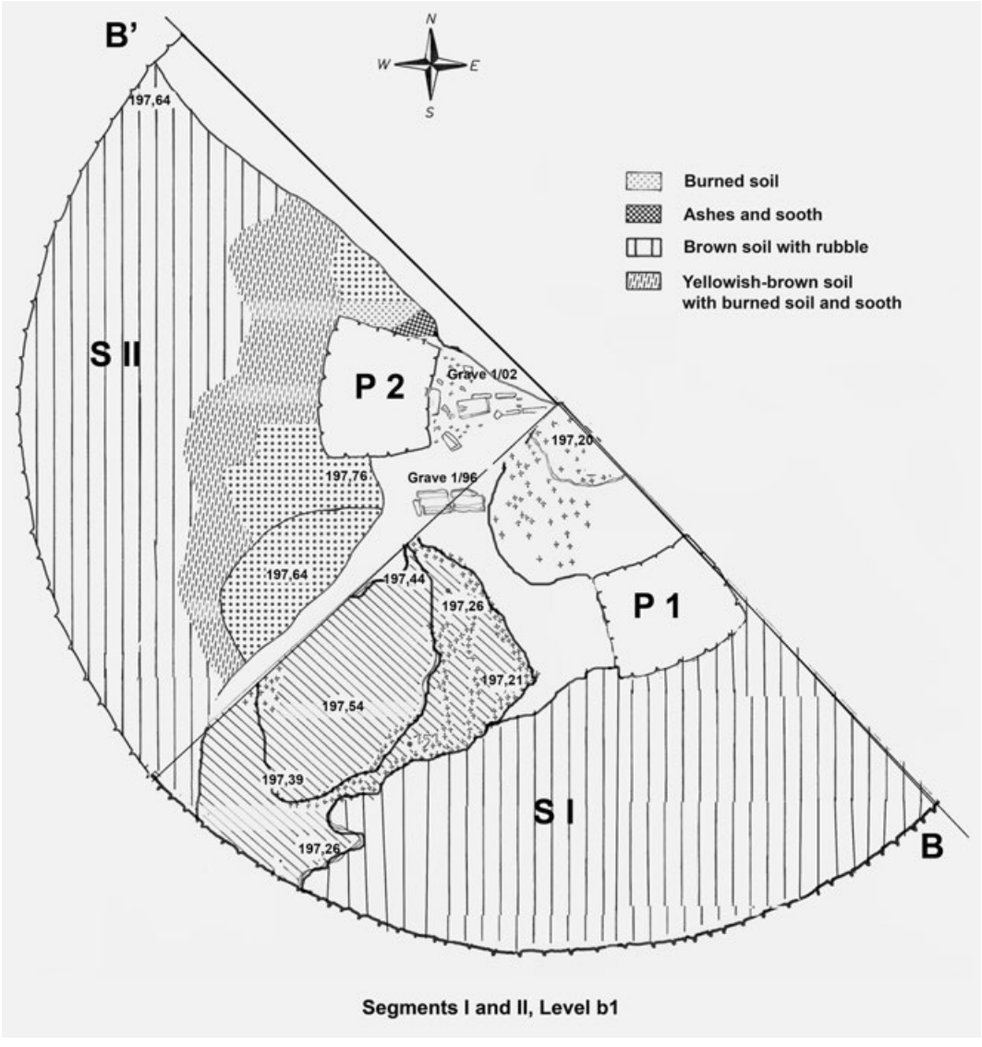


Fig. 20. *Felix Romuliana*. A plan of the segment II on the level b 1.

the second half of the 4th century, a coin of the Emperor Justin I was discovered[33].

Layer B1 was accumulated on the top of level b1. It is about 50 cm thick and consists of brown soil with traces of fire – lenses of soot, ash, and burnt soil mixed with building rubble. This layer, which indicates the destruction of structures from the previous level in a conflagration as well as the abandoning of the tower for a rather long time, abounded in fragments of pottery and glass vessels, animal bones, fragments of antler semi-products, tools of bone and antler as well as iron items. In the absence of coins, dating is supported by the fragments of green-glazed lamps made on the potter's wheel, the iron fibula with reversed trapezoid foot, and another iron fibula with striped bow and reversed foot, both typical for the culture Chernyahov-Sîntana de Mureș (Cat. 17–18), and combs made of antler. These combs belong to the type with two rows of teeth with straight lateral sides or carved lateral sides (Cat. 28–30), and there was only one specimen of the type with one row of teeth and a curved handle with saddle-like finials, richly decorated by engraving (Cat. 33). The types of ceramic vessels, including two types of amphorae, are generally dated in the 4th–first half of 5th century, although there is a type of pot dating from the 4th–6th centuries[34]. According to these finds, we assume that level b1 dates to the first half of the 5th century. It was probably destroyed in Hunnish invasion that devastated *Dacia Rip-*

33 Vasić in this volume, 208 Cat. 1–3.

34 Conrad / Premk in this volume, 237–238 Cat. 107–119.

Fig. 21. *Felix Romuliana*. Grave 1 in Tower 19 (middle and the second half of 5th century), from the east.

Fig. 22. *Felix Romuliana.* Finds from the grave 1, an antler comb and a spindle whorl.

ensis in 443 AD. In fact, layer B1 represents the layer of destruction and reflects the deterioration of the tower in the ensuing decades.

However, the life continued in *Felix Romuliana* also in the second half of the 5th century. It is confirmed by two graves excavated in layer B1 in the central section of the tower.

They were of the cyst-graves type, rectangular in ground plan and paved with *tegulae* with the sidewalls made of bricks placed on edge. In 2002, next to the east side of the pillar 2, a grave of an adult woman, 1.80 × 0.45 m in size, oriented west-east, was discovered *(figs 21–22)*. It had grave goods including a bone spindle whorl on the chest of the deceased person (Cat. 37) and a double-row antler comb with straight lateral sides to the right by her head (Cat. 26). The cover of the grave 1/02 was made of horizontally arranged *tegulae*. In the segment I south of pillar 2, most probably a child's grave, 0.90 × 0.45 m in size, oriented west-east was discovered in 1996. This grave probably had the same type of cover as the woman's grave, but it was not registered[35] *(fig. 6)*.

Level b *(fig. 23)* could only be partially identified, within the segment II, on the basis of fragments of floor, consisting of light yellow backfill and one hearth of elliptical shape next to the section AK. In the segment I this level is represented by a large elliptical hearth (hearth 2/97), perhaps some kind of structure.

Layer B is about 25 cm thick, consisting of brown soil with lenses of soot and rather large pieces of building rubble. This layer accumulated on the top of level b contained a rather small amount of portable finds besides fragments of pottery and glass vessels[36]. From this layer, apart from iron nails and tools, the artefact worth mentioning is a cast bronze fibula with wide, richly decorated arch and a reversed foot joined to the bow with pseudo-coils (Cat. 25) and a double-row antler comb with straight lateral sides (Cat. 27). The fibula belongs to the Early Byzantine type, spread in the Middle and Lower Danube basin in the first half of the 6th century[37].

According to the data above, the layer B could be dated from the end of 5th to the middle of 6th century.

Level a was identified on the basis of remains of mortar floor of poor quality in the segment II at the level height of 198.60 m *(fig. 24)*. Upon this floor, a layer of intense building rubble of the collapsed tower walls, like large broken stone blocks, fragmented bricks, and lime mortar, was formed, marked as layer A. In this layer few iron nails and an insignificant amount of pottery fragments were found.

Level a probably represents the restoration of *Felix Romuliana* in the time of Justinian I mentioned by Procop-

35 Although the data from The Diary of Excavations in *Felix Romuliana* in 1996 and the lack of technical documentation from this year's campaign doesn't allow us to be sure about its entire construction (The Documetation of Institute of Archaeology, Belgrade, No. 157/1).

36 Pottery types are generally dated to the 4th–6th centuries. Conrad / Premk in this volume, 238–242 Cat. 120–148.

37 Janković 1976, 171–173; Teodor 1988, 202–206 figs 5–7; Uenze 1992, 154–155 figs 6–8 List 4; Curta / Gândilâ 2011, 51–79.

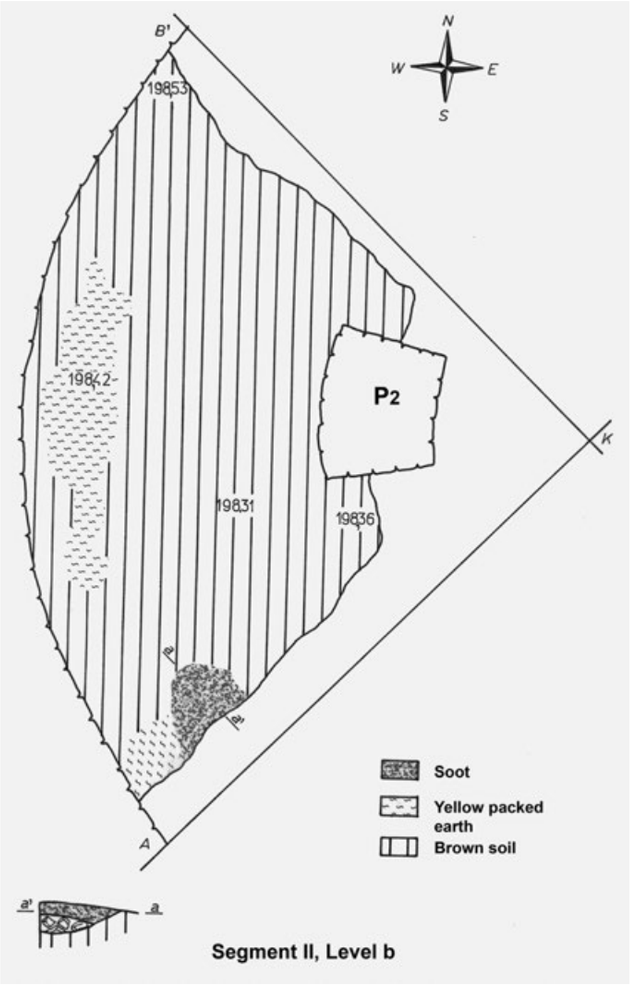


Fig. 23. *Felix Romuliana*. Plan of the segment II on the level b.

ius in his work *De aedificiis*[38]. However, a small amount of finds from layer A does not support this view, but we must have in mind that some cultural layers in the tower 19 were destroyed as a result of earlier removing of debris in this structure. The layer A has been preserved partially[39]. So, we do not have complete data about layers dating from the second half of the 6th and the beginning of the 7th century as well as about later (medieval) period.

Evidence of the military units in Late Roman *Felix Romuliana* could be found in small finds from the layers of the 4th and 5th centuries in Tower 19, like weapons, horseman's equipment, parts of military belts, and crossbow fibulae (Cat. 11–15). The existence of auxiliary units of cavalry (*equites pseudocomitatenses*)[40] is confirmed in *Felix Romuliana* by the finds of horseman's equipment, like horse-bits and antler combs with horses' proteomes (Cat. 31), the *insignia* of their commanders[41]. These soldiers were recruited among the barbarians situated on the territory of the Empire (*Moesia I, Dacia Ripensis, Moesia II*) and beyond, mainly from the left bank of the Danube[42]. Generally, together with their families, they have brought the elements of their material culture, observed in *Felix Romuliana* through the influence of Chernyahov – Sîntana de Mureș culture[43].

The traces of habitation in Tower 19 have to be considered within the results of earlier and recent research of Late Roman and Early Byzantine *Felix Romuliana*.

At the end of the 4th century Late Roman *Felix Romuliana* reused most of the buildings of the Imperial Palace. Also, Galerius' baths were rebuilt[44]. In this period, the fortification of the Imperial palace certainly had a protective function, but the Tower 19 was reused as a workshop – in the earliest level e as smithy and in the time close level d as metallurgical complex with blacksmith's (furnace 3/02, hearths 8/98 and 9/98) and smelting (furnace 2/02) furnaces.

Later, during the 5th century, the original plan of *Felix Romuliana* disintegrated as the result of the building of structures, mostly of light construction – drywalls, walls of packed earth, huts, etc. This process could also be noticed in Tower 19. In level c, it was used as a dwelling, and in levels b1 and b, the badly damaged Tower 19 was a *refugium,* an occasionally shelter for soldiers or population from surroundings of *Felix Romuliana*.

In the period from the last quarter of 4th to the end of 5th century, the rubble of tower walls was not removed, but the structures were dug into destruction layers. As the entrance of the tower had to be free for communication during the use of the tower in the Late Roman period, a natural slope from the west to the east was emphasised, and the layers have accumulated in the west, i. e. in the segment II.

After the decline of the Late Roman settlement in Gamzigrad during the second half of the 5th century, caused by the invasions of Huns in 441–448, renewed Early Byzantine *Felix Romuliana* started its life at the end of the 5th

38 Prok. aed. IV, 4.

39 In segment I, it was about 25 cm and in segments II and III about 30 cm thick.

40 Not. dign. or. I, IX. Under the command of *magister militum per Illyricum* were also nine auxiliary legions (*legiones pseudocomitatenses*), among them *Timacenses auxiliarii*.

41 Petković 1998, 221–228; Petković, 2006b, 361–362 fig. 2,1–2; 13.

42 Petković 1998, 226–228.

43 Petković 2006 b, 361 fig. 2–9; Petković 2011c, 192–194 fig. 167.

44 Petković 2011c, 176–178.

or at the beginning of the 6th century, probably during the reign of emperor Anastasius I (491–518)[45].

In the first horizon of life in the Early Byzantine *Felix Romuliana*, the buildings from the previous period were reconstructed and some new ones were built, mostly economical buildings like different workshops, granaries, and miscellaneous storehouses related to the new function of the settlement[46]. This horizon indicates the connection between the Early Byzantine *Felix Romuliana* and the reconstruction of the *limes* on the Danube in *Dacia Ripensis*[47].

The second horizon of life in the Early Byzantine *Felix Romuliana* is characterised by the reconstruction of the later fortification of Galerius' palace during the reign of emperor Justinian I[48]. There is archaeological evidence of repair on the walls of later fortification and large polygonal towers from this period. Also, the latest discovery of the defensive ditch along the south and west ramparts of *Felix Romuliana* confirms this hypothesis[49].

From the middle of the 6th century, Tower 19 also had a defensive function. The mortar floor, level a, dated to the 6th century, had been made over the elevation of workshops and dwellings, destroyed in fire in the middle of the 5th century, as well as over the cyst-grave (grave 1/02) and the traces of the occasional residence (hearth 2/97) in the tower from the second half of 5th century and the beginning of 6th century[50]. This floor indicates that Tower 19 was reused as a defensive object, a tower of the west gate, or a single watch-tower. The west gate of the later fortification of *Felix Romuliana* was used in the 6th century, and probably in that time, the south gate of the earlier fortification was broken through, in purpose to make a kind of *propugnaculum*[51].

The cultural layer corresponding to the second Early Byzantine horizon of life in *Felix Romuliana* (layer B) is very rich in small finds of all kinds (ceramic and glass vessels, lamps, bronze and iron items, antler items, *fibulae*, coins, etc.) and, according to them, could be dated to the second half of the 6th and the beginning of the 7th century[52].

There is no archaeological evidence of the Avars' attacks in *Felix Romuliana* in the period of their invasion in *Dacia Ripensis* (584–586), when *Aquae* (Prahovo, okr. Bor, RS), *Bonnonia* (Vidin, obl. Vidin, BG), and *Ratiaria* (Arčar, obl. Vidin, BG), were robbed and destroyed. In the upper zone of the cultural layer of the later Early Byzantine horizon some finds of ceramic vessels and jewellery indicate that *Felix Romuliana* was inhabited by barbarians, probably Slavs, at the beginning of the 7th century[53]. Also, in 2006, in the latest phase of the Late Roman necropolis (phase III), a grave-pit with remains of a cremated individual was found (grave 2 a/06). This grave had disturbed two cyst-graves, dated to the end of the 4th–the first half of the 5th centuries (graves 2/06 and 3/06), as well as a wall of the building reconstructed in the 6th century[54]. It indicates a new population, practicing cremation funeral in the second half of the 6th–beginning of the 7th century in *Felix Romuliana*. Nevertheless, at this stage of research, the archaeological evidence of life in *Felix Romuliana* in

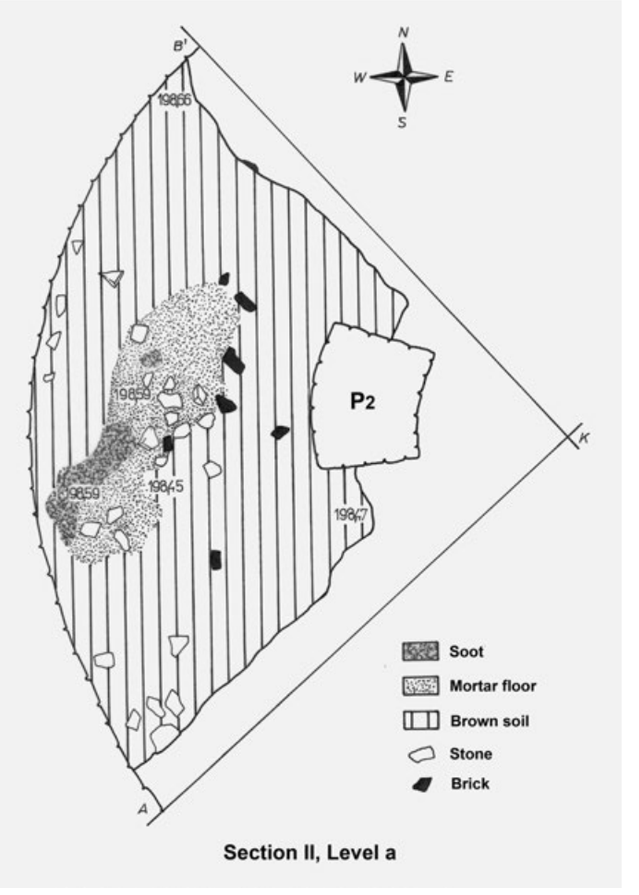


Fig. 24. *Felix Romuliana.* Plan of the segment II on the level a.

45 Janković 1983b, 128; Petković 2011c, 180–184.

46 Janković 1983b, 123–128 figs 93–105.

47 Petković 2011c, 184.

48 Janković 1983b, 128–129.

49 von Bülow et al. 2009, 112 pl. 5,2; Živić 2007, 385–386. – Archaeological material from the ditch dates from the 5th–6th centuries.

50 Petković 2006a, 39–40 fig. 10; Petković 2011c, 175 fig. 142.

51 Unfortunately, the informations about the stratigraphy of cultural layers in Tower 20 are scarce and insufficent to confirm the functioning of the west gate with its towers (Towers 19 and 20) during the Early Byzantine period. On contrary, the east gate was surely out of function as it had been closed by a strong drywall. (Documentation of the Institute of Archaeology in Belgrade).

52 Janković 1983b; Petković 2011a, 117–118; 120.

53 Janković 1981, 191–194; Janković 1983b, 129–131; Petković 2011c.

54 Petković 2007, 264 fig. 29.

the 7th century is too scarce to prove the presence of Slavs at this site[55].

According to archaeological research, Gamzigrad was abandoned for, at least, two centuries – from the middle of the 7th until the end of the 9th / the beginning of 10th centuries[56].

Considering the poor archaeological data from the Tower 19, having in mind that the upper layers in this object were destroyed, we could only say that it was inhabited during the Early Medieval period, in the 7th and later in the 9–11th centuries[57].

The Tower 19 represents an archaeological unit depicting the whole multi-layered site of *Felix Romuliana*-Gamzigrad. The investigations inside of the fortified imperial palace in 2004–2008 have mostly confirmed the proposed stratigraphy of the cultural layers in *Felix Romuliana*, based on the case-study of the Tower 19[58].

THE CATALOGUE OF SMALL FINDS FROM THE TOWER 19[59]

Fibulae (brooches)

I. Late La Tène fibulae

Spear-fibula of the Middle La Tène scheme

1. C 297/02, segment II, level d, in furnace 2/02, ▼197.34 m
One-piece wire spear-fibula with a spring-head made of two coils with an external chord. Reversed foot has been extended to triangular needle holder and is attached to the bow below the head with an embossed rectangular extension. In the wider part of the bow, along its edge, an inscription was shallowly carved within a ligature (?) NAIX or XNVM.
Dimensions: 5.1 cm.
Analogies: Popović 1991, 169 fig. 3,5–7; Popović 1994, 62 figs 1–7; Popović / Sladić 1997, 105–108 fig. 6,3–7; Popović 1999, 47–48 fig. 2.
Dating: the 2nd–1st centuries BC.
Unpublished.
Fig. 25.

Nauheim-fibula

2. C 22/98, segment III, layer D
Arched bronze fibula with embossed and bent-upwards head. Spring with pin is missing. Low stripe-like bow, with a slightly pronounced longitudinal rib, is tapering towards triangular foot. The foot is bent upwards, with a button knob at the end of the trapezoidal plate pin-holder.
Dimensions: 7.5 cm.
Dating: the 1st century BC–1st century AD.
Published: Petković 2010a, 37–38 type 1 E; cat. 43 pl. 1,14.
Pl. 1,1.

II. Roman Elbow-fibulae

Iron elbow-fibula with a spring-head (Petković type 18 G)

3. C 321/02, segment II, layer D, ▼197.20 m
Iron fibula, with an elbow curved stripe-like bow that tapers from the head to the end. Head and pin are missing, and the foot is damaged. A pin holder is flattened and elongated in rectangular shape.
Dimensions: 5.2 cm.
Dating: 3rd–4th centuries.
Dating: the second half of 2nd century–beginning of 4th century.
Published: Petković 2010a, 135 type 18 G; cat. 751 pl. 24,11.

Hinge elbow-fibula (Petković type 19)

4. C 202/02.segment IV, layer E, ▼196.54 m
Bronze fibula with semicircular plate above the head. A bulb at the end of the foot. Elongated, rectangular pin-holder. Pin and pin-holder are damaged.
Dimensions: 4 cm.
Dating: the second half of 2nd–3rd century.

55 Janković 1983b, 131; Janković 1997, 134 pl. 2,1–6.

56 Two coins of emperor Leo VI (886–913) were found in Gamzigrad, one of them pierced to wear as an ornament, excavated in medieval house 1/04 (3/05) in southeast part of fortification.

57 Janković 1983c; Janković 2011, 202–203; 205. – In the Medieval Gamzigrad the west gate was walled up and the entrance in the fortification was at the east gate. The Late Roman ramparts and the towers were probably used for the defence of the Medieval settlement inside the fortification of *Felix Romuliana*, but there is still not enough archaeological evidence for this hypothesis.

58 Petković 2008a; Petković 2008b; Petković 2011b; Petković / Kapuran 2013.

59 In the catalogue, the finds relevant to chronology of levels and layers in Tower 19 are presented. Unfortunately, glass vessels and objects, analysed by the deceased Mira Ružić, are still in preparation for publishing, hopefully it will be printed in the next volume of Romuliana Studies.

Figs 25–30. *Felix Romuliana.* 25 Cat. 1. – 26 Cat.4. – 27 Cat.5. – 28 Cat. 6. – 29 Cat. 9. – 30 Cat. 10.

Published: Petković 2010a, 146–148 type 19 C; cat. 879 fig. 39.
Fig. 26.

III. Roman Ring-fibulae

5. C 732/02, segment II, level e, in mortar floor, ▼196.51 m
A bronze fibula with a bow of rectangular cross-section. The ends of the bow are spirally twisted.
Dimensions: 2.6 cm.
Dating: 3rd–4th centuries.
Published: Petković 2010a, 224–225 type 29 cat. 1123.
Fig. 27.

6. C 378/02, segment II, level D, ▼197.18 m
An iron fibula with a bow of rectangular cross-section. The ends of the bow are spirally twisted. Pin is missing.
Dimensions: 2.5 cm.
Dating: Like the cat. no. 5.
Published: Petković 2010a, 224–225 type 29 cat. 1125.
Fig. 28.

IV. Roman arched fibulae

Arched T-fibulae with a spring-head (Petković type 31 C)

7. C 85/97, segment I, layer E
Iron T-fibula with a spring-head of eight coils with an internal chord. Pin is missing. The spring axel has button like thickened endings. Foot is decorated with longitudinal incisions.
Dimensions: 6.3 cm.
Dating: the middle of 3rd century–5th century.
Published: Petković 2010a, 231–232 type 31 C; cat. 1170, pl. 44,8.

8. C 326/02, segment II, layer D, ▼197.20 m
Bronze T-fibula. Spring, pin and part of the bow are missing. Foot is decorated with cross notches and semicircular facets.
Dimensions: 2.9 cm.
Dating: Like the cat. no. 7.
Published: Petković 2010a, 231–232 type 31 C; cat. 1167.

Fig. 31. *Felix Romuliana*. Cat. 11.

9. C 794/02, segment II, layer E, in furnace 4/02, ▼196.97 m
Bronze T-fibula with a spring-head of six coils with an internal chord. Foot is decorated by faceting and at the end by notches.
Dimensions: 4.5 cm.
Dating: Like the cat. no. 7.
Published: Petković 2010a, 231–232 type 31 C; cat. 1171 pl. 44,7 fig. 73.
Fig. 29.

Arched T-fibulae with a spring-head and one bulb on head (Petković type 31 D)

10. C 471/02, segment II, level e, in mortar floor, ▼196.40 m
Bronze T-fibula. Missing spring and pin. A bulb in form of pinecone (*pinia*) is on the bow above the head. Foot is decorated with crossed incisions.
Dimensions: 6.1 cm.
Dating: the end of 3rd–the first half of 5th century.
Published: Petković 2010a, 232–233 type 31 D; cat. 1210.
Fig. 30.

Arched bulbous crossbow fibulae

Keller 1, Pröttel 1, Petković 34 A

11. C 672/02, segment II, layer E, ▼196.81 m
Bronze bulbous crossbow fibula with three bulbs in the form of pinecones on the head. The bow of trapezoidal cross-section is decorated with longitudinal groove and transverse incisions. Rectangular foot, tapering at the end, is faceted.
Dimensions: 6.2 cm.
Dating: the end of 3rd century–the first quarter of 4th century (293–324 AD).
Published: Petković 2010a, 261 type 34 A 1; cat. 1352 fig. 79.
Fig. 31.

12. C 733/02, segment II, level e, in mortar floor, ▼196.49 m
Bronze bulbous crossbow fibula with three channelled bulbs in the form of pinecones on the head. The bow of trapezoidal cross-section is decorated with an incised longitudinal wavy line. Rectangular foot, tapering at the end, is faceted. The pin is missing and foot is damaged.
Dimensions: 5 cm.
Dating: Like the cat. no. 11.
Published: Petković 2010a, 261 type 34 A1 cat. 1353.
Fig. 32.

Keller II 3, Pröttel 3/4, Petković 34 D

13. C 87/97, segment I, layer E
Bronze bulbous crossbow fibula with missing head. The bow has triangular section. Long trapezoidal foot is decorated with two longitudinal grooves and, at the beginning and at the end, faceted ornament with two pairs of "eyelets".
Dimensions: 5 cm.
Dating: the last third of 4th century (364–380 AD).
Published: Petković 2010a, 266–368 type 34 D 2 cat. 1550.

14. C 347/02, segment II, layer D, ▼197.59 m
Bronze bulbous crossbow fibula with the central bulb and pin missing. Large, distinct bulbs in form of an onion on the head. The bow of triangular cross-section is decorated with longitudinal groove and a series of *peltae*. Long trapezoidal foot is decorated with two longitudinal grooves and along the edges of a series of 6 "eyelets" connected by tangents.
Dimensions: 5.1 cm.
Dating: Like the cat. no. 13.
Published: Petković 2010, 266–268 type 34 D 2 cat. 1551.
Fig. 33.

15. C 164/02, segment II, layer C, ▼197.46 m
A head of bronze crossbow fibula (probably type Petković 34 E)[60], damaged (a central bulb is missing), it has profiled beam with two large, distinct bulbs in the form of onion.
Dimensions: 4.8 cm.
Unpublished.

Arched fibulae with a reversed foot

Arched fibulae with a wire-bow and reversed foot

16. C 424/02, segment II, layer E, ▼197.02 m
Iron fibula with a spring of eight coils with internal chord. The bow has triangular section. Rectangular reversed foot

60 Petković 2010a, 268–271 type 34 E, 380–408 AD.

Figs 32–37. *Felix Romuliana*. 32 Cat. 12. – 33 Cat. 14. – 34 Cat. 17. – 35 Cat. 18. – 36 Cat. 19. – 37 Cat. 20.

is damaged.
Dimensions: 5 cm.
Dating: the end of 3rd–the middle of 5th century.
Published: Petković 2010a, 309–310 type 35 A cat. 1699 pl. 73,2.

17. C 157/02, segment II, level b_1, ▼197.56 m
Iron fibula with a spring of six coils and an internal cord. The bow has triangular section. Long trapezoidal foot is attached to the bow with two coils. Needle holder is missing.
Dimensions: 6 cm.
Dating: 3rd–the middle of 5th century.
Published: Petković 2010a, 310–311 type 35 B cat. 1708 pl. 73,2.
Fig. 34.

Arched fibulae with stripe-bow and reversed foot

18. C 98/02, segment II, level b1, ▼197.92 m
Iron fibula with a beginning of bow embossed and bent upward forming a head. A spring of ten coils with internal chord. Pin is missing. Rectangular foot is fastened to arc with three coils. The bow and foot are decorated with a longitudinal groove.
Dimensions: 7.2 cm.
Dating: the second half of 3rd–the middle of 5th century.
Published: Petković 2010a, 314–315 type 36 A cat. 1726.
Fig. 35.

19. C 176/02 segment IV, layer D, ▼196.87 m
Bronze fibula with the beginning of bow transversely embossed and perforated for the spring axis. The spring and pin are missing. Rectangular reversed foot is tied to the bow with two coils.
Dimensions: 6 cm.
Dating: Like the cat. no. 18.
Published: Petković 2010a, 314–315 type 36 A cat. 1727.
Fig. 36.

20. C 687/02, segment II, layer E, ▼196.78 m
Bronze fibula with the beginning of bow embossed and bent down, forming a head with a spring of seven coils with an internal chord. The pin is missing. Rectangular reversed foot is tied to the bow with three coils.
Dimension: 5.1 cm.

Fig. 38. *Felix Romuliana*. Cat. 23.

Dating: Like the cat. no. 18.
Published: Petković 2010a, 314–315 type 36 A cat. 1729 fig. 114.
Fig. 37.

21. C 734/02, segment II, level e, ▼194.54 m
Iron fibula with the beginning of bow embossed and bent down forming a head with a bronze spring of nine coils and pin. Rectangular reversed foot is tied to the bow with two coils.
Dimensions: 4.5 cm.
Dating: Like the cat. no. 18.
Published: Petković 2010a, 314–315 type 36 A cat. 1730.

22. C 544/02, segment II, layer E, ▼196.96 m
Bronze fibula with the beginning of the bow embossed and bent down forming a head, with spring of seven coils with an internal chord. At the beginning of the bow is a square plate-like extension decorated with transverse incisions and X motif, and at the end of bow are two such extensions. Also, at the beginning of the rectangular reversed foot there are two square plate-like extensions, decorated with transverse incisions and X motif. Foot is tied to the bow with three coils.
Dimensions: 4.4 cm.
Dating: the second half of 4th century.
Published: Petković 2010a, 315–316 type 36 B cat. 1746 pl. 74,9.
Pl. 1,2.

23. C 232/02, segment IV, layer D, ▼196.03 m
Bronze fibula with a damaged head. The spring and pin are missing. The bow is decorated along edges with incised grooves and a row of horizontal S motives between them. Reversed foot is tied to the bow with two coils.
Dimensions: 8.3 cm.
Published: Petković 2010a, 316–318 type 36 C 2 cat. 1762.
Fig. 38.

Arched fibulae of Viminacium-Novae type

24. C 241/02, segment II, layer D, ▼197.23 m
Iron fibula with a spring of 6 coils and an internal chord. The pin is missing. The bow has semicircular cross section. Rectangular foot has an upward bent extension at the end and rectangular pin-holder.
Dimensions: 4.3 cm.
Dating: 4th–5th centuries.
Published: Petković 2010a, 323–326 type 37 B cat. 1795 pl. 77,2.
Fig. 39.

Early Byzantine fibulae with reversed foot

25. C 18/97, segment I, layer B
Cast bronze fibula with a wide, striped bow and a small, rectangular reversed foot. The head has a bulb at the beginning, under which is an axis with a button-shaped ends, with an iron spring with an internal chord. The spring is fixed to the body of the fibula and the coils around a bulb on the head. The pin is missing. The bow has a longitudinal groove and two decorative stripes along the edges with a cut motif, a zigzag line that forms triangles with the imprinted point in the middle. Decorative ribbons are framed by wavy lines and pseudo-filigree. The rectangular foot is adorned with mesh and "fir branch" motives. The foot is attached to the bow with two coils.
Dimensions: 4 cm.
Analogies: Janković 1981, 173–174 fig. 69,E; Uenze 1992, 154–155 figs 7,6–8 List 4.
Dating: the first half of 6th century.
Published: Petković 2011a, 117 fig. 9.
Fig. 40.

Bone and antler Items

Combs

Three-layered combs with two rows of teeth (two-sided) and flat short sides

26. C 7/02, segment II, grave 1/02, along the eastern side of the p. 2, buried from the layer B1
Three-layered antler comb with two rows of teeth and flat short sides. Rectangular plating, attached with six iron rivets is decorated with incised geometric motif composed of vertical lines between which four metopes decorated with pairs of crossed lines.
Dimensions: 11.2 × 4.5 cm.
Analogies: *Intercisa* (Dunújávaros, Kom. Fejér, HU): Alföldy 1957, 479–480 fig. 109,3, the 4th century; Csákvár (Gem. Bicske, Kom. Fejér, HU): Sálamon / Barkóci 1970, g. 21 fig. 7,30, 380–427/30 AD; Petković 1995, 21–23 type I, decorative motif 3a, *Campsa*, cat. 22 pl. 2,4, first half of the 4th century; *Diana* (Kladovo, okr. Bor, RS): cat. 37 pl. 2,5, 6th century; *Horreum Margi* (Čuprija, okr. Pomoravlje, RS), cat. 62 pl. 3,8, 380–441 AD.
Dating: the second half of 4th–6th century.
Published: Petković 2011c, 174–175 fig. 142.
Pl. 1,3.

Fig. 39

Fig. 41

Fig. 40

Figs 39–41. *Felix Romuliana*. 39 Cat. 24. – 40 Cat. 25. – 41 Cat. 30.

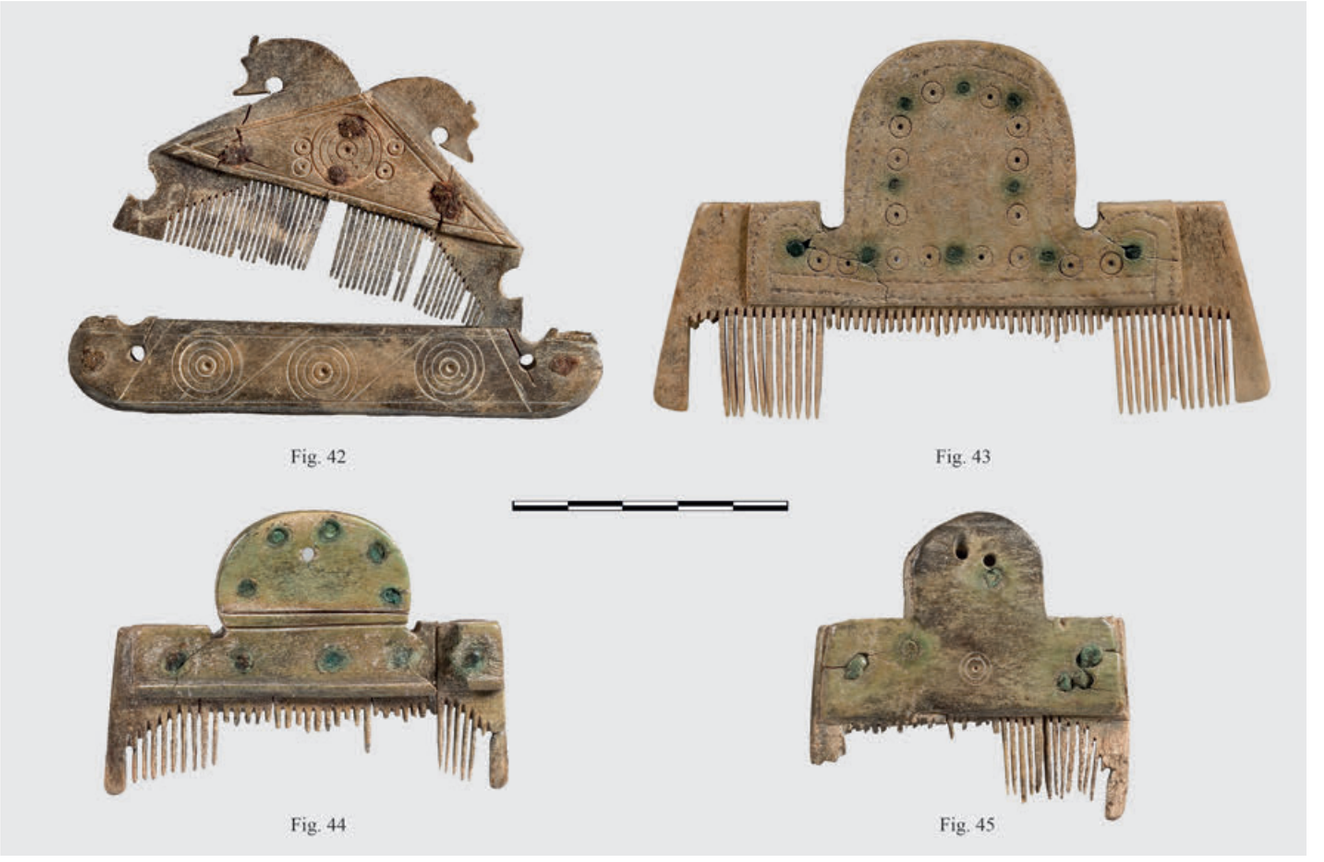
27. C 50/02, segment II, layer B, ▼198.36 m
Three-layered antler comb with two rows of teeth and flat short sides, with a rectangular plating fastened with iron rivets, damaged.
Dimensions: 9 × 3.8 cm.
Analogies: *Intercisa* (Dunújávaros, Kom. Fejér, HU): Vágo / Bóna 1976, g. 1110 pl. 18; 45,4, the 4th century; Csákvár (Gem. Bicske, Kom. Fejér, HU): Sálamon / Barkóci 1970, g. 41 fig. 9,1, 380–427/30 AD; Fintinele "Rit" (jud. Arad, RO): Marinescu / Gaiu 1989, g. 5 fig. 4, the first half of the 5th century; Markovo Kaleto – Nova Černa (obl. Silistra, BG): Milčev / Angelova 1970, fig. 10, 4th–6th centuries; *Tomis* (Constanța, RO): Chelu-ta / Georgiescu 1974, pl. 5,6, the 6th century; *Viminacium* – "Burdelj" *(*Kostolac, okr. Braničevo, RS): Zotović 1981, 113–114, grave 49,T.XII,5, grave 52,T.XIV,7, the end of the 5th century; Petković 1995, 21–23, Type I, *Pontes* (Kostol, okr. Bor, RS): cat. 46, T.II,8, 380–441 AD; Mora Vagei (Mihajlovca, okr. Bor, RS): cat. 53,T. III,4, the second half of 4th–first half of the 5th century.
Dating: Like the cat. no. 26.
Published: Petković 2003.
Pl. 1,4.

28. C 78/02, segment II, layer B1
Fragment of a small three-layered antler comb with two rows of teeth and flat short sides, with undecorated rectangular plating attached with an iron rivet and a bone peg.
Dimensions: 4.2 × 4.8 cm.
Analogies: As cat. 27.
Dating: Like the cat. no. 26.
Published: Petković 2003.
Pl. 1,5.

Three-layered combs with two rows of teeth (two-sided) and curved short sides

29. C 69/02, segment II, layer B1, in the rubble along the wall of the tower
Three-layered antler comb with two rows of teeth and curved short sides, with a rectangular plating adorned at the ends with double incised crossed lines in square metopes, framed by carved vertical lines. Plating is fastened with four iron rivets. The comb is damaged.
Dimensions: 9.2 × 4.6 cm.
Analogies: *Castrum Novae* – Čezava (okr. Braničevo, RS): Vasić 1984, 115 fig. 20,1, the end of 4th–beginning of 5th century; Petković 1995, 23–24 type II var. 1b, decorative motif 2, cat. 69, 378–441 AD; *Pontes:* Petković 1995, 23–24 type II var. 1b, decorative motif 2, cat. 84, 380–410 AD.
Dating: the last quarter of 4th–the first half of 5th century.
Published: Petković 2003.
Pl. 2,1.

30. C 101/02, segment II, level b1, ▼197.94 m, in the rubble along the p. 2
Three-layered antler comb with two rows of teeth and curved shorter sides, with the rectangular plating decorated with metopes at the ends formed of oblique and vertical incisions and a pair of "eyelets" and parallel incisions in the middle. Plating is attached by three iron rivets and a bone peg. Rivets at the ends of the plating combined with carved metopes make a figural motif of lions' proteomes, while the shorter sides are curved as a body or paws of animals.
Dimensions: 10.2 × 4.2 cm.



Figs 42–45. *Felix Romuliana*. 42 Cat. 32. – 43 Cat. 33. – Cat. 34. – 45 Cat. 35.

Analogies: *Castrum Novae* – Čezava: Petković 1995, 23–24 type II var. Ib, cat. 67–69 pl. 5,1–2, 378–441 AD; *Sirmium* (Sremska Mitrovica, RS): Popović 2012, 127 fig. 22,1, the last quarter of 4th century–the first half of 5th century. The decoration of plating has no direct analogy.
Dating: Like the cat. no. 29.
Published: Petković 2003.
Fig. 41.

31. C 345/02, segment II, layer D, ▼197.57 m
Fragment of three-layered, two-sided antler comb, which had two parallel rectangular plates, between which is cut out decoration of circular perforations – there are two rows of smaller and single row of large circular perforations.
Dimensions: 4.8 × 1.8 cm.
Analogies: Znojmo – "Grad" (Bez. Znojmo, CZ): Hruby 1957, 168 type 8 fig. 9–10, 5th–6th centuries; Altenstadt (Landkr. Wetterau, DE): Keller 1971, 112 g. 10,T33,2, the last third of 4th century; Baljevac (okr. Raška, RS): Petrović 1966, figs 4a–b; Petković 1995, 24, Type II var. 2b, cat. 87, the first half of the 5th century: *Sirmium*: Popović 2012, 127 fig. 22,5, the last quarter of 4th century–the first half of 5th century.
Dating: the last third of 4th–the first half of 5th century.
Published: Petković 2003.
Pl. 2,2.

Three-layered combs with a single row of teeth (unilateral) and a triangular handle decorated with horse proteomes

32. C 328/02, segment II, layer D, ▼197 m
Three-layered unilateral antler comb with a triangular handle decorated with horse proteomes. Handle plating is fastened with four iron rivets. It is decorated in the central part with a carved motif of concentric circles with an "eyelet" in the middle and a pair of "eyelets" on the left and right sides of this motif. One rivet on the top and one on the bottom side of the central ornament complement the motif. The comb was found in the corresponding rectangular casing decorated with horse proteomes on the short sides. The case is decorated with concentric circles with an "eyelet" in the middle, connected by tangents, so forming a motif of a "wavy spiral". The casing is fastened by two iron rivets, which are simulating the horses' eyes.

Dimensions: Comb: 7.9 × 6.6 × 8.8 cm; Case: 9.4 × 1.8 cm.
Analogies: *Felix Romuliana, Diana*, Čezava – *Castrum Novae*: Petković 1998, 216; 227–228,fig. 1,1–2.4–5; Južac – Sopoćani (okr. Raška, RS): Popović 1986, 116–117 fig. 4; *Iatrus* (Krivina, obl. Ruse, BG): Gomolka 1966, 339 fig. 60; Lébény (Kom. Győr-Moson-Sopron: Pusztai 1966, 116 fig. 7, a comb and a case adorned by a pair of horses' proteomes; *Treveris* – Trier (DE), *Civitas Argentoratensium* – Strasbourg (FR), *Mogontiacum* – Mainz (DE), Champlien, *Colonia Augusta Rauracorum,* Furfooz – Augst (CH): Petković 1998, 216 Map.
Dating: the last quarter of 4th–the beginning of 5th century.
Published: Petković 2006b, 355 fig. 2,1; 14.
Fig. 42.

Three-layered antler combs with a single row of teeth (unilateral) and a semicircular handle

33. C 135/02 segment II, level b 1, ▼198.17 m, in the soot
Three-layered unilateral antler comb with a semicircular handle with saddle endings. Handle plating is attached with five bronze rivets on the semicircular section and five in a rectangular area. Plating is decorated on both sides with a carved geometric motif consisting of the double dotted line along the edge of the semicircular handle and of radially arranged eight "eyelets" in the middle and at the rectangular part of the plating with a row of eight incised "eyelets". The teeth were partially damaged.
Dimensions: 10.2 × 7 cm.
Analogies: *Colonia Claudia Ara Agrippinensium* – Köln (DE): Thomas 1961, 106–107 cat. 40 type III, Donauländische Variante: Komárom (Kom. Komárom-Esztergom, HU): Thomas 1961, 106–107 cat. 41 fig. 51, type III, Donauländische Variante.
Dating: the last quarter of 4th–the middle of 5th century.
Published: Petković 2006b, 355 fig. 2,5; 4; 7.
Fig. 43.

34. C 303/02, segment IV, layer E, below the drywall, ▼196.22 m, in the soot
Three-layered unilateral antler comb with a semicircular handle with saddle endings. Handle plating is attached with five bronze rivets on the semicircular section and four on the rectangular part. Plating is decorated on both sides with incised circles around the rivets, with two horizontal incised lines on the semicircular section and in the rectangular area on the handle. At the top of the handle's curve there is a small circular perforation for attaching a metal hoop for hanging. The teeth were partially damaged.
Dimensions: 7 × 5.4 cm.
Analogies: *Intercisa:* Alföldi 1957, 480 fig. 110; Bíro 1994, 96 no. 428 pl. 47,428, 4th century; *Transleder*ata – Sapaja (Banatska Palanka, okr. Južni Banat, RS): Dimitrijević 1984, 50 pl. 50, the 4th–5th centuries; Petković 1995, 27–28 cat. 102–105 pl. 9,1, five specimens, the 4th century; *Heraclea Lyncenstis* (Bitola, MK): Janakievski 1987, 94–95 pl. 11, the end of 4th–the beginning of 5th century; Tîrgşor: Diaconu 1965, 102–104, M. 79,2 pl. 85,M.105,2 pl. 91,M.181,4, Pl. 112,M.264,8, Pl. 127, decorated with horizontal grooves, pl. 131,M,277,10, 4th century; Thomas 1961, 107; 111 fig. 60 no. 96; Mihălăşeni (jud. Botoşani, RO): Şovan 1999, 14 type 3,d fig. 3,1, the end of the 4th–5th century; Chernyahov (okr. Zhitomir, UA): Petrov 1964a, 108–110 fig. 13; 15; Nikitina 1969, 159 type III var. 2b fig. 10, grave 264, the 4th century; Maslow: Petrov 1964b, 138–139 grave 69 fig. 6,14, the 3rd –4th centuries.
Dating: the 4th century.
Published: Petković 2006b, 353–355 fig. 2,3; 3; 5.
Fig. 44.

Fig. 46. *Felix Romuliana*. A coin of Justinus I, segment II, layer A.

35. C 502/02, segment II, layer E, the section BK', ▼197.00 m
Three-layered unilateral antler comb with a semicircular handle. The semicircular part of the handle plating is fastened with one brass rivet. The rectangular section of plating is attached with one rivet at one end, and with three (one over another) at the other end. Along the top of the handle curve are horizontal grooves and one, eccentrically placed, "eyelet". Also, in this part of the handle are two small perforations. The comb teeth, unevenly thick, were damaged.
Dimension: 5,5 × 8,8 cm.
Analogies: As cat. 34.
Dating: 4th century.
Note: This comb was made of a larger, older comb of the same type. At this point the remains of older decoration: incised horizontal lines on the original comb were located in the centre of the handle curve, as well as the "eyelet". In addition, the holes of the old rivets are visible on the plating, which is clumsily re-attached (e. g. with three rivets in one place). The original comb is reduced in size and the damaged teeth were replaced, this time with a thicker notched plate.
Published: Petković 2006b, 353–355 figs 2,4; 6.
Fig. 45.

Items of everyday use

36. C 88/02, segment II, level c (▼197.26 m) and layer D (▼197.06 m)
Two fragments of a cosmetic box, *pyxides*, which can be jointed. The *pyxides* were made of a tubular bone of a

large herbivore mammal. It is conical, tapering towards the top (rim). The cosmetic box is decorated by 4 carved concentric rings at the bottom and at the top. The bottom and the lid are missing and the recipient is badly damaged.
Dimensions: R1 = 3.5 cm, R2 = 3 cm, h = 5 cm
Analogies: *Panticapaeum* (Kertsch, Krim, UA): Peters 1986, 70 pl. 14,18.20.24, Roman period; Szilasbalhás, Koroncó, Nagyar Nemzeti Muzeum (unkown sites in Panonnia): Bíro 1994, 41 pl. 51,443–446; 52,447, Roman period.
Dating: 4th century.
Unpublished.
Note: Probably an *unguentum pyxides (narthecium)*, a cosmetic box for cosmetic ointments, make-up or perfumes.
Pl. 2,3.

37. C 6/02, segment II, grave 1/02
A whorl made of bone, with both flat sides, decorated with incised concentric grooves around the middle circular perforation.
Dimensions: d = 7.4 cm, h = 1.2 cm.
Analogies: *Gorsium* (Székesfehérvár, Kom. Fejér, HU) Ušće Porečke reke, *Transdierna* – Tekija (Kladovo, okr. Bor, RS), *Pontes*: Petković 1995, 44 type III cat. 448–490 pl. 31,6–7, the end of 3rd–4th century.
Dating: 4th century.
Published: Petković 2011c, 174–175 fig. 142.
Pl. 2,4.

38. C 107/2002, segment II, level c, ▼197.29 m, 1.79 m from A, 1.22 m from B of p.2
A fragment of rectangular head of the bone needle.
Dimensions: 3.2 cm.
Analogies: *Singidunum* (Belgrad, RS), *Margum* (Dubravica, okr. Braničevo, RS), *Viminacium, Castrum Novae* – Čezava, *Campsa* – Ravna, Ušće Porečke reke, *Diana* – Karataš (Kladovo, okr. Bor, RS), *Pontes, Felix Romuliana, Ulpiana* (Priština, RS): Petković 1995, 46–47 type 1 var. 1 at. nos. 510; 512–519; 523–536; 538–539; 542–551; 555–557; 560–564; 566–567, the end of 1st–the middle of 5th century.
Dating: 1st–6th centuries.
Unpublished.
Note: This type of needle could be used for sewing and knitting, but also for fastening the hair or clothes. In the necropolis they were used to attach the shroud.
Pl. 2,5.

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All illustrations are from Documentation center of the Institute of Archaeology, Beograd.
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ABSTRACT

The Roman archaeological site in Gamzigrad near Zaječar in Eastern Serbia, has been researched for 65 years. It was identified as imperial residence of the tetrarch Galerius, *Felix Romuliana*, by Dragoslav Srejović. Since 2007, it is on the World Heritage List of the UNESCO. Because of that, the Late Roman period of life in *Felix Romuliana* was neglected, and only recent research in Tower 19 and inside of the fortification revealed two horizons of life, from the last quarter / third of 4th to the middle / last quarter of 5th century and from the end of 5th to the beginning of 7th century, both with several phases. The abundance of portable finds discovered in the Tower 19 enabled the dating of the discovered levels and layers. Furthermore, the stratigraphical and chronological relations between the phases of life in Tower 19 and inside of fortification were estimated.

ZUSAMMENFASSUNG

Die römische archäologische Stätte in Gamzigrad bei Zaječar in Ostserbien wird seit 65 Jahren erforscht. Sie wurde von Dragoslav Srejović als kaiserliche Residenz *Felix Romuliana* des Tetrarchen Galerius identifiziert. Seit 2007 steht diese auf der UNESCO Welterbe-Liste. Aus diesem Grund wurde die spätrömische Lebensperiode von *Felix Romuliana* vernachlässigt und erst jüngste Forschungen im Turm 19 und im Inneren der Befestigungsanlagen ergaben zwei Lebenshorizonte, vom letzten Viertel / Drittel des 4. bis zur Mitte / zum letzten Viertel des 5. Jahrhunderts und vom Ende des 5. bis zum Anfang des 7. Jahrhunderts, mit mehreren Phasen. Die Fülle des aus Turm 19 geborgenen Fundmaterials ermöglicht die Datierung der entdeckten Ebenen und Schichten. Darüber hinaus wurden die stratigraphischen und chronologischen Beziehungen zwischen den Nutzungsphasen im Turm 19 und im Inneren der Befestigung untersucht.

(Übersetzung: J. Gier)

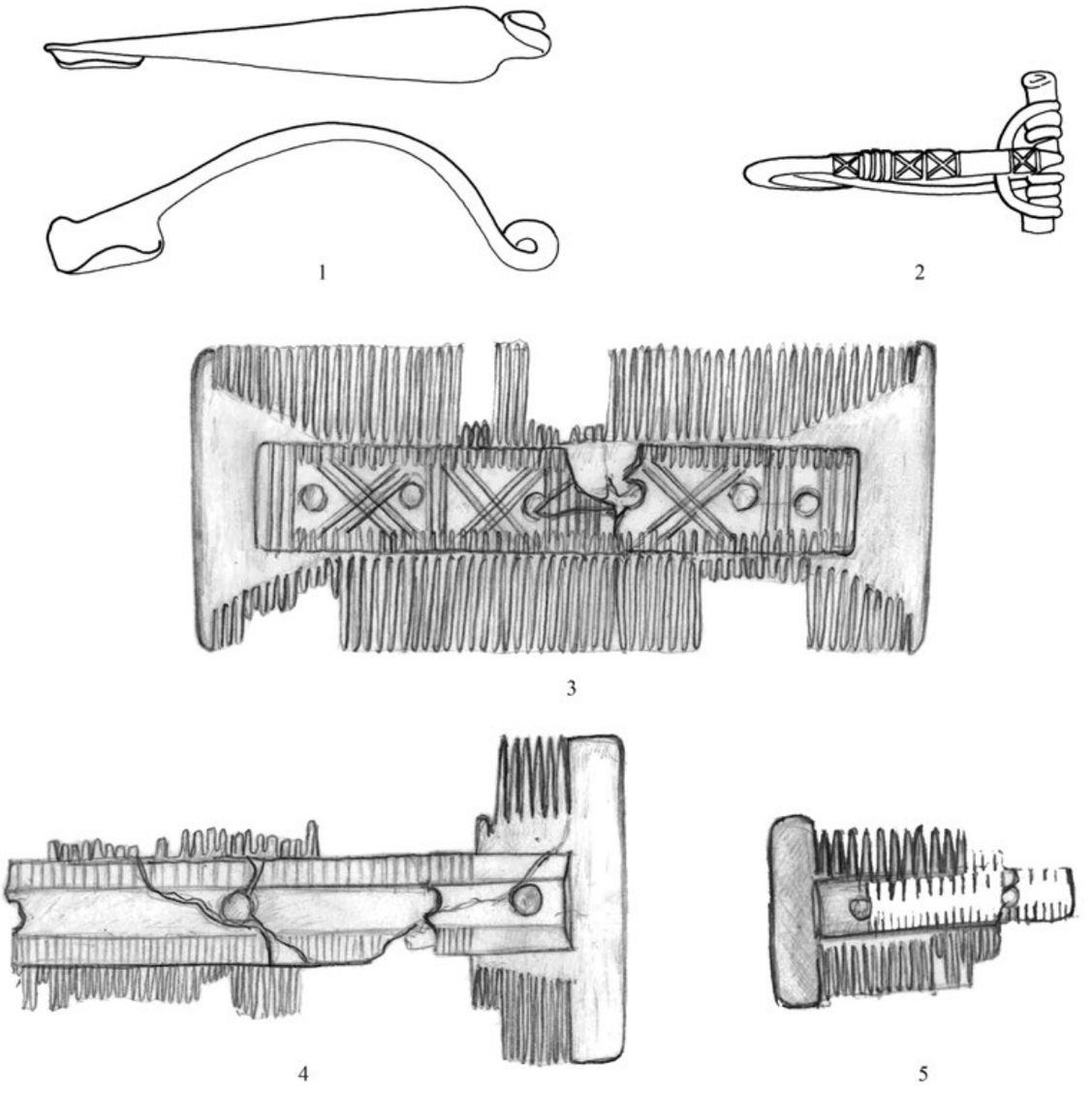

Plate 1. *Felix Romuliana.* 1 Cat. 2. – 2 Cat. 22. – 3 Cat. 26. – 4 Cat. 27. – 5 Cat. 28.

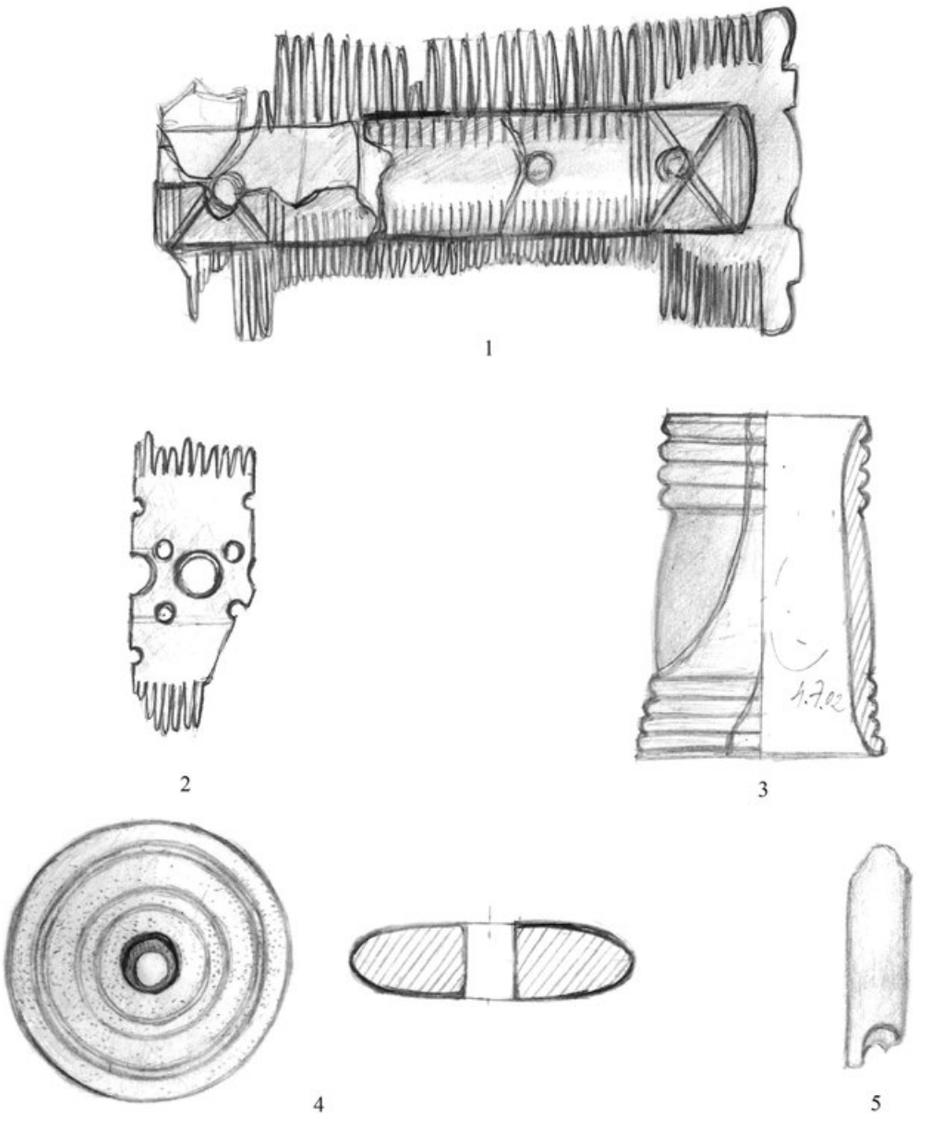

Plate 2. *Felix Romuliana.* 1 Cat. 29. – 2 Cat. 31. – 3 Cat. 36. – 4 Cat. 37. – 5 Cat. 38.