

VIVERE MILITARE EST

FROM POPULUS TO EMPERORS - LIVING ON THE FRONTIER
VOLUME II



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RESEARCH OF VIMINACIUM AND ITS SUBURBAN ZONES*

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ABSTRACT

This paper presents the results of long-lasting research of the archaeological site of Viminacium. Since 1882, when the first excavations were conducted, until today, the most explored were the necropolises, with almost 14,000 graves, while research of the legionary fort and the city itself only really gained focus in this century. At the beginning of the 21st century, a new phase of the Viminacium examination began when multidisciplinary research started, including, among other things, remote sensing and anthropological, archaeobotanical, archeozoological and physical-chemical analysis. Systematic excavations of the amphitheatre are now finished, while those of legionary fort are still ongoing.

KEYWORDS: VIMINACIUM, ROMAN NECROPOLIS, AMPHITHEATRE, LEGIONARY FORT, AQUEDUCTS

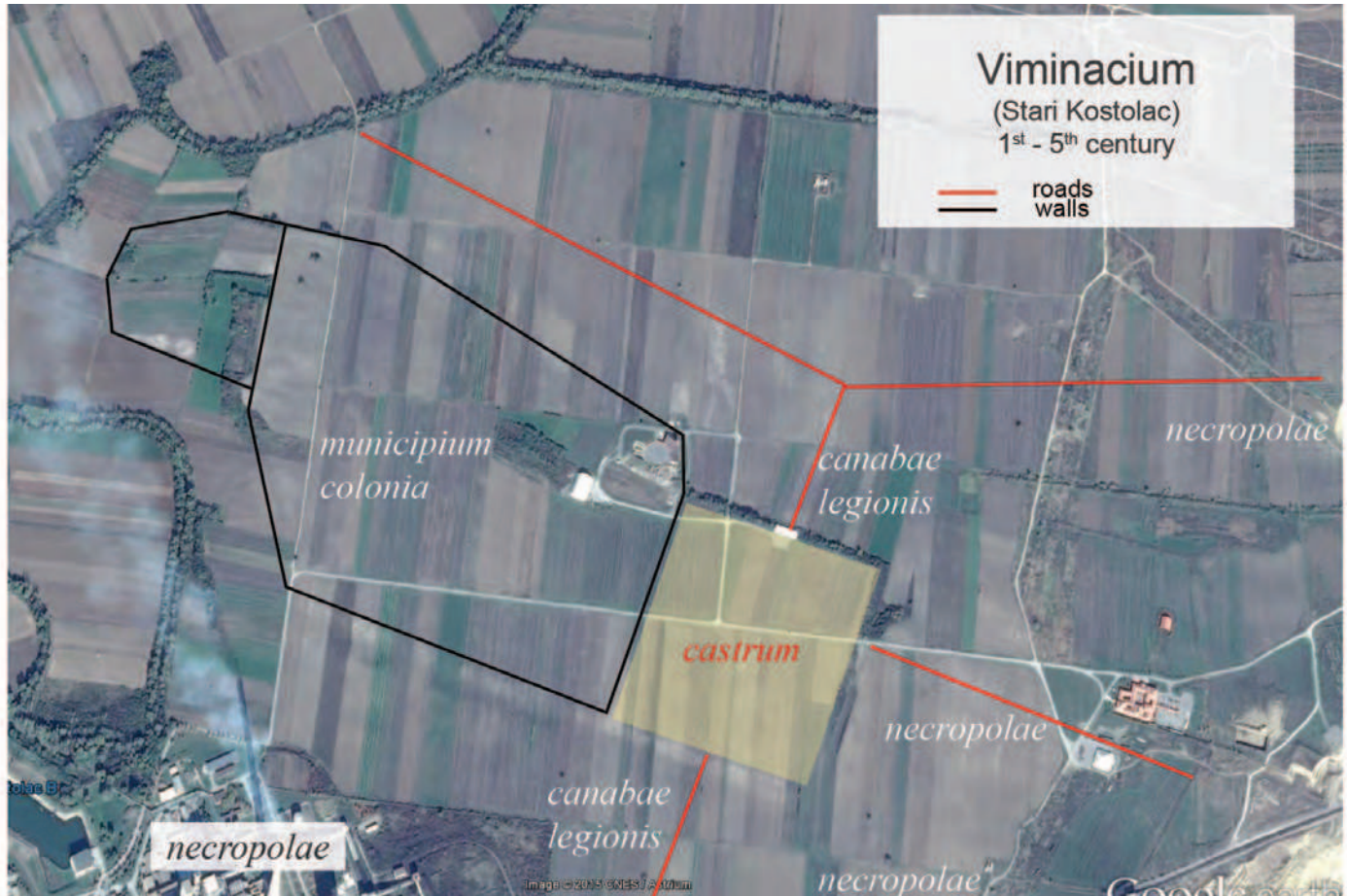
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INTRODUCTION

The remains of the Roman city and Viminacium military camp have, for a long time, attracted the attention of ours and the world's public. Bearing in mind that this was the capital of Upper Moesia, a Roman province that was destroyed by the Huns in the 5th century, almost 1,600 years ago, the fact that, in the minds of the local population, the knowledge and awareness of the Roman city under the name Viminacium still exists testifies to the extent of its significance and size. Its remarkable advantage is that its remains (more than 450 hectares of the city and 220 hectares of the narrower city territory) are located below orchard land, that is, there are no new urban units above the archaeological site. Systematic research of the city itself and the fortification (Map. 1) was prompted by salvage excavations undertaken during the last three decades of the 20th century. At that time, excavations were carried out in the southern necropolis of Viminacium, where more than 13,000 graves were discovered, representing the largest excavated cemetery from the Roman period. Such a large number of graves, the numerous and unique findings from them, and the abundance of archaeological and anthropological materials did not go unnoticed by the public and, at the beginning of the 21st century, the long-awaited systematic research started that brought together an interdisciplinary team composed of outstanding experts from various fields. Today, involved in the Viminacium research, in addition to archaeologists, there are anthropologists, architects, geophysicists, mathematicians, electrical engineers, geologists, petroleum workers and researchers dealing with remote sensing and 3D modelling.

HISTORY OF THE CITY

The city itself was founded at the intersection of the roads connecting the northern part of the Balkan Peninsula with other parts of the Roman Empire. Although these roads had a primarily military and strategic function, they had very lively traffic during the whole of Antiquity, thanks to which Viminacium became not only a military base, but also an important trading and manufacturing seat. The discovery of the Celtic necropolis at Viminacium, at the site of "Pećine", proved that in the pre-Roman period the Celts lived in this area. The research of the necropo-



lis confirms that Viminacium was established in the territory of the Celtic tribe of Scordisci. Strabo, in *Geography*, writes that in this area, the Scythians were mixed with the older Thracian tribes. There is a much data about Viminacium in antique sources from the 2nd to the 9th century. It is mentioned by many ancient writers, from Ptolemy to Hierocles and appears in almost all preserved Roman itineraries such as *Tabula Peutingeriana* and *Itinerarium Burdigalense*, as well as in the *Notitia Dignitatum*, *Codex Theodosianus* and *Codex Iustinianus*. On the *Tabula Peutingeriana*, the site is designated as *Viminatio*; on the *Itinerarium Antonini Augusti* as *Viminacio* and *Euminacio*, and on the *Itinerarium Burdigalense* from 333 it also appears as *civitas Viminacio*.¹

Map 1 - Viminacium topography

¹ Mirković 1968, 61.

The first Roman legions stationed in Moesia (possibly in Viminacium) were the Legion IV *Scythica* and the Legion V *Macedonica*, probably around 15 A.D. These two legions had a common commander and were most likely placed in a joint camp. According to some authors, they were moved to Viminacium around 33 or 34 A.D. In any case, in the middle of the 1st century or before, most probably in the fourth and the beginning of the fifth decade, Viminacium already had a permanent legion. It seems that since coming to these areas and to the Danube, until the end of the eighth decade of the 1st century, two legions were stationed in Viminacium, most probably the IV *Flavia felix* and the VII *Claudia pia fidelis*, and then the latter remained as a permanent garrison until the end of Antiquity. The last note in sources was in *Notitia Dignitatum*, when Viminacium was a garrison of 3 units in Late Antiquity: *Cuneus equitum promotorum, Viminacio; Praefectus legionis septimae Claudiae, Viminacio;*² and *Praefectus classis Histricae, Viminacio.*

An adjacent settlement, *canabae legionis*, developed near the *castrum* at an early stage. Special attention to the rebuilding of this settlement was noted in the later imperial inscription that mentions *canabae legionis VII Cl (audiae) [A]nt(onianae) p(iae)f(idelis)*, during the reigns of *Septimius Severus* and *Carausius* (between the years 197-211 A.D.).³

During the reign of *Marcus Aurelius*, the rise of Viminacium was interrupted by an epidemic of the plague, but only temporarily. Archaeological research shows that the plague epidemic did not reflect too much on the economic prosperity of Viminacium, because the city was in full bloom already in the first years of the 3rd century.

Events that were related to a number of barbarian invasions in the second half of the 3rd century and the abandonment of the province of Dacia under Aurelianus had an enormous effect on Viminacium, negatively impacting production, trade and urban development. The city recovered under the Tetrarchy and flourished under *Constantinus I*, for whom it was an important base for actions to the north of the Danube.

² In *Notitia dignitatum Legio VII Claudia* was mentioned twice, the second time as *Praefectus legionis septimae Claudiae, Cuppis*. In the *Paul Halsall Internet History Sourcebooks Project*, which has multiplied all over the internet, *VII Claudia* is, for an unknown reason, omitted from Viminacium, mentioned only in the garrison in Cuppis. In all printed editions as well as in all preserved manuscripts *VII Claudia* was mentioned in both places.

³ Mirković 1986, 55.

The first line of defence on the Danube frontier was the river fleet (*classis Histrica*). Viminacium was mentioned in *Notitia Dignitatum* as one of its bases, with the *praefectus* residing here (*Praefectus classis Histricae, Viminacio*). *Menander Protector* writes that, in 580, the *Classis Histrica* for *Moesia Prima* was in Viminacium.⁴

From the end of the 2nd to the end of the 4th century, the Roman emperors, considering Viminacium a very important city, started with more regular visits. There was almost no Roman Emperor who did not go through Viminacium or stayed there for a longer or shorter period time.⁵ It is especially interesting that the city gained significance when the Roman state began to weaken. In the last decades of the 3rd century, the city played a key role in resolving the issue of power in the Roman Empire.

In the 3rd century, at the time of Gordian III, Viminacium became a colony and acquired the right to mint coins.⁶ In 365 AD, Viminacium became the seat of one of the four episcopacies in Moesia. The names of the bishops *Amantinus* and *Cyriacus* were related to the area of the province of *Moesia Prima* and Viminacium - ... "*Amantinus ... Cyriacus Mysiae*."⁷ The city was destroyed in the middle of the 5th century with the invasion of the Huns. This data relies on the testimony of *Priscus*.⁸

It should not, however, be ruled out that the destruction of the city and military camp could have occurred in the eighth decade of the 4th century, during the invasion of the Goths.

The rebuilding of the city during Justinian's rule, can be judged on the basis of the data of *Theophilus Simocata* and the findings at the site of the local church (Todića crkva) and Svetinja, where remains from the 6th century were identified.

Although, in the year 584, the Avars occupied Viminacium,⁹ this event did not yet mark the end of its history. Around 600 AD, Byzantium was on the offensive - the Roman army had been concentrated in Viminacium and, from there, moved to the left bank of the Danube.

4 Mirković 1968.

5 Seeck, 1911, 1047; Cod. Theodos, X, 10, 4.

6 Borić-Brešković 1976, 8-23.

7 Zeiller 1918, 148.

8 Prisci fr. 2, 280 and 8, 305.

9 Theoph. Sim. Hist. I 3-4.

VIMINACIUM RESEARCH

The first records of the Viminacium site are almost 300 years old. After the visits of the travellers who cruised through Serbia in the past, there remained descriptions and plans of the ruins of the city and camp.¹⁰ These reports, although often rough, unspecified or imprecise, represented a valuable source of information, since they originated from the time when the parts of the city still were visible, before serious degradation took hold. The first archaeological research in the Viminacium region started due to the endangering and destruction of the site. The architect Mihailo Valtrović, then the curator of the National Museum, visited Viminacium in 1882 and made the first rough sketch of the site. After this visit, in October of the same year, he also performed the first scientific excavations, funded by the National Museum in Belgrade. Soon after came the research of Miloje Vasić, the first Serbian, educated archaeologist. During the excavations, which were carried out in 1902 and 1903, Viminacium was visited by Queen Draga Obrenović (Fig. 1). Amazed, she gave Vasić 100 golden ducats to continue the research, and he, in gratitude, named the street he discovered Queen Draga Street. This visit was recorded in the newspaper *Novine Serbske*. During these excavations, one part of the city settlement, with an area of 1,600 m², was investigated and a report was published in the *Archaeologischer Anzeiger*¹¹. Vasić determined the end of the first half of the 1st century for the beginning and placed the end at the first half of the 5th century for the development of the explored part of the city settlement of Viminacium. According to the method of construction and the construction materials used, it has been concluded that all the explored walls did not originate from the same period. Thus, the period ranged from the end of the first half of the 1st century to the end of the first half of the 5th century, divided into three main epochs.¹²

Despite the remarkably significant discoveries, seventy years passed before the continuation of the excavation. With the construction of the Kostolac Thermoelectric Power Plant and then the opening of the coal mine “Drmno”, the research of the city of Viminacium was directed towards the necropolises. The excavations, led by Ljubica Zotović, which lasted for twenty years (1977-1997), resulted in the

¹⁰Marsigli 1726; Kanitz 1892.

¹¹Vasić 1905.

¹²Vasić 1903b, 208.



Fig. 1 - Queen Draga Obrenović at Viminacium

discovery of over 13,000 graves, the largest number of graves at one site in the whole territory of the Roman Empire.

However, when it comes to research of the necropolises, the first data about them was provided by M. Valtrović, in the year 1882, when he concluded that a large Roman cemetery extending to the right bank of the Mlava, which he then excavated, was located to the south of the town. During the field survey, he determined the existence of the northern and eastern necropolises.¹³

The excavations which began almost a hundred years later confirmed the existence of Roman necropolises east of the military fort and north and south of the fort and settlements established next to the camp. Since today's open coal mining is progressing toward the Roman fort and the city settlement, the current rescue excavations are still ongoing, but now to the east and north of the military camp and settlements.

In the area of the southern Viminacium necropolises, the oldest necropolis belongs to the Celtic population that inhabited this territory at the end of the 4th and the beginning of the 3rd century B.C.¹⁴ In the period of Roman domination,

¹³ Валтровић 1884.

¹⁴ Jovanović 1984; Jovanović 1985, 13–18.

burial was carried out at several of the excavated necropolises – Više Grobalja, Pećine, Kod Bresta, Drmske Carine and Velika Kapija (Map 2), which comprised the southern necropolis of Viminacium, and were subject to several monographs and studies.¹⁵ However, until now not all the graves and materials found therein have been completely published, which will follow after the completion of the rescue excavations. We can generally determine that it was a bi-ritual necropolis where both cremations and inhumations were represented, of course in different proportions in respect to the period. As the new research spreads to the east of the site, the type of grave forms changes accordingly. However, it can be concluded that, for example, the forms of the graves with cremations are particularly diverse. The most widespread grave form represents the simple or stepped rectangular pits with the sides burnt to a red and sometimes grey intensity. This form is attributed to the domicile population, who changed their rites of burial due to the influence of the newcomers, but gave them their own authentic feature, and are known as the Mala Kopašnica-Sase grave type according to the eponymous site.¹⁶ Graves of this type are distributed in the area of Pannonia, Moesia, and eastern Thrace. There are many variants of this form: they can be rectangular-shaped pits with a cover of either flat or ridged tiles, or with a wooden board or an amphora split longitudinally for covering, while the stepped graves could be with a brick-built interior step or even with three steps.¹⁷ A lot fewer burials occurred in urns, which were, in fact, ceramic pots in secondary use. The existence of graves in the form of a well are considered a borrowed from other cultures, that is, the bearers of this grave form arrived with the army from other parts of the Roman Empire and settled in the territory of Viminacium, practicing their rituals for quite a long period of time.¹⁸

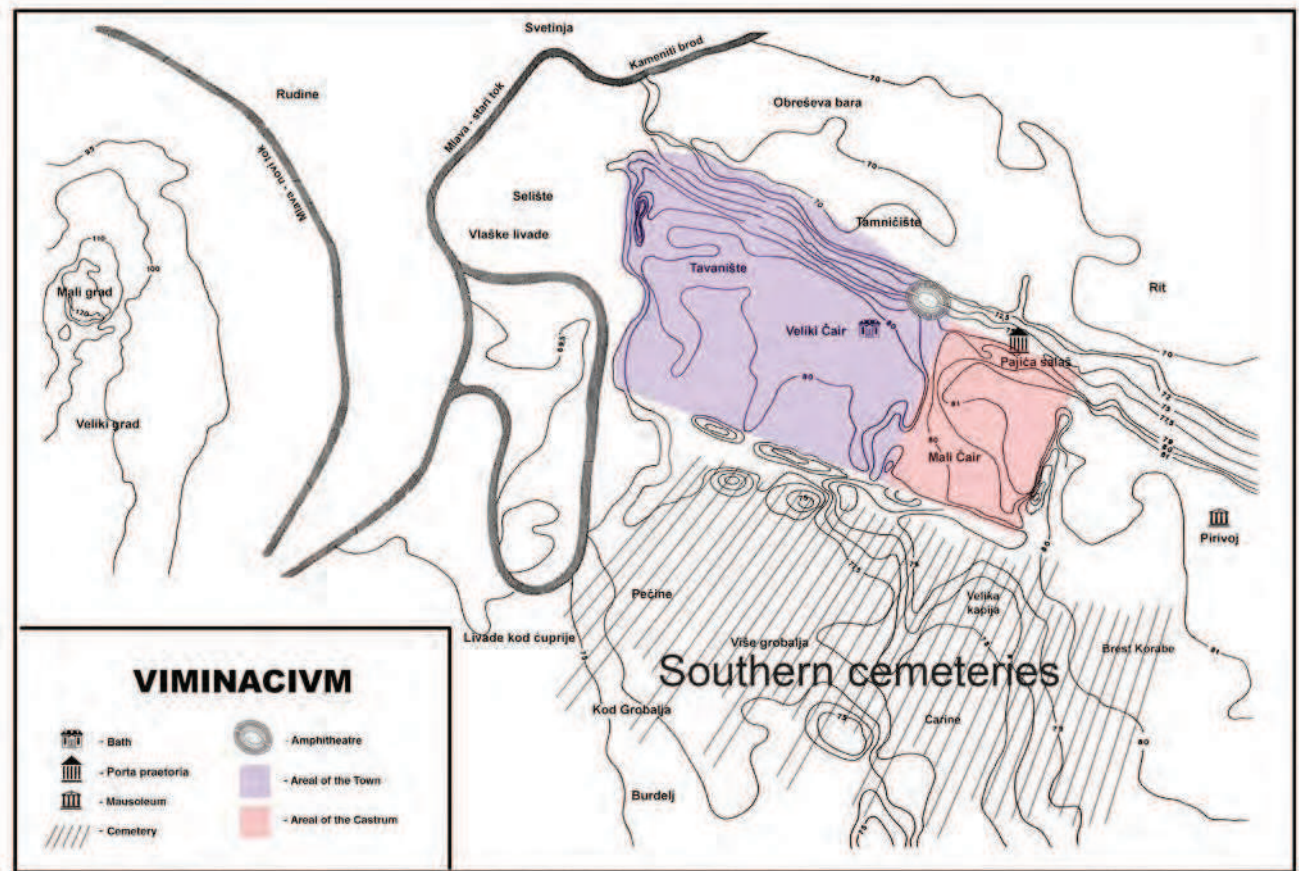
Considering skeletal graves, the deceased was most frequently buried in a plain grave pit, wrapped in a linen shroud. Next, by number, were the burials in wooden coffins, then those with a construction of tiles or bricks, which could be very diverse, while graves with a wooden board as the floor are quite rare.

15 Зотовић 1986, 41–60; Зотовић, Јордовић 1990; Korać, Golubović 2009; Golubović 2008; Korać, Mikić 2014.

16 Garašanin 1968.

17 Golubović 1998, 248.

18 Golubović 2008, 141.



A special type of tombs are those built of bricks. This type of grave has been discovered in urban centres such were *Sopianae*¹⁹, *Viminacium*²⁰, *Sirmium*²¹, as well as close to the military forts along the Pannonian and the Moesian part of the Limes, whilst also being characteristic for *Pannonia* and *Moesia*. The trapezoidal cross-section, as a specificity of the necropolis at Viminacium, was first remarked on by Miloje Vasić at the beginning of the 20th century and characterised as a Viminacium type of tombs.²² The tombs were used for multiple burials, so the bones

Map 2 - Viminacium city, fort and necropolis

19 Fülöp1984.

20 Васић 1907, 66-98; Korać 1993, 107-122.

21 Milošević 1971, 3-13.

22 Васић 1907, 66-98; Васић1895, 1 dalje.

Fig. 2 - Viminacium
hypogeum



of various deceased, mostly dislocated and fragmented, were found in a single tomb, either W-E or E-W oriented.

A few dozen monumental tombs, above the surface or of the hypogeum (Fig. 2), family tombs intended for the burial of several persons, are concentrated in the northern part of the researched necropolises, closer to the civilian settlement. Some of the tombs decorated with wall paintings of exceptional beauty testify that in Viminacium during the 4th century there existed one of the most important painting workshops.

Almost all the tombs belong to the Late Antique period (the exception is a tomb from the beginning of the second half of the 3rd century) and are located in the Late Antique layer of the necropolis, alone or in a space inside or outside memorial buildings. So far, more than 30 tombs with wall paintings have been found in the Viminacium necropolises. However, due to the poor preservation of the wall paintings, as most of them are in fragments, only two tombs can be reliably identified as Christian or Pagan, and are the most relevant for the perception of painting in an urban centre such as Viminacium.²³ The tombs were painted with

²³ Korać 2007.

primary, earthy colours, dominant among which were red, black, ochre, blue and green, with a predomination of geometric and floral motifs while, of the zoomorphic motifs, the most common was the peacock.²⁴

Over thirty lead sarcophagi were found at different sites and, compared to other types of burials from the Roman period, represent a relatively rare occurrence. They are mostly without any, or with humble, decoration in the form of geometric motifs and laid directly in the pit. However, there were also those richly decorated with figural motives. The most abundant ornaments on the Viminacium lead sarcophagi were applied using plastic tapes that divided the surface of the sarcophagus into triangles and rhombuses and were characteristic of the Jerusalem workshop. Lead sarcophagi found on the necropolises of Viminacium, although likely, in some way, could be related with Syria, were probably the product of local craftsmen, whose work was undoubtedly influenced by the population originating from the Orient. In any case, they were imported, but not as full and finished products, but as templates as expressions of the widely accepted fashion in a certain period, in this case from the 2nd to the 4th century. From the territory of Viminacium derive the largest number of lead sarcophagi, specially ornamented, but there were no Christian symbols on them. In most of the so-called lead sarcophagi found so far were buried children. The small percentage of burials in lead sarcophagi compared to others forms of burial at the Viminacium necropolises points to the special status of those buried in them.²⁵

In the 21st century, as part of the rescue excavations, research of the eastern necropolises has begun to lead to new significant discoveries.

The whole area of the eastern necropolises was threatened by the expansion of the Drmno open-cast coalmine. It should be noted that all excavations were preceded by geophysical prospects (Fig. 3), which have become obligatory and based on which archaeological excavations are planned.

At the eastern cemetery of Viminacium, with the toponym of "Pirivoj", the first excavations began in 1997, and were continued only in 2003. The necropolis is bi-ritual so 412 inhumations and 74 cremations have been researched. The site is especially important due to its mausoleum complex, measuring 20 x 20 m (Fig. 4). The mausoleum is unique since it is surrounded by a square wall built of stone

24 Andelković, Rogić, Nikolić 2010, 231.

25 Golubović 2002, 633.

Fig. 3 - Geophysical prospection at Viminacium



blocks. In the central part, there is the main building, measuring 5 x 5 m and built from greenschist stone bound with plaster and in the centre of the main building is the tomb. This form of burial, known as a *bustum*, is usually very rare and was even rather extraordinary at that time. The buried was cremated and had to be highly ranked in the Roman hierarchy. Other tombs surrounding this central one had notable inventories, among them about twenty gold artefacts and gilded fibulae.²⁶ Inhumations and cremations were placed outside the wall around the mausoleum. Among them was a tomb with a wall painting from the beginning of the 4th century. According to the images, it was a pagan tomb, but in the immediate vicinity there were also graves containing findings with Christian symbols. In grave G-212, the tile construction, besides other findings, a finger ring with a carved cross was found.²⁷

Another feature of the necropolis of Pirivoj, at the most eastern part of it, is a trench (5 x 5 m) with more than 100 graves containing both skeletons and cremat-

²⁶ Korać, Golubović, Mrđić 2009, 99.

²⁷ Golubović, Korać 2013, 41.



Fig. 4 – Mausoleum at Viminacium

ed individuals. Obviously, the deceased were buried in the trench over a rather short period of time.

At the site of “Kod Koraba”, located in the wider area of Viminacium, about 650 m southeast of the legionary fort, during research that lasted from 2005 to 2008, a previously unknown Roman necropolis was discovered, and 211 graves were researched, 132 graves of cremated deceased and 79 inhumations. According to the type of graves and artefacts found there, the necropolis is dated into the period from the middle of the 1st to the middle of the 3rd century, and only one grave is from the 4th century.²⁸

Due to the expansion of the coal mine to the east, rescue excavations were shifted and new data on the eastern part of the Viminacium necropolis is emerging. Namely, at the location Nad Klepečkom, now about 800 m east of the legionary fort, 111 graves of cremations and 94 inhumations, all dating from the 2nd and 3rd century, have been researched. Excavations started in 2008 and were completed in 2016. The remains of the road, trench and large buildings were discovered along the former Roman road that led from Viminacium to Lederata. Since the excavations were carried out until 2016, most of the area has been fully explored,

28 Bogdanović 2009, 83-110.

and the boundaries of the necropolis and the city have been defined, so this site is most likely the earliest part of the settlement of Viminacium.

Over 40,000 artefacts from graves of cremated or inhumated deceased, among which over 1,000 gold ones and some quite unique, have been found during 40 years of excavations at Viminacium.

SYSTEMATIC EXCAVATIONS IN THE 21ST CENTURY

At the beginning of the 21st century, a new phase of the Viminacium research began. Namely, since 2002, under the leadership of Miomir Korać, multidisciplinary research has begun, which includes, among other things, remote sensing, and anthropological, archaeobotanical, archeozoological and physical-chemical analysis. All data obtained is merged into a geographic information system (GIS). For aerial photography, remote control aircraft, drones, are used and for the documentation of the investigated units, photogrammetry and 3D modelling.

LEGIONARY FORTRESS

The research of the legionary fortress, whose foundation was determined by previous geophysical survey and analysis of the digital model, began in 2002 in the northern gate sector (*Porta Praetoria*). The remains of this gate, with massive street pavements, canals of a sewer system and richly decorated architectural elements, pointed to a powerful defence system of which the fortress was a part since it was built on the then northern border of the Empire (Fig. 5). In the layer of debris at the northern gate of the military camp (*Porta Praetoria*), under a massive square stone, a hoard of 136 bronze coins was found. The latest coin does not exceed the fourth decade of the 5th century.²⁹

The research of the legionary fortress continued in the area between the amphitheatre and the northern gate from 2015 (Fig. 6). In the excavated area, the northwest corner of the fortress was discovered, with a corner tower, a part of the

²⁹ Korać, Golubović, Mrđić 2009, 71.



Fig. 5 - Northern gate of the legionary fortress

north ramparts along the tower and the northern segment of the western ramparts. Based on these results, at least two phases can be clearly identified within the camp. The older phase was built of natural brick quarried in the close vicinity of the archaeological site, and it was dated in the last decades of the 1st century. The fortress built from stone could be only broadly dated to the 2nd century. In front of the corner tower, over a length of 10 m, a defensive rampart was explored, as well as a massive wall above it built of larger limestone blocks. A part of a defensive trench was explored in front of the western ramparts. A channel extends from the fort through the western ramparts and then descends to the bottom of the trench. The arced upper segment of the channel is made of brick bound with mortar, while from the section where the arc is most prominent, northwest towards the opening on the south side of the massive wall; the channel consists of limestone blocks. Four graves built of bricks were discovered in the researched area, one of them located along the western wall.

The results of the research have so far confirmed the existence of two basic phases of the fort's construction. The older phase comprised the remains of the ramparts and towers of "natural brick"³⁰ while in the younger phase the ramparts

³⁰ Locally referred to as "red stone".



Fig. 6 - Legionary fortress,
north-western corner

and towers are made of Greenschist facies stone. The rampart of the younger phase stretches along the north and west faces of the ramparts built of cut pieces of natural brick. The northern rampart was dug to a length of 120 m, while the west was discovered over a length of 220 m. In parts where the rampart was preserved in the negative, below the base, traces of small holes for piles of quadruple, oval or circular bases, whose base was spiked shaped were discovered. The wooden piles went partly into the base of the ramparts and were used to strengthen the earthen groundwork, i.e. to increase soil compaction.

West of the younger ramparts, and above the eastern side of the defensive trench, several late antique objects, built using the drywall technique, and belonging to different phases, were discovered.

In 2017, 22 graves from the Late Antique period were discovered along the western ramparts. The most common were children's graves, tombs built of tiles.

AQUEDUCTS

During 2003, excavations of the Roman aqueduct at Viminacium were undertaken (Fig. 7). More than 1,150 m of two parallel aqueduct channels were explored, from a total of more than 6 km that was mapped using a variety of remote sensing techniques. Excavations were preceded by a geophysical survey of the terrain, after which the precise route of the underground channels was determined. The rest of the water supply system has not been archaeologically researched. Undefined parts were further explored with georadar (GPR – Ground Penetrating Radar) and other methods of remote detection.³¹

It was concluded that the water for Viminacium came through three parallel aqueducts, and estimated that the aqueducts brought water from the hills and springs south east of the city from a distance of several kilometres to the area in front of the legionary fortress (*Castrum*) near the Eastern gate of the fortress. Water from the aqueduct was further distributed through a ceramic or lead pipe system to the end users. Elements of these distribution systems have been found all over the archaeological site.

Multiple aqueducts are most likely related to a large increase in population numbers. The oldest aqueduct can be dated into the end of the 1st century, while the other two are later but probably use same principle of gravity feed and terrain configuration, as well the same water source. The city that became a municipium (*municipium Aelium Viminacium*) and later a colony (*colonia Viminacium*) almost doubled in area and expanded in these decades with a huge increase of inhabitants and public buildings that required massive amounts of water (public baths - *thermae*).

During 2003 the territory on which aqueduct 2 was expected to be identified was researched using an aerial survey, geophysical and geomagnetic recording, as well as a field survey, and this was partially excavated in 2008. On that occasion, one of the castellums (*Castellum aquae*) was discovered and excavated. It was used as a drain and water supply reservoir, measuring 16.35 x 11.8 m and in a W-E orientation, into which both branches of the aqueduct and two pipelines constructed from ceramic pipes fed. The *Castellum aquae* was relocated to a protected location within the Archaeological Park and preserved, ready for presentation.

³¹ Korać, Mrđić, Mikić 2006, 7.

Fig. 7 - Roman Aqueduct of
Viminacium



AMPHITHEATRE

The systematic archaeological research of the amphitheatre began in late 2007, and continued until mid-July 2017. The research included: the arena and the wall around the arena, four gates of the amphitheatre and the rooms extending along the arena wall, as well as the area of the grandstands (Fig. 8). Excavations included research of the area around the amphitheatre itself. To the north of this building the city rampart was explored, while east and south east of the amphitheatre a rampart and gates flanked with two rectangular towers, a defensive tower east of the ramparts, as well as two buildings with an apse were discovered. South of the amphitheatre a street was researched, which led from the gate to the west, and two objects and parts of an older communication and drainage channels were discovered. In the area west of the amphitheatre, parts of several buildings were discovered: one built in the drywall technique, one with columns and one with an apse. Following the results of the excavations, it has been concluded that the amphitheatre was built at the beginning of the 2nd century and used until the first



Fig. 8 - Amphitheater at Viminacium

half of the 5th century. In the Late Antique period, a necropolis of inhumed deceased was formed in the amphitheatre area.³² The excavation of the amphitheatre showed the existence of at least three phases of construction, defined by changes in the structures. According to the results of the research, a wooden amphitheatre was first built during the first quarter of the 2nd century and the rule of Trajan, while the second phase, characterised by a construction of stone and wood, in the middle of the 2nd century, mainly relates to the reign of Hadrian. In the period from the second half of the 2nd century until the middle of the 3rd century, changes in the structure of the building were noticed, but at the end of the 3rd century or at the beginning of the 4th century, the amphitheatre was no longer operational, for reasons unknown. This area was abandoned and, in the second half of the 4th century, a necropolis was formed on it.³³ According to the results of the archaeological research, it was estimated that the amphitheatre could hold from 6,500 to 7,300 spectators in the second and third construction phases, while in the first phase, when it had only a wooden construction, 6,000 spectators could be accommodated.³⁴ The arena wall was painted, testified to by the various remains of wall

32 Excavations in 2017 completed the ten-year research of the amphitheatre and its surrounding area. The north-western part of the stands was left for future research and the possible use of new methodologies. About excavations see reports: Nikolić, Bogdanović 2012, 42-45; Nikolić *et al.* 2014a, 48-52; Nikolić *et al.* 2014b, 93-98; Nikolić *et al.* 2017, 63-70.

33 Nikolić, Bogdanović 2015, 553-554.

34 Nikolić, Bogdanović 2015, 550, 553

Fig. 9 - Roman Baths at
Viminacium



paintings found just next to the wall.³⁵ Below the auditorium of the amphitheatre, several structures were identified as *aediculae*, which were also painted.³⁶

BATHS (THERMAE)

The baths in Viminacium were researched in two periods, from 1973 to 1974, and from 2003 to 2007. So far, archaeological excavations have uncovered five apses (over the pools), a central space with a hypocaust under the floors from two periods and several peripheral chambers in the researched area of 825 m² (Fig. 9). Considering the number and layout of the walls that have been partially researched, extending more within all profiles, it can be concluded that the Viminacium baths were larger in size compared to the structure discovered by the previous research, or that they were part of a larger complex.³⁷ The Viminacium baths are the oldest thermal baths from the Roman period that have been excavat-

³⁵ Rogić, Bogdanović 2012, 46-49.

³⁶ Rogić 2014, 507-512

³⁷ Nikolić, Milovanović, Raičković 2017, 40.

ed in the territory of Serbia so far. The best researched baths from the territory of the Roman province of *Moesia Superior* are dated from the 3rd and 4th centuries.³⁸ The excavation of the baths showed that there were three phases of building and that the construction of each subsequent period grew on the ruins of the previous one.³⁹ The *Viminacium thermae* was in use since the second half of the 1st century AD to the end of the 4th century. The structures belonging to the earliest phase, from the 1st to the 2nd century, have been partially researched. The north-western part was most likely used only until the end of the 3rd century, when the baths were briefly out of function, while the other parts lasted even later, or were renewed in a different manner and used until the end of the 4th century, when the baths were definitely left after a fire which may be related to the period around 380 years and the Gothic invasion.⁴⁰ The latest excavations did not provide evidence that the building was in use after the 4th century, although after the research in 1974, such assumptions were made.⁴¹

The remains of wall paintings, fragments of marble ornamentation, window glass and mosaic tiles indicated that the *Viminacium* baths were luxuriously decorated. During previous research, a lot of ceramic and numismatic material confirmed several construction phases and they support the assumptions that followed the analysis of building techniques presented in the structures of the building.

38 Kuzmanović 1988, 15

39 Nikolić, Milovanović, Raičković 2017, 41

40 Nikolić, Milovanović, Raičković 2017, 40.

41 Kondić, Zotović 1974, 97.

SUBURBAN VILLAS

Several *villae rusticae* have been researched in the surroundings of Viminacium. On a map with the position and distribution of the *villae rusticae* around Viminacium, it is noted that the villas were distributed across a wider territory west, east and south of the city (Map 3). The villas at Livade kod Ćuprije,⁴² and Burdelj⁴³ were located 650 m, i.e. 1,100 m southwest of the city, near the Mlava River. Two villas were found 550 m south of the city, at the site Više Grobalja.⁴⁴ The villa at Rudine⁴⁵ was about 500 m west of the city, on the west bank of the Mlava. Five roman villas at the site of Rit were located a couple of hundred meters from the town and the military camp, northeast of the north-eastern corner of the *castrum*.⁴⁶ On the area east of the city, one villa was explored at the site of Na Kamenju,⁴⁷ three villas at the site of Nad Klepečkom⁴⁸, and one at the site of Stig.⁴⁹ The villa at site of Na Kamenju is located 1,800 m east of the military camp, the villas at the site of Nad Klepečkom 2,300 m east of the military camp, and the farthest villa, at the site of Stig, is 2,900 m east of the *castrum*. In the wider city area, the remains of villas were discovered in the villages of Drmno and Kravlji Do.⁵⁰ This suggests that many villas certainly existed in the wider territory of the *municipium*, in the fertile valley which, in modern times, is called Stig. Some of the villas could be defined as suburban, the suburban residences of richer citizens of the city, however, in some of them, findings confirm the economic and agricultural character of these buildings, so we can, with certainty, define them as *villae rusticae*.

For some of the villas, it is believed that they were in the vicinity of ancient communication routes. Thus, villa Na Kamenju was located directly by the road, at a distance of only 3 m, and a similar situation is apparent with the villas at the

42 Jovičić, Redžić 2011, 369.

43 Зотовић 1986, 51.

44 Redžić, Mrđić, Milovanović 2017, 51.

45 Поповић, Иванишевић 1988, 125-179.

46 Redžić, Jovičić, Danković 2017, 77-86.

47 Golubović, Korać 2010, 33-36; Jovičić 2011, 39-43

48 Jovičić 2011, 44-51; Redžić, Jovičić, Danković 2014; Jovičić, Redžić 2014.

49 Redžić, Raičković, Miletić 2006, 51.

50 Ђокић, Јацановић 1992, 75.



Map 3 - *Villae Rusticae* at Viminacium

sites of Rit and Više Grobalja. A road was also found at the locality of Nad Klepečkom, with the villa located 90 m north of it. There are also indications that the villa at Burdelj was located near an ancient communication that led from the city gates to the south. As for the architecture of the researched villas, they vary in size, from 230 to 730 m². The exception is one villa excavated at the site of Nad Klepečkom, which is 2,900 m² in size. The villas are square in shape, with several rooms organised around the central atrium or corridor. The walls of the excavated villas were built of solid materials, stone and mortar, in the *opus incertum* technique or from a combination of stone, brick and mortar, in the *opus mixtum* technique. Traces of a heating system (hypocaust), as well as traces of wall paintings were found in some of villas, but these are rare.

Roman villas in the vicinity of Viminacium are dated from the 2nd to the 4th century A.D. Three villas from the 2nd century were explored at the site of Nad Klepečkom, while two villas at the site of Više Grobalja and five at the site of Rit are dated to the 3rd century. The villas found at the sites of Na Kamenju, Livade kod Ćuprije, Rudine, Stig and Burdelj are dated into the 4th century.⁵¹

51 Jovičić, Redžić 2011, 378.

TEMPLE COMPLEX

The complex researched from 2002 to 2007, 800 m east of the military camp, consisted of eight buildings, with a length of 500 m.⁵² Fragments of bricks, pieces of green schists and red stone were scattered on the surface and, during the excavation, it was concluded that this was material from which the buildings were built. Numerous fragments of architectural plastic together with bronze coins were dated from most of the structures in the middle of the 3rd century, and from only two buildings in the 4th century. Unfortunately, the complex has been robbed for centuries and nothing has been left that could help us to precisely define the function of the buildings. According to the exceptional architectural ornamentation and the arrangement of the objects, the greatest similarities in architecture and arrangement of features leads to the search for analogies in the so-called temple complexes as defined, for example, in Kempton (*Cambodunum*)⁵³ or in Altbahtal (Altbachtal).⁵⁴

DISCUSSION AND CONCLUSION

After analysing the previous Viminacium research we could divide it into three basic phases:

- the first phase of research carried out at the end of the 19th and the beginning of the 20th century
- the second of large rescue excavations from 1973 to 1997
- the research conducted since 2001, characterised by the application of several methods of various sciences, first used in the preparation of archaeological excavations, and then for the documentation and final processing and interpretation of the results.

In the third phase the most up-to-date methods in recording and analysing georadar signals were used, as well as methods of artificial intelligence and prog-

52 Golubović, Korać 2010, 33-36.

53 Weber 2000.

54 Cüppers 1990, 588-91.

nostics with the aim of defining the space and obtaining 3D models. The focus of the third phase was mainly salvage excavations in the zone of the cemeteries and suburban settlements. The coal mine today spreads over 1,200 hectares of Viminacium's surrounding area. The "Kostolac B" thermo electric power plant covers an additional 120 hectares.

Paleodemographic analyses also confirms that Viminacium, from the 1st to the 4th century of the new era, was a major military and urban centre. After researching Viminacium in the 21st century, the excavations of its eastern necropolises, aqueducts and amphitheatre, which brought new data important for the interpretation of the population, the researchers came to the assumption that, in the second half of the 2nd century and at the beginning of the 3rd century, the city was home to some 30,000 inhabitants.⁵⁵

Considering that only a few buildings, part of the rampart with a gate and towers and one street have been archaeologically researched within the city itself and the Viminacium military fort, and that the largest excavations were carried out on the periphery, yielding results related to the necropolises, villas, roads and water supply systems, it is difficult to determine a complete urban matrix. However, geophysical research carried out on a large part of this territory has provided valuable information on the street system and the size of the city blocks, as well as the position of the main communications in the fort that was conceived in a similar way to other legionary fortresses of the Roman Empire.

The research of this city represents the basis for studying Roman provincial culture on the territory of today's Serbia. City itself is also the best witness to the process of Romanization and urbanization after military conquest. Extent of multidisciplinary research, protective excavation of city suburban zones and cemeteries reveals complex and diverse situation that had somewhat different life and evolution than the one we expected at the beginning of the project. This is only the beginning of the long scientific process that will lead us to the understanding of life at the provincial capital.

55 Korać, Mikić 2014, 9.

BIBLIOGRAPHY

Anđelković, Rogić, Nikolić 2010 – J. Anđelković, D. Rogić and E. Nikolić, Peacock as a Sign in the Late Antique and Early Christian Art. *Arheologija i prirodne nauke* 6, 2010, 231–248.

Borić-Brešković 1976 – B. Borić-Brešković, *Novac kolonije Viminacijum u zbirci Svetozara St. Dušanića*. Beograd 1976, 8–23.

Bogdanović 2009 – I. Bogdanović, Rezultati arheološko-geofizičkih istraživanja na lokalitetu Kod Koraba (istočna nekropola Viminacijuma). *Arheologija i prirodne nauke* 5, 2009, 83–110.

Cod. Theodos, X, 10, 4 - *Theodosian libri XVI cum Constitutionibus Sirmondianis et Leges novellae ad Theodosianum pertinentes*, ed. Th. Mommsen-E. Meyer Berlini 1903.

Cüppers 1990 – H. Cüppers, *Die Römer in Rheinland-Pfalz*. Stuttgart 1990, 588–91.

Ђокић, Јацановић 1992 – Д. Ђокић, Д. Јацановић, Топографска грађа Стига. *VIMINACIUM* 7, 1992, 61–110.

Fülep 1984 – F. Fülep, *Sopiana. The History of Pécs during the Roman Era and the Problem of the Continuity of the Late Roman Population*. Budapest 1984.

Garašanin 1968 – M. Garašanin, Razmatranja o nekropolama tipa Mala Kopašnica – Sase. *Godišnjak VI*, Centar za balkanološka ispitivanja, ANUBiH, knjiga 4, Sarajevo 1968, 5–34.

Golubović 2002 – S. Golubović, Decorated lead sarcophagi in Moesia Superior, LIMES XVIII, *Proceedings of the XVIIIth International Congress of Roman Frontier Studies held in Amman, Jordan (September 2000)*, BAR International Series 1084 (II) 2002, 629–640.

Golubović 1998 – S. Golubović, Graves of the Mala Kopašnica-Sase Type at the Viminacium Cemetery from an Aspect of their Ethnic Origin, *The Thracian World at the Crossroads of Civilizations II*. Bucharest 1998, 247–260.

Golubović 2008 – S. Golubović, *Grobovi u obliku bunara sa nekropola Viminacijuma*. Beograd 2008.

Golubović, Korać 2013 – S. Golubović, M. Korać, Grave inventory - a reflection of the belief of the deceased. *Tibiscum* 3, 2013, 37–46.

Golubović, Korać 2010 – S. Golubović, M. Korać, The recent discovery of a temple complex at Viminacium. *Bolletino di Archeologia* on line, Roma 2010, 33–36.

Jovanović 1984 – B. Jovanović, Les sculptures de la necropole celtique de Pećine près de Kostolac (Serbie du nord). *Études Celtiques XXI*, Paris 1984.

Jovanović 1985 – B. Jovanović, Nekropola na Pećinama i starije gvozdeno doba Podunavlja. *Starinar XXXVI*, Beograd 1985, 13–18.

Jovičić 2011 – M. Jovičić, *Vile rustike na teritoriji Viminacijuma*, Master rad, Beograd 2011.

Jovičić, Redžić 2011 – M. Jovičić, S. Redžić, Late Roman Villa on the Site Livade kod Čuprije - A Contribution to the Study of Villae Rusticae in the Vicinity of Viminacium. *Archaeology and Science*, 7, 2011, 369–385.

Jovičić, Redžić 2014 – M. Jovičić, S. Redžić, Istraživanje antičke vile rustike na lokalitetu Nad Klepečkom (Viminacijum) u 2013. godini, *Archaeology in Serbia. Projekti Arheološkog instituta u 2013. godini*. Beograd 2014, 54–59.

Kanitz 1892 – F. Kanitz, *Römische Studien in Serbien*, Denkschriften der kaiserlichen Akad. der Wiss. in Wien 1892, 16–20.

Kondić, Zotović 1974 – V. Kondić, Lj. Zotović, Viminacium – rezultati arheoloških istraživanja u 1974. godini. *Arheološki pregled* 16, 1974, 94–97.

Korać 1993 – M. Korać, Late Roman Tomb with Frescoes from Viminacium. *Starinar* XLII, 1993, 107–122.

Korać 2007 – M. Korać, *The Paintings of Viminacium, Die Malkunst Viminaciums* (Slikarstvo Viminacijuma). Center for New Technologies, Beograd 2007.

Korać, Golubović, Mrđić 2009 – M. Korać, S. Golubović, N. Mrđić, *Itinerarium Romanum Serbiae*. Belgrade: Centre for New Technology 2009.

Korać, Golubović 2009 – M. Korać, S. Golubović, *Viminacium. Više grobalja, tom 2*. Belgrade: Archaeological Institute 2009.

Korać, Mikić 2014 – M. Korać, Ž. Mikić. *Antropološka kolekcija Viminacium I: nekropola Pećine*. Beograd: Centar za nove tehnologije Viminacium i Arheološki institut 2014.

Korać, Mrđić, Mikić 2006 – M. Korać, N. Mrđić, M. Mikić, Kartiranje rimskog akvedukta na Viminacijumu uz pomoć globalnog sistema za pozicioniranje (GPS). *Arheologija i prirodne nauke* 2, 2006, 7–20.

Кузмановић 1988 – И. Кузмановић, Архитектура касноантичких и рановизантијских терми на територији Југославије. *Свеске* 19 1988, 15–21.

Marsigli 1726 – L. F. Marsigli, *Danubius pannonico-mysicus, observationibus geographicis, astronomicis, hydrographicis, physicis, perlustratus*. Hagæ Comitum: Apud P. Gosse, R. Chr. Alberts, P. De Hondt ; Amstelodami : Apud Harm. Uytwerf & Franç. Changuion 1726.

Milošević 1971 – P. Milošević, Earlier Archaeological Activity in Sirmium. *Sirmium* II 1971, 3–13.

Mirković 1968 – M. Mirković, *Rimski gradovi na Dunavu u Gornjoj Meziji*. Beograd: Arheološko društvo Jugoslavije 1968.

Mirković 1986 – M. Mirković, *Inscriptions de la Mésie Supérieure*, Vol. II. Beograd 1986.

Nikolić, Milovanović, Raičković Savić 2017 – E. Nikolić, B. Milovanović, A. Raičković Savić, Contribution to the Study of Roman Architecture in Viminacium: Research of Thermae Masonry Techniques. *Archaeologia Bulgarica* XXI 2017, 39–57.

Nikolić et al. 2014a – S. Nikolić, I. Bogdanović, Lj. Jevtović, G. Stojić, Archaeological research of the Viminacium amphitheater in 2013, in: D. Antonović (ed.) *Archaeology in Serbia. Projects of the Archaeological Institute in 2013*. Belgrade 2014, 48–52.

Nikolić et al. 2014b – S. Nikolić, Lj. Jevtović, G. Stojić, Archaeological research of the area of the Viminacium amphitheater in 2014, in: I. Bugarski, N. Gavrilović Vitas, V. Filipović (eds.), *Archaeology in Serbia. Projekti Arheološkog instituta u 2014 godini*. Beograd 2014, 93–98.

Nikolić, Bogdanović 2012 – S. Nikolić, I. Bogdanović, Research of the Viminacium Amphitheater in 2011, in: *Archaeology in Serbia: Projects of the Archaeological Institute in 2011*, V. Bikić, S. Golubović, D. Antonović (eds.). Belgrade 2012, 42–45.

Nikolić, Bogdanović 2015 – S. Nikolić, I. Bogdanović, Recent excavations on the amphitheatre of Viminacium, in: *Proceedings of the XXIIInd International Congress of Roman Frontier Studies held in Ruse, Bulgaria* (September 2012). Sofia 2015, 547–555.

Nikolić et al. 2017 – S. Nikolić, Lj. Jevtović, G. Stojić, D. Rogić, Archaeological research of the area of the Viminacium amphitheater in 2015, *Archaeology in Serbia. Projekti Arheološkog instituta u 2015. godini*. Beograd 2017, 63–70.

Поповић, Иванишевић 1988 – М. Поповић, В. Иванишевић, Град Браничево у средњем веку, *Старинар* XXXIX 1988, 125-179.

Prisci Panitae fragmenta, ed. Dindorf, HGM I. 1870.

Redžić, Raičković, Miletić 2006 – S. Redžić, A. Raičković, V. Miletić, Arheološka istraživanja lokaliteta Stig na osnovu georadarskih ispitivanja, *Arheologija i prirodne nauke 1* 2006, 47–56.

Redžić, Jovičić, Danković 2014 – S. Redžić, M. Jovičić, I. Danković, Iskopavanja na lokalitetu Nad Klepečkom (Viminacijum). *Archaeology in Serbia. Projekti Arheološkog instituta u 2012. godini*. Beograd 2014, 62–65.

Redžić, Jovičić, Danković 2017 – S. Redžić, M. Jovičić, I. Danković, Iskopavanja na lokalitetu Rit (Viminacijum) u 2014. godini. *Archaeology in Serbia. Projekti Arheološkog instituta u 2014. godini*. Beograd 2017, 77–86.

Redžić, Mrđić, Milovanović 2017 – S. Redžić, N. Mrđić, B. Milovanović, Zaštitna arheološka istraživanja na lokalitetu Više grobalja 2015. godine. *Archaeology in Serbia. Projekti Arheološkog instituta u 2015. godini*. Beograd 2017, 49–56.

Rogić, Bogdanović 2012 – D. Rogić, I. Bogdanović, Slikana dekoracija zida arene amfiteatra u Viminacijumu. *Archaeology in Serbia. Projekti Arheološkog instituta u 2011. godini*. Beograd 2012, 46–49.

Rogić 2014 – D. Rogić, Wall decoration of the Viminacium amphitheatre. In: *Antike Malerei zwischen Lokalstil und Zeitstil (Aktendes XI Internationalen Kolloquiums der AIPMA (Association Internationale pour la Peinture Murale Antique, Band 23, ed. N. Zimmerman, Verlag der Österreichischen Akademie der Wissenschaften. Wien 2014, 507–512.*

Seeck 1919 – O. Seeck, *Regesten der Kaiser und Päpste für die Jahre 311 bis 476 n. Chr.* Stuttgart 1919.

Theophylacti Simocatae, Historia. ed. De Boor. Lipsae 1887.

Vasić 1905 – M. Vasić, Funde in Serbien, *Archaeologischen Anzeiger* 2 1905, 102–109.

Vasić 1895 – М. Васић, Колонија Виминацијум – археолошка студија, *Старинар* XII, 1895 1-61.

Vasić 1907 – М. Васић, Неколике гробне конструкције из Виминацијума, *Старинар* н.р. II, 1907, 66–98.

Валтровић 1884 – М. Валтровић, Откопавања у Костолцу, *Старинар* I 1884, I, 3–15; I-2, 49–63; I-3, 91–114; I-4, 121–142.

Weber 2000 – G. Weber (Hg.), *Cambodunum-Kempten. Erste Hauptstadt der römischen Provinz Raetien?* Mainz 2000.

Zeiller 1918 – J. Zeiller, *Les origines chrétiennes dans les provinces danubiennes de l'empire romain.* Paris 1918.

Зотовић 1986 – Љ. Зотовић, Јужне некрополе Виминација и погребни обреди, *Viminacivm* I 1986, 41–60.

Зотовић, Јордовић 1990 – Љ. Зотовић, Ч. Јордовић, *Viminacivm I, некропола Више Гробаља.* Београд 1990.

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