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INSTITUTE OF ARCHAEOLOGY
Monographies 66

MIOMIR KORAĆ

# VIMINACIUM
# URBS ET CASTRA LEGIONIS
## Research, Protection, Presentation and Valorisation

BELGRADE
2019


I DEDICATE THIS BOOK TO MY
BELOVED WIFE, WHO HAS ALWAYS
BEEN MY TRUE INSPIRATION
AND MY UNCONDITIONAL SUPPORT

# CONTENTS

# Research

MY DEAR FRIEND,

AFTER AN EXHAUSTING MARCH OF MANY DAYS THROUGH THE GORGES AND CUTS OF THE RIVER DANUBIUS, THIS MORNING I FOUND MYSELF IN A WIDE
THE WEST FROM CUPPAE, THE WEATHER TURNED BRIGHT AND I REACHED VIMINACIUM IN DAYLIGHT AND A SWELL DAY. I, FLAVIUS GRATIANUS, S
WESTERN
ROMAN EMPIRE. VIMINACIUM... IT USED TO BE SUCH A RADIANT TOWN! MONUMENTAL TEMPLES, WIDE STREETS, LUXURIOUS VILLAS, EXTENSIVE BATH
PREVIOUS GLORY. IN THE TOWN ITSELF, SOME OF THE HOUSES AND PUBLIC BUILDINGS HAVE BEEN RESTORED, AND LIFE IS SLOWLY RETURNING. BUT IN TH
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IN MY LIFETIME, ALBEIT SHORT, HAVE I NOT SEEN A TOWN WITH SUCH A GOOD LOCATION. ROADS LEADING TO THE SOUTH TO NAISSUS AND HELLAS DIVER
TRAVELLING ALONG THE DANUBIUS WE WOULD QUICKLY REACH PANNONIA, NORICUM, RAETIA OR DACIA. WHEREVER YOU LOOK, YOU SEE ORCHARDS, T
CONTROL. AND THEN, IN A MOMENT, WHEN YOUR GAZE FALLS ON THE RUINS OF THE CAMP OF THE LEGION VII CLAUDIA AND THE DEVASTATED GREAT TE
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ONE THAT IN THE YEAR 42 WAS NAMED „CLAUDIA PIA FIDELIS" BECAUSE IT WAS SO LOYAL DURING THE MUTINY OF SCRIBONIANUS IN DALMATIA... BEFOR
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OF THE BARBARIANS, THIS COULD ALL BE IN VAIN. STILL, ALTHOUGH THEY CANNOT REBUILD EVERY SINGLE HOUSE, THEY MUST REBUILD THE FORT. THE TERRIT
ABLE CAIUS DID I FIND OUT THAT DURING THE WARS OF MARCUS ULPIUS TRAJANUS (97-118) AGAINST THE DACIANS FROM THE YEAR 101 TO THE YEAR 106, VIM
CITY AND IT WAS PROCLAIMED A MUNICIPIUM. IT STARTED TO DEVELOP RAPIDLY AND IT BECAME A LEGAL AND ZADMINISTRATIVE CENTER. AND THEN, AS OU
STARTED PLUNDERING THE COUNTRY, ONCE AGAIN, VIMINACIUM BECAME A HUGE MILITARY BASE AND A MEETING POINT FOR THE TROOPS FROM ALL OVER. T
THE EAST, PLAGUE ALSO REACHED THE CITY. NOT A SINGLE HOUSE NOR A FAMILY NOR EVEN A CENTURIA REMAINED SPARED. THEY CITY STOOD STILL, ECHOING W
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IN THE TOWN ITSELF, A VERY OLD MASTER-PAINTER, USED TO LIVE. I CANNOT REMEMBER HIS NAME, BUT I KNOW THAT IN PAINTING FRESCOES FOR VILLAS AND GR
FEAST WITH ALL KINDS OF SPECIALTIES USED TO LAST FOR DAYS. GLAMOROUS SPECTACLES WERE PLAYED IN THE AMPHITHEATER. I FELT MY GUIDE CAIUS' GREAT SORR
AGAIN ENJOY EVERYTHING THAT A MAN OF HIS KNOWLEDGE AND CULTURE CAN APPRECIATE. UNFORTUNATELY, THIS CONVERSATION OF OURS WAS INTERRUPTED
BRITANNIA IS NOT ENOUGH FOR HIM! AND I STARTED THIS TRIP WITH A BAD PREMONITION. SHALL I ENCOUNTER HIM SOMEWHERE AROUND LUGDUNUM? IT JUST C
IN THIS CITY COULD ALSO BE A GOOD OMEN FOR ME. I HAVE TO RUSH! UNTIL WE SEE EACH OTHER AGAIN, MY DEAR AND FAITHFUL FRIEND.

VIMINACIUM
MCCCCVI A.V.C.
D.N. FLAVIUS GRATIANUS P. F. AVG
(D.N. A LETTER THAT HAS NOT BEEN PRESERVED BUT WOULD HAVE POSSIBLY BEEN WRITTEN TO THEODOSIUS BY GRATIANUS)

HISTORY SAYS: DURING THIS TRIP, GRATIANUS WAS ABANDONED BY HIS TROOPS. HE TRIED TO ESCAPE BY MOVING TOWARDS THE ALPS, BUT HE WAS CAUGHT AND MURD
HISTORY SAYS: IN 441, VIMINACIUM WAS DEVASTATED BY THE HUNS. ALTHOUGH IT WAS RENEWED, IT NEVER REACHED THE IMPORTANCE AND GLAMOUR IT POSSESSED D


ON THE WAY TO LUGDUNUM
E PLAIN CLOSE TO THE CAPITAL. DURING THE TRIP, RAIN AND STORMS FOLLOWED US, BUT AS WE REACHED THE PLAIN TO
ON OF VALENTINIANUS I. AUGUSTUS AT THE AGE OF SEVEN AND, AS MY FATHER DEPARTED IN 375, THE RULER OF THE
S, ITS AMPHITHEATER... THE BARBARIANS DEVASTATED IT A FEW YEARS AGO AND NEARLY NOTHING REMAINED OF ITS
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S MY BEST GENERALISSIMUS, TO SHARE THE DUTY WITH ME AND PROTECT ME FROM SYCOPHANTS AND ENEMIES, I WOULD
MY FAITHFUL MEN TO A LITTLE FORT OUTSIDE THE CITY, FROM WHICH I HAVE A PERFECT VIEW OVER THE ENTIRE PLAIN.
GE THERE; TO THE EAST, THE VIA LEDERATA LEADS TO THE LAND OF THE DACIANS. RIVERS HERE ARE WIDE AND NAVIGABLE.
ILLED FIELDS, FORESTS. PEOPLE ARE ALL OVER THE FIELDS, WORKING DILIGENTLY; ONE WOULD SAY THAT EVERYTHING IS UNDER
MPLE OF THE CAPITOLINE TRIAD, YOU BECOME AWARE OF THE RECENT DESTRUCTION. AND THE MILITARY CAMP WAS A WON-
THE DISTANCE. AND WHAT TO SAY ABOUT THE PORTA PRAETORIA! IMPOSING ARCHITECTURAL FEATURES! NOWHERE HAVE I
UT ONE MADE OF EARTH. AT THE VERY BEGINNING, BEFORE THE FAMOUS LEGION VII MACEDONICA WAS STATIONED HERE. THE
E IT, POSSIBLY THE LEGION IV SCYTHICA OR V MACEDONICA... YES! I REMEMBERED NOW MY FAVORITE ANNALES BY TACITUS,
LAND, IN OESCUS, RATIARIA AND NAISSUS. AND THEN, THE LEGION VII CLAUDIA ARRIVED HERE FROM DALMATIA. SOMETIMES
ITALY TO FIGHT CIVIL WARS, AFTER THAT AND UPON RETURN ONLY TO HAVE TROUBLE WITH REBELLIOUS TRIBES ON THE OTHER
TO SHOW ME THE CITY OR EVEN BETTER, WHAT REMAINED OF IT. THIS COURAGEOUS MAN NAMED CAIUS URSIUS CERTAINLY WAS
E BY, BUT HIS STORY ABOUT THE CITY DID NOT LEAVE ME INDIFFERENT. I LEARNED THAT IN THE IST CENTURY, BEFORE IT CONTINUED
UTINY OF CIVILIS AND BEFORE IT ARRIVED IN MOESIA, IT WAS STATIONED IN DALMATIA, IN BURNUM. SOME OF ITS SOLDIERS WERE
AFTER THE MUTINY OF THE LEGIONS XIV GEMINA AND XXI RAPAX IN THE MILITARY FORT OF MOGONTIACUM IN GERMANIA, LED BY
EN THREE LEGIONS WERE STATIONED WITHIN THE SAME FORT. AND WHICH POSITION OF TROOPS DID I ENCOUNTER. ON THE DANUBIAN
UXILIARY AND OTHER UNITS. OUT OF THAT NUMBER., ONLY IN VIMINACIUM THERE IS ALMOST ONE THIRD OF MOESIAN FORCES. THE
ON I ARRIVED WITH HAD ONLY SOMEWHAT MORE THAN ONE THOUSAND MEN. I WAS FORTUNATE TO HAVE AN AUXILIARY COHORT OF
DILIGENT INHABITANTS, FACING A LONG-LASTING RENOVATION. BUT, AS NEWS ARRIVE FROM THE BORDERS ABOUT NEW MOVEMENTS
ORY IS RICH IN WOODS, SO MANY PARTS ARE REBUILT IN WOOD AND THEY SHOULD SOON BECOME CASTRA AESTIVA. FROM THE HONOR-
MINACIUM WAS THE MAIN MILITARY BASE FOR ROMAN TROOPS. DURING THE REIGN OF P. AELIUS HADRIANUS (118-138) IT GREW TO BE A
R WISE EMPEROR MARCUS AURELIUS RULED (161-180) AND AS THE ROXOLANES, SARMATIANS AND IAZYGES CROSSED THE DANUBIUS AND
HE EMPIRE. AT THAT TIME, GREAT PESTILENCE OCCURRED AMONG THE SOLDIERS AND THE CITIZENS, SINCE ALONG WITH THE TROOPS FROM
VITH ENDLESS CRIES AND MOURNS. BUT IN THE YEAR 196, LUCIUS SEPTIMIUS SEVERUS (193- 211) CHOSE THIS CITY TO PROCLAIM HIS ELDER SON,
VAS THE STARTING POINT FOR THE GOLDEN AGE OF VIMINACIUM. DURING THE SHORT REIGN OF GORDIANUS III (238-244), THE CITY BECAME
N GAINED ITS OWN MINT AND IT REACHED ITS GREATEST ECONOMIC AND POLITICAL PEAK, AT THE POINT WHEN ALL THE OTHER PARTS OF THE
EXING THROUGH PERMANENT FIGHTS OVER THE THRONE. ACTUALLY, THE LEGION VII CLAUDIA OFTEN GAVE ITS FULL SUPPORT TO THE FUTURE
ATICAL TURN EXACTLY IN THESE AREAS. FOR EXAMPLE, AT THE END OF THE LAST CENTURY, ONE OF THE LAST BATTLES FROM THE DARK PERIOD
NLY ONE OF HIS CENTURIONS HAVE NOT VICIOUSLY KILLED HIM! DIOCLETIANUS GRABBED THE EMPIRE AND HE HIMSELF VISITED THE CITY TWICE.
ARS AGO, EVEN THE APOSTATE IULIANUS TRESPASSED THE AREA AND STOPPED AT THE BANKS OF THE RIVERS MLAVUS AND DANUBIUS. MAYBE
CE HE EXCLAIMED "VIMINACIUM, LUMINE MEUM!". MY CAIUS SAID THIS TO ME, CLAIMING THAT HE HIMSELF HAS HEARD HIM. HOWEVER, THIS
LSO TOLD ME THAT THE CHRISTIAN COMMUNITY OF THE CITY IS VERY STRONG AND THAT THE VIMINACIUM EPISCOPE TOOK PART IN THE SERDICA
IMES, NOW MOSTLY LYING IN RUINS. OVER THE PAST YEAR., SEVERAL TEMPLES HAVE BEEN RENEWED AND BELIEVERS REGULARLY MEET IN PRAYER.
USED TO BRING LUXURIOUS GOODS, WHILE LOCAL CRAFTSMEN RECEIVED OVERORDERS FROM WEALTHY CITIZENS.
AVE MEMORIALS HE SURPASSED HIS SPIRITUAL TEACHER, THE FAMOUS FLAVIUS CHRYSANTIUS. ONE USED TO DRINK AND EAT FROM SILVERWARE.
ROW OVER THE PAST TIMES AND I BEGAN COMFORTING HIM WITH THE IDEA THAT THE TOWN WOULD SOON RECOVER. FULLY AND THAT HE WOULD
BY A MESSENGER. WITH BAD NEWS ABOUT THE MUTINY IN THE GAUL. THE USURPER. NEVER. HOLDING HIS PEACE. THE MAGNUS MAXIMUS! AS IF
OCCURRED TO ME THAT CARACALLA WAS BORN IN LUGDUNUM AND EXACTLY IN THIS CITY DID HE LIVE HIS BEST MOMENTS. MAYBE STAYING
ERED IN LUGDUNUM ON AUGUST 25TH, 383.
URING THE 3RD CENTURY.

Stone relief found at Čair site

Moesia with bull and lion, symbols of the legio VII Claudia and legio IIII Flavia. The only known emblem of the province apart from standard coin reverses issued in Viminacium mint

I am assured that in some fifty years, Viminacium will be one of the most important (archaeological) sites in the world. Its importance will not be reflected in the preservation degree of its walls and ramparts, but in information and most of all knowledge Viminacium shall give us. My team that I am very proud of will make that happen.

## INTRODUCTION

The story of the glamour and downfall of the Roman city and military camp of Viminacium has drawn the attention of not only the domestic but also the international scientific public, who eagerly anticipate that Viminacium will take its rightful place in the first rank among the world's cultural monuments.

The ancient city of Viminacium is exceptional in terms of the surface area unencumbered for archaeological investigation (over 1,100 acres/450 hectares for the greater metropolitan area and 540 acres/220 hectares in the city territory proper).[1] During the last five decades, the Viminacium necropolis has been excavated and over 14,000 graves identified.

The Viminacium project includes a multidisciplinary team consisting of experts in different research fields. Apart from archaeologists, it includes mathematicians, electrical engineers, geophysicists, geologists, petrologists, and experts in artificial intelligence, remote sensing, three-dimensional modelling and formal analysis. Their wish is that the squares and temples, theatres and the hippodrome, baths, streets and city quarters become parts of the Serbian and world heritage and a recognisable symbol of the Serbian Danube valley.

The information gathered to date allows us to conclude that the present-day territories of the villages of Stari Kostolac and Drmno, which are located about 2 miles/3 kilometres from Kostolac and 60 miles/100 kilometres south-east of Belgrade, lie within the limits of the urban territory of the ancient city of Viminacium, the capital of the Roman province of Moesia Superior, which was called Moesia Prima during Late Antiquity. During Roman times, the northern part of the city was established along one of the Danube anabranch, while on its western side, its city walls were situated next to the river Mlava. Only in later periods was Viminacium spread to the left Mlava bank, too.

[1] The terms "greater metropolitan area" and "city territory proper" do not correspond to the territory on which the city was situated. It is known that the city relied on agriculture and was not limited to the urban settlement itself, but also included a broader area, the so called *ager* or *territorium*.


**Fig. 1**

Fig. 2

Fig. 3

Fig. 4

Fig. 5




## HISTORICAL SOURCES

The legionary fortress of Viminacium certainly came into existence when the Roman Empire spread to the Balkans region (Popović, V., 1968, 29–50), probably during the early decades of the 1st century A.D. when the Romans first reached the Danube (Mirković, M., 1968, 23; Garašanin, M., 1974, 59).[2] The discovery of a Celtic necropolis at the "Pećine" site at Viminacium clearly indicates that it is situated at the former territory of the Celtic tribe Scordisci. In his "Geography", Strabo writes that the tribe of Small Scordisci lived here together with Thracian tribes. (Strabon VII, 318). The size and importance of the base originated from a number of factors, among which should certainly be mentioned the rich agricultural hinterland in the Mlava river valley where Viminacium is situated and its important strategic location within the defensive system of the northern frontier of the Empire and also in regional communications and trade networks. The Roman author Solin writes that Moesia was also known as *Moesia Cerrina* (*Cerraris horeum*) (Fluss, RE, Moesia, 2362).

The year in which Viminacium was established could not be precisely determined. Mommsen has the opinion that the province was established in the year 20 B.C., while some other authors consider that it occured at the turn of the New Era. Max Fluss thinks that it could not have been established before the year A.D. 44. The earliest epigraphic monuments from Viminacium belong to the legionaries of the legions *VII Claudia* and *IV Flavia*. *Legio VII Claudia* was transferred to Moesia in the year 56/57 or 45 and it was stationed in Viminacium. Ever since the time of Tiberius' rule, as a legionary fortress, it must have played an important defensive role (Mirković, M., 1986, 25–29).

Also location of the legionary camp was important and later of the city itself, and later the city, at a junction of roads linking the northern part of the Balkan peninsula with other parts of the Empire in all directions. One road led south in the Balkan Peninsula through Moesia Su-

[2] M. Mirković shares the opinion of M. Garašanin that the first military camp (*praesidium*) in Singidunum was organised during the time of Lentulus, in the years 6, 9 or 11.

**Fig. 6**

perior towards Macedonia and Greece. The second road, starting in Pannonia, extended along the Danube to the mouth of the river at the Black Sea. Yet another road connected Viminacium to the north with the Roman province of Dacia, through the neighbouring fort at Lederata, the modern village of Ram. Although the primary function of these roads was military and strategic in nature, they were also in constant use by commercial travellers throughout antiquity and certainly contributed to Viminacium's role as a prosperous trading and manufacturing centre (Mirković, M., 1968, 56).

Viminacium's importance is also reflected in the number of times it is mentioned in ancient literary sources, extending from the 2nd to the 9th century. References are made by Ptolemy in the 2nd century, by Julius Honorius in his *Cosmographia* from the 5th and partly from the 6th century (Geografii Latini minores: Iulii Honorii Cosmographia, Prolegomena, XXI, XXXVI; Iulius Honorius, RE X), which reflects the situation from the 4th century, and also in *Augusta – Vita Severi* (SHA, vita Severi 10, 3, LCL, London). It is also mentioned in Hierocles' *Synecdemus*, as well as in all Roman itineraries which remained preserved: the *Tabula Peutingeriana*, *Itinerarium Antonini, Itinerarium Burdigalense, Notitia dignitatum*, *Codex Theodosianus* and *Codex Iustinianus*. There are also references by later writers, Theophylactus Simocatta, Theophanes the Confessor and Anastasius Bibliothecarius. In Latin sources, it is sometimes designated as *Viminatio*, for example in the *Tabula Peutingeriana* (Tabula Peutingeriana, 217, 5); sometimes as *Viminacio* or *Euminacio*, for example in the *Itinerarium Antonini Augusti* (Itineraria Romana I: Itineraria Antonini Augusti, 133, 3,); and also as *civitas Viminacio* in the *Itinerarium Burdigalense* (Itineraria Romana I: Itineraria Burdigalense, 564) from the year A.D. 333.

In Greek sources, Viminacium is mentioned for the first time in Ptolemy's *Geography*, appearing as *Uiminakion (Ούϊμινάκιον)*. On Ptolemy's map, Viminacium features prominently. In *Cosmografia* by Iulius Honorius, Viminacium is mentioned as *campo Viminacio ..."Fluvius Margus nascitur in campo Moesiae alluens Viminatio excurrensque infundit se in Danuvium supra dictum ..."*. (GLM: Iulii Honorii Cosmographia, XXI, XXXVI), Priscus (Prisci, Panitae frag. 2, 280 and 8, 305. et passim.), refers to it as *Biminakion (Βιμινάκιον)*, and Procopius (Procopius, De aedif., IV, 5) uses the same designation, while Theophanes (Theophanis, Chronographia, 24) calls it *Bimenakion (Βιμηνάκιον)*. In a profane geographical manuscript from the first half of the 6th century, known as Hierocles' *Synecdemus* (Itin. Hierosoli., 657, 2), Viminacium is designated as the *Bimenakion metropolis*. In the *Notitia Dignitatum utriusque imperii pars orientis*, which reflects the situation on the Danube frontier before the year 376, more specifically in the era of Valentinian I and Valens, Viminacium is mentioned as the base of the VII Claudia Legion (*Legio VII Claudia*). The legion is indicated as having a *praefectus legionis septimae Claudiae*, as well as having a *cuneus equitum promotorum.* It is also a base for the Danube fleet with a *praefectus classis Histricae Viminacio*.

According to the standard historical interpretation, primarily relying on Priscus' text, Viminacium perished in a Hunnic attack in 443, which is also documented with numismatic hoard finds. The best-known coin found from that period to date is an issue of Theodosius II. Later, in the 9th century, the presbyter-cardinal Anastasius Bibliothecarius, in his work *Chronographia Tripartita* (23), refers to Viminacium as *Viminacium* (Chronographia Tripartita, 23, 173). Still, this source does not reflect the situation from the 5th and the 6th centuries, but depicts the situation from the 9th century.

In itineraries, Viminacium is always depicted on crossroads. In the *Tabula Peutingeriana*, Viminacium is described as a place with connections in all directions. From the west, a road comes from Sirmium via Singidunum and Margum, and continues eastward and southward. Itineraries mention that Viminacium is X miles from Margum. To the south, the road went on to Naissus, the first stop on the way being *Munecipio* (Chronogr. Tripartita, 23) or *Municipio* (Tab. Peut. and Itin. Ant. 134, 1), XVIII *milia passuum* from Viminacium. A somewhat different picture is shown in the *Itinerarium Burdigalense* (Itineraria Romana I: Itin. Burdig., 564, 10.) which indicates a *mutatio Ad Nonum* between Viminacium and *Municipium*. The roads to Dacia and down along the Danube did not diverge at Viminacium but at some distance to the east of the city.

According to *Tabula Peutingeriana*, the road to Dacia branched off at a distance of X *milia passuum* from Viminacium *via Lederata,* then passed through Apofi, XII *milia passuum* further on, and on to Arcidava on the left bank at a distance of XII *milia passuum*. Lederata (Byzantine *Litterata*) is usually considered


DESCRIPTIO · NONAE · TABVLAE · EVROPAE ·
CARPATES MONTES
IAZIGES METANASTAE
DACIA
PANNONIAE INFERIORIS PARS
ILLIRIDIS DALMATIAE LIBVRNIAE PARS
MYSIA SVPERIOR
THRACIA
EVXINI PONTI PARS
PONTI ET BITHINIAE PARS
ASIAE PROPRIAE PARS
MACEDONIAE PARS
IONII PELAGI PARS
SIGEVM
CHERSONESVS
HELLESPONTVS

Fig. 7


DESCRIPTIO · QVINTAE · TABVLAE · EVROPAE ·
MAGNIAE GERMANIAE PARS
RE TIA
VIN DELI CIA
NORICVM
PANNONIA SVPERIOR
PANNONIA INFERIOR
IAZIGVM METANASTARVM PARS
DACIAE PARS
ILLIRIS
DALMATIAE
ADRIATICVS SINVS
ITALIÆ PARS
TYRRENI PELAGI PARS

Fig. 8


APHRICA
ETHIOPIA INTERIORE
ASIA
INDIA
SCITHIA
TERRA INCOGNITA

Fig. 9

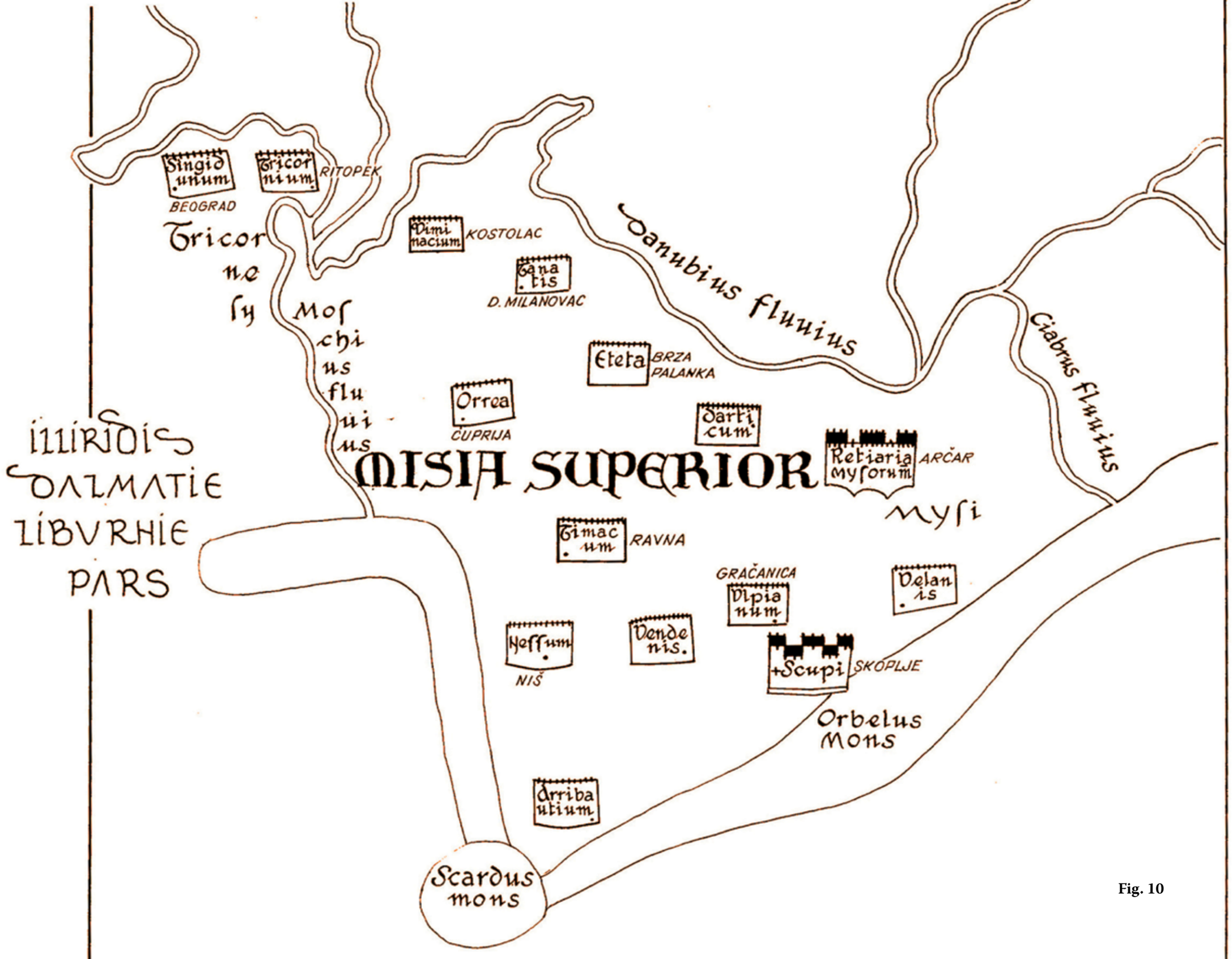
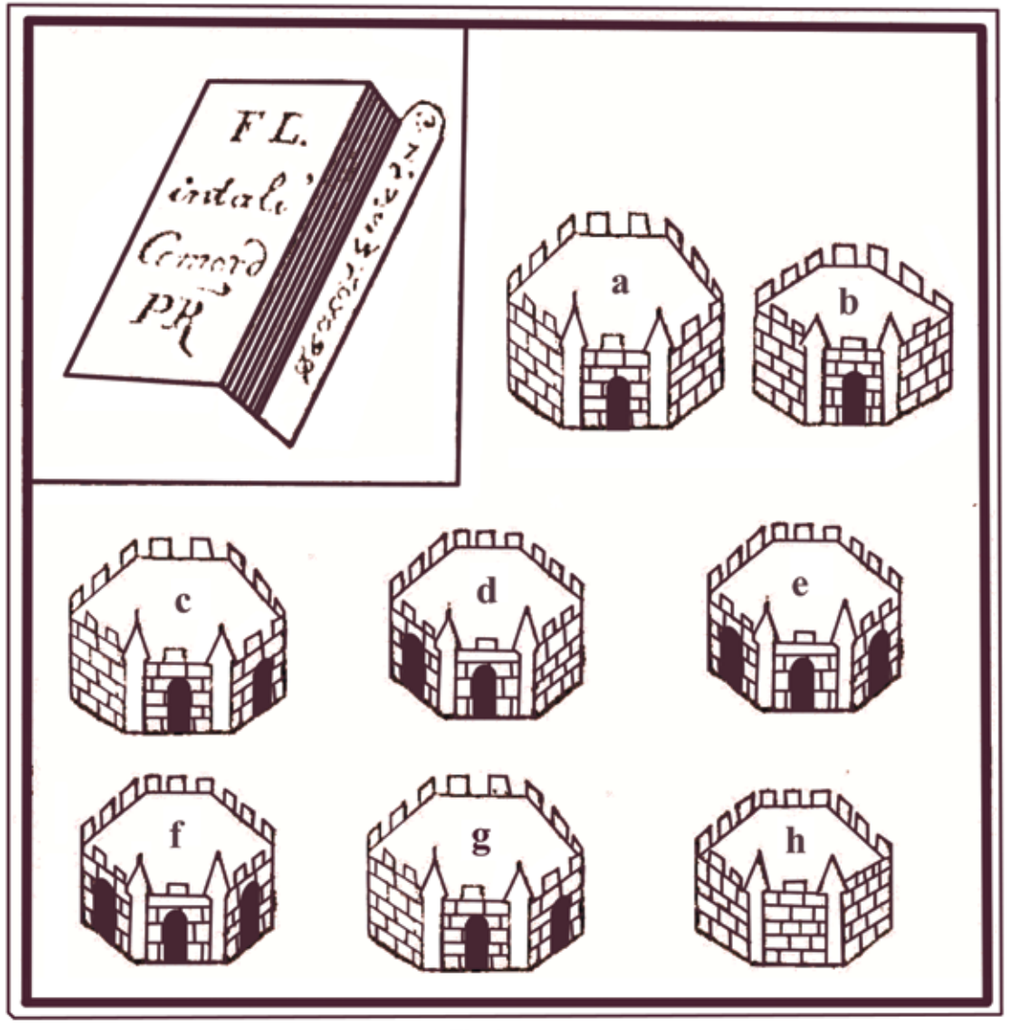

Singidunum
BEOGRAD
Tricornium
RITOPEK
Tricornenſy
Moſchius fluuius
Viminacium
KOSTOLAC
Cana tis
D. MILANOVAC
Danubius fluuius
Ciabrus fluuius
Eteta
BRZA PALANKA
Orrea
ĆUPRIJA
Darticum
Retiaria myſorum
ARČAR
MISIA SUPERIOR
Myſi
ILLIRIDIS DALMATIE LIBVRHIE PARS
Timacum
RAVNA
GRAČANICA
Vlpianum
Delanis
Neſſum
NIŠ
Vendenis.
+Scupi
SKOPLJE
Orbelus Mons
Arribautium
Scardus mons

**Fig. 10**




a) Flaviana. b) Pinco.
c) Tricornio. d) Aureomonte. e) Viminatio.
f) Laedarata. g) Cuppis. h) Ad Novas.

**Fig. 11**

to be present-day Ram and across from it, Banatska Palanka, where fortifications secured the Danube crossing.

Position of the fortress gates and the cemeteries at Viminacium partially indicate the directions of the Roman roads leading south and east. We know for a fact that the Mlava River was spanned by a bridge, remains of which were recorded by Konstantin Jireček (Jireček, K. J., 1959, 84, 131), Felix Kanitz and Milan Đ. Milićević. Still to this day the local toponym for this site is "Kameniti brod (stone river crossing)". Until recently, when the water level is low, stone structure was sometimes visible. To the east of the bridge, on the right bank of the Mlava, traces of an old road have been identified. According to that, one can assume that the area beneath the city walls, known as "Obreševa bara" and "Rit", was a port during Roman times. Geomorphologic research of this area has already begun and is currently being conducted some 200 meters to the north of the northern gate of the legionary fortress, called "Porta Praetoria".

Priscus, an author who wrote in Greek, tells us that in 441, after they crossed the Danube, the Huns sacked numerous towns and forts, including Viminacium. It is only from Procopius (De aedif., IV, 5) that we learn that the old Viminacium had been devastated to the ground and that the Emperor Justinian erected a brand new city. (De aedificiis, IV, 5.). Although Priscus' text states that the Huns devastated towns and forts, it is not quite clear whether the same fate befell Viminacium. For his part, Procopius explicitly says that "the city was razed to the ground", but this statement may only refer to an assumed Roman settlement on the left bank of the Mlava, on the ruins of which a Byzantine city could have been built (Поповић, М., Иванишевић, В., 1988; Ivanišević, V., 2016).

An episcopate was definitely located within the Viminacium city (Hier. Synecdemus 657,2), and was under the jurisdiction of Justiniana Prima (*Primae Iustinianae IV)*, as we learn from *Nov*. IV …"*De privilegis archiepiscopi Primae Justinianae…*".

Even though, in 584, the Avars invaded Viminacium (Theoph. Simo., Historiae, I 3–V), this event nevertheless did not mark the end of its history. Around A.D. 600, the Byzantine Empire went on the offensive. The Roman army assembled at Viminacium, from where it crossed over to

the other bank of the Danube. Intriguingly, the descriptions of these events speak of Viminacium as an island. Theophylactus Simocatta (Hist., VIII, 1), writing in the time of the Emperor Heraclius (610–640), refers to this. The notice that Roman troops have reached *Viminakion*, an island in the River Istar, was repeated by Theophanes the Confessor in the second half of the 8th century and by Anastasius Bibliothecarius (Theophylactus Simocatta, I, 281), a well-known source on the Slavic apostles. This warrants the conclusion that the island and the Danube curve played an important strategic role for Viminacium in the early Byzantine, and perhaps even in the Roman era, as Jireček had assumed long ago. Actually, the modern dry bed of the river Mlava represents a Danube anabranch from the Roman and Byzantine times. New geo-physical research and analyses of aerial photographs, confirmed the existence of various constructions in the Danube anabranch and it can be presumed that archaeological research shall point to the existence of a Roman port in that area.

We know even less about the medieval city in this area. Bulgarian historians believe that in the Middle Ages Viminacium was a Bulgarian fortified stronghold known by the name of Braničevo. What is important, however, is that the Episcopal tradition in the city was preserved in the Middle Ages. This is indicated by the *Sigillium primum* of Basil II from 1019, in a reference to the Ohrid Archiepiscopate. However, at that time, the mid-12th century travelogue of Odo de Deogilo describes Braničevo as only a miserable little town, *Brundusium civitatem pauperculam*. In Ansbert, an itinerary writer from the third Crusade (1189–1190), Braničevo appears as *Brandiez*. At the time of the aggressive expansion of the Latin church during the papacy of Innocent III, Braničevo, with its strategic position, attracted attention of the theocratically acquisitive pope. The question of the Braničevo episcopate is linked to the question of the restoration of Christianity on the Danube in the 9th century and must be viewed against the backdrop of the political and ecclesiastic aspirations of Rome and Constantinople with respect to the lands of the Slavs in general. It is well-known that Basil I and Photius made great efforts to reorganise the church hierarchy in the north. Thus, the Acts of the Constantinople Council from 879 feature Agathonos Moravan among the bishops present. When Methodius was the Morava bishop, P. Dvornik probably rightly concludes that the location at the confluence of the Morava and the Danube rivers was in question. This indicates that the tradition of Roman Episcopal seats in Viminacium and Margum had been revived in the period of the restoration of Christianity.

It is generally accepted that the Legion VII *Claudia Pia Fidelis* formed a garrison stationed at Viminacium. In fact, this legion, which represents the disbanded legion VII Macedonica (*Legio VII Macedonica*), was transferred from the Roman province of Dalmatia, and earned the epithet *Pia Fidelis* in A.D. 42 when it demonstrated exceptional loyalty during Scribonian's rebellion in Dalmatia.

However, the first legions stationed at Viminacium were the *Legio IV Scythica* and the *Legio V Macedonica* which, by general consensus, occurred around A.D. 15. According to other scholars, it is also possible that these two legions were transferred to Viminacium in A.D. 33/34,[3] during Tiberius' road-building operations on the Danube. Alternatively, the two legions could have been in Viminacium only during the summer period and spent the winter downstream on the Danube or in the hinterland in the legionary camps at Oescus, Ratiaria or Naissus. Balduin Saria, considering that by 44 A.D. no permanent legionary station could have been organised in Viminacium. Tacitus mentions in the *Annals* that the legions also had their own small winter camps, the so-called *hibernae* (Tacit, Annales, I, 30). In any case, by the mid-1st century or some time shortly before that there was already a legion permanently stationed at Viminacium. It is even possible that two legions, *Legio IV Flavia Felix* and *Legio VII Claudia Pia Fidelis*, were stationed at Viminacium during the '80s A.D. and Domitian's campaigns on the Danube. There is a hypothesis that the *Legio IV Flavia Felix* was stationed in Viminacium before establishing their own legionary fortress in Singidunum.[4] According to Suetonius, after the rebellions led by Saturninus in 89 of the legions XIV *Gemina* and XXI *Rapax* at their base in Mainz *(Moguntiacum)*, Domitian prohibited stationing of two legions in the same fortress (Suetonius. Domit. VII). Before that, two or even three legions could have been assigned to the same fortress.

[3] N. Vulić and A. Premerstein shared this opinion, while Alfred von Domaszewski considered it was Ratiaria.
[4] This was the opinion of G. Alföldy

An important fact is that in A.D. 211 *canabae* were established in Viminacium, the so called *canabae leg(ionis) Cl(audiae) Ant(oniniana)*, but also the fact that the land was rented to soldiers, after it was measured by the *mensores* (XXXIX, 46). The fleet had to protect the middle and lower Danube. Since the fleet was named Flavia, Carl Patsch presumed that it was renewed during Vespasianus reign. Vasić (Vasić, M., 1894, 10) thought that the fleet had its headquarters in Viminacium. Menander the Protector states that in A.D. 580 the *Classis Histrica* for Moesia Prima was stationed in Viminacium.

At Viminacium, after the large-scale archaeological excavations carried out in the last quarter of the 20th century, knowledge of the city slowly emerged from the background of the scattered historical references to reveal a complex of archaeological sites that had experienced vigorous development over the five centuries of its long history and was partly renewed in the 6th century.

The settlement at Viminacium was granted municipal status during Hadrian's reign around A.D. 117 (*municipium*), when it was given the title *Viminacium municipium Aelium Hadrianum*. The continued development of Viminacium was briefly interrupted by an epidemic of the plague during Marcus Aurelius' reign, but indications in the archaeological record show that the economic prosperity of Viminacium was not seriously diminished by the plague because in the early years of the 3rd century commerce was again flourishing.

There was literally no Roman emperor who did not pass through Viminacium or spend some time there. Significantly enough, when the Roman Empire started to decline, Viminacium gained in importance, and from the end of the 2nd to the end of the 4th century, for almost two hundred years, Roman emperors visited and sojourned at Viminacium even more frequently because of its exceptional strategic importance. Numerous times in its six hundred year history, for example at the end of the 3rd century, Viminacium played a key role in resolving questions of the disposition of ruling power in the Empire.

Among visiting Roman emperors, mention should certainly be made of Trajan, who spent the winter of 98/99 preparing his war against the Dacians (Bennett, J., 1997, 53). On two occasions, hunts (*venatio caesariana*) were organised for Hadrian at Viminacium; the emperor Septimus Severus visited twice; later on other emperors stayed there: Gordian III, Phillip the Arab, Trebonianus Gallus, Hostilian, Diocletian, Constantine The Great, Constans I and Julian. Gratian was the last emperor known to have visited Viminacium (Mirković, M., 1986, 23–24).

Viminacium played a certain role in 258/59, when Ingenuus unsuccessfully attempted to gain the imperial throne. The rebellion was defeated and Gallienus appears to have brutally punished the citizens of Viminacium. Trebonius Polius writes about that and reports: *"…After Ingenuus was murdered, he (Gallienus) severely punished the citizens of Moesia, so that many a settlement was left with no inhabitants…"* (Zeiller, J., 1918, 148). The city lost all its rights and it was probably burnt and destroyed. Diocletian's subscriptions, as well as his visit to Viminacium, took place in August–September 293 and in September–October 294 (Codex Iustinianus, II, 19, 8: V, 16, 20; VI, 2, 11; VIII, 35, 5; VIII, 44, 22; VIII, 50, 16; IX, 22, 12; as well as Mommsen, Th., 1861, 435). From 317 onwards and in 321, due to the unstable political situation, Constantine spent a lot of time in Pannonia, Moesia Prima, Dacia Ripensis and Moesia Secunda. According to ancient sources, the first visit of Constantine to Viminacium took place on the 25th May 321 (Codex Iustinianus, VIII, 10, 6), and the second one, caused by the Gothic invasion, some thirteen years later, in 334 (Codex Theodosianus, XII, 2, 21; Seeck, O., 1919, 172). From imperial decrees one discovers that Constantius also visited Viminacium in two occasions – in 338 and in 358. During his first visit, he met one of the episcopes of Moesia Prima (Seeck, O., 1901, 1047; Cod. Theo., X, 10, 4), while his second visit was connected to fights against the Aquincenses and Picenses on the Danube. Another *subscriptio* is connected with Iovian's trip to the Orient and his visit to Viminacium on the 27th November 363 (Cod. Theo. I, 1954, 362). Gratian, the last Roman Emperor who visited Viminacium, lived there in 381 or 382 (Cod. Theo., I, 10, 1; Seeck, O., 1919, 67). In 365, Viminacium was one of four episcopates of Moesia. After its destruction in 441, Viminacium was renewed by Iustinianus for a short period of time. Iustinian's *Codex* (Cod. Iust. Nov. XI) and data written by Procopius (Procopius, De aedef., IV, 5) confirm this. For the last time, the city was mentioned by Theophilus Simocates, during the first decades of the 7th century (Theoph. Sim., VIII, 1, 2).

The sojourn of the emperor Hostilian was of exceptional significance because, as the 5th century writer Zosimus reports, he spent almost an entire year here with his mother Etruscilla. Zosimus is well informed because he draws on earlier authors from the 2nd and 3rd centuries, such as Eutropius, Deuxipus, Aurelius Victor, Pseudo-Aurelius Victor and Eusebius. After the deaths of his father and brother, Hostilian came to Viminacium at the beginning of 251 and organised the deployment of Roman troops along the middle to the lower course of the Danube. Ancient sources state that in November of 251 Hostilian died of the plague, probably at Viminacium.

Today, most histories of the Roman Empire make little mention of the emperor Trajan Decius and his sons Herennius Etruscus and Hostilian. These men are not numbered among the so-called military emperors, but they do come from good Roman blood lines. Trajan Decius came from a family of consuls who resided at Sirmium. His son Herennius Etruscus was born in Pannonia between 220 and 230 and, together with his father, was very much involved with the military. Not much is known about Hostilian but, judging from his coin portraits, he was considerably younger than his brother. He lived in Rome with his mother Herennia Etruscilla and served as a senator, obviously in the shadow of his father and brother. Trajan Decius elevated both his sons to the rank of Caesar. Although the title of *princeps iuventutis* is attested only for the elder son, Hostilian might have also received it in 251. Usually, the title of *Augustus* was only granted to the elder son; it was conferred on Hostilian only after the death of his father and brother. As emperor, Hostilian bore the title of *Imperator Caesar Caius Valens Hostilianus Messius Quintus Augustus*, and his brother Herennius Etruscus the title of *Imperator Caesar Quintus Herennius Etruscus Messius Decius Augustus*.

In the 3rd century, during the reign of Gordian III, Viminacium attained status of *Colonia* and was granted the right to mint coins (Душанић, С., 1961, 141–154; Borić-Brešković, B. 1976; Idem., 1981). According to historical sources, in 284 a deciding battle was fought in the immediate vicinity of Viminacium for supremacy in the Empire by the emperors Diocletian and Carinus. In historical sources, this occasion was differently described. In *Itinerarium Hierosolimitaneum* 564, 9, it says that Diocletian defeated Carinus near Viminacium, while Eutropius, Aurelius Victor and Jordan wrote that it happened near Margum (Itin. Hiero 564, 9). An important find dating from this period is a marble portrait of Carus, father of Carinus, stored in the Požarevac Museum (Spasić–Đurić, D., 2002, 24, 26).

In the 4th century, Viminacium was an important Episcopal seat, mentioned in the council acts from Serdica from the year 343 or 344. The names of the episcopes Amantinus and Cyriacus …*"Amantinus... Cyriacus Mysiae"* (Zeiller, J., 1918, 148.) can be connected with the province of Moesia Prima and with Viminacium.

In the mid-5th century, the city was definitively destroyed in a Hunnic attack. This fact relies on data given by Priscus (Priscus, fr. 2, FHG, IV, 73; Prisci Pan. Frag. 2, 280 and 8, 305). However, it is also possible that the city and the legionary fortress suffered serious damage around 380 from invading Goths. As archaeological research from the years 2002–2003 shows, the city was never reconstructed on its original location, and its revival and restoration during Justinian's reign in the 6th century can only be conjectured on the basis of data provided by Theophylactus Simocatta and the 6th century archaeological remains at the Todića crkva and Svetinja sites. In the debris layer near the northern gate of the legionary fortress, the so called porta praetoria, under a massive stone which has collapsed, 136 bronze coins were found. The latest coins date from the fourth decade of the 5th century.

Given its location and fluvial connections, Viminacium always stood at a junction where cultural influences from the eastern and western parts of the Empire met and interacted. The recovered archaeological material clearly demonstrates an impressively high level of development for the various branches of arts and crafts, and merchants from all over the Roman Empire came to trade their wares here. It appears that the thriving economy of the city, where goods were also produced to be exported outside the province boundaries, also spurred the development of various workshops in the area. In the 4th century some of these workshops produced significant contributions to the wall painting of late antiquity.

**Fig. 12**

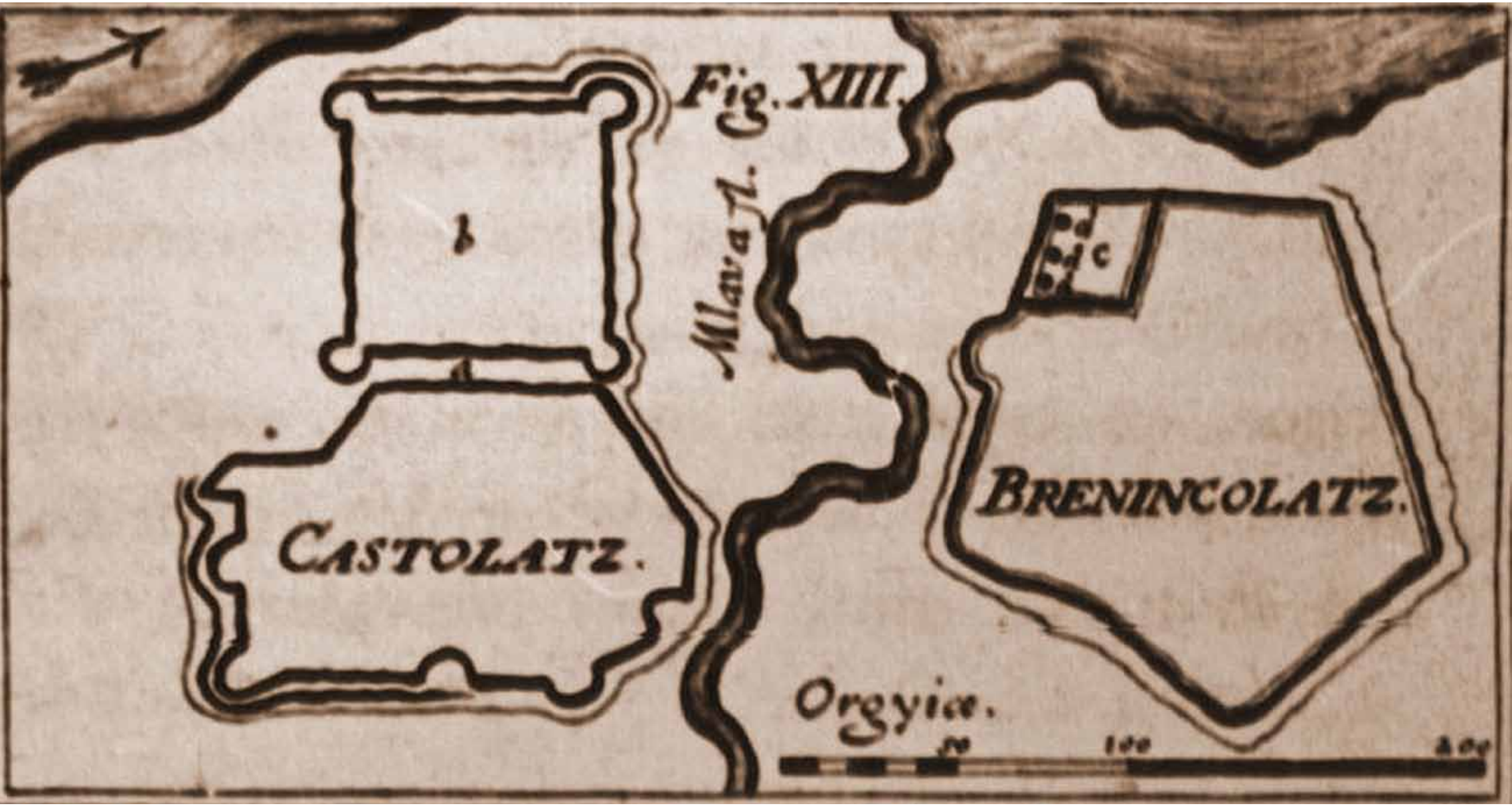



**Fig. 13**

## RESEARCH HISTORY OF VIMINACIUM

European cultural circles were informed about Viminacium in the late 17th and in the early 18th century, when Count Marsigli (Aloysio Luigi Ferdinand Marsili, 1658–1730) from Padua passed through this area; after returning to the Hague in 1726, he published his impressions of his travels in his famous work *Danubius Panonico-Mysiscus observationibus geographicis, astronomicis, hydrographicis, physicis perlustrat* (Marsigli, A. L. F., 1726) In his second edition, he included data, sketches and plans, as well as inscriptions from Belgrade, Smederevo and Kostolac, sketches of the Roman road leading through the Iron Gate and transcriptions of the inscriptions carved in the rocks of the Iron Gate. The distinguished Count, who was first employed in the service of Venice (he served Venice from 1680 to 1690), and later of Vienna, travelled along the Danube in the last decades of the 17th century and left valuable testimony about the ancient city and military camp at Viminacium, as well as its earliest map. In his figure XIII, Marsigli gives a sketch of two entities separated by the river Mlava – the two *fortalita*. The first one is situated on the right Mlava bank and named *Brenincolatz*, measuring 360 x 280 orgya. The second one is situated on the left Mlava bank and named *Castolatz*, measuring approximately 300 x 240 orgya. This testimony by Marsigli raises many doubts, but still gives valuable data, confirmed by current archaeological excavations and geo-physical research.

Europeans became aware of this area, and painters and travel writers came to pay homage to the ruins in their work, for example Herring and Bartlett, who produced a series of lithographs with scenic views of the general area. These two painters set out from London for Istanbul but on the way were enchanted by the beauty of the Đerdap gorge and its environs and felt compelled to leave behind visual testimony of their visit.

Viminacium is marked on most of the maps of this area from the 16th to the 19th century. On geo-political maps of Hungary and the neighbouring countries, published by Danit de Meyne and Joannes van Deutecum in Amsterdam in 1596, Viminacium is named *Viminallum*. It is also marked at the geo-administrative map of Serbia, which was made by Anastas Jovanović (1817–1899). The map was published in Belgrade in 1845. On an engraving representing the battles near Ram, Kulič, Smederevska Palanka and Banatska Palanka, made by K. Ponheimer and published by Bartolomeo Lopresti (in Vienna in 1788), Viminacium is named *Hostelatz*. On a map from the 18th century, Viminacium is named *Vieneratz*, while the map showing the countries of the Balkans, named as *Macedonia, Thracia, Illyria, Moesia et Dacia*, shows the Latin name *Viminacium*.

Valuable descriptions made by Serbian antiquaries should also be mentioned. They were made at the end of the 17th and the beginning of the 18th century by Eugene Savoy, the great military commander and antiquary, who possessed the most valuable document for antique geography, the *Tabula Peutingeriana*.


**Fig. 14**


Fig. 15

Fig. 16

Fig. 17

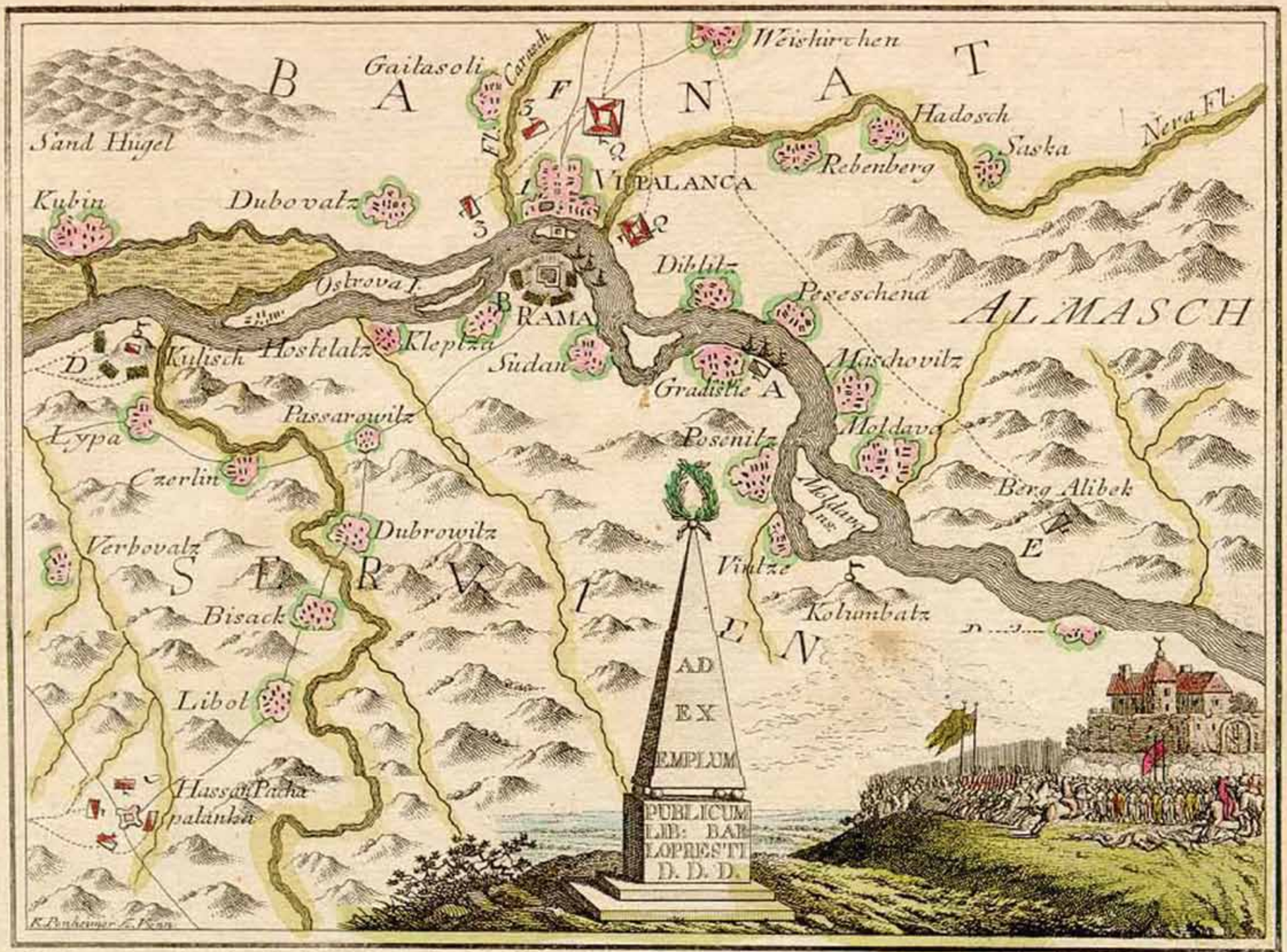
Fig. 18




In the mid-19th century, the scholar, Felix Kanitz, travelled through these parts and published not only sketched maps of the city and military camp ruins, but also description of the Viminacium remains he was able to see on spot. Felix Kanitz first travelled through this area in 1866. A decade later, in 1877, he travelled to this area for the second time (Kanitz, F., 1867, 42; Kanitz, F., 1892, 17; Kanitz, F., 1968). On the route to the Danube delta, Kanitz sketched and described 76 fortresses, which were not known before. Although not an educated archaeologist, this ambitious man travelled through Serbia and managed to mark 340 archaeological sites. Kanitz, an excellent aquarellist (in the Belgrade National Museum an aquarelle made by Kanitz is preserved, showing Gamzigrad during the second half of the 19th century) and illustrator (as a traveller and illustrator of a Leipzig newspaper, he regularly visited Serbia from 1859 to the end of the 19th century). He described many of the Serbian antiquities and published some of them. He never left a picture of this area, but he left very interesting observations and descriptions of Viminacium and the broader Danube area. Without his sketches and comments made from 1859 to 1897, it is not possible to imagine modern archaeological research. Having competent and financial support of the Serbian government, he stopped in Viminacium and made a valuable testimony. Felix Kanitz was an honorary member of the Serbian Academy of Sciences, as well as the French Academy of Sciences and many other European Scholar Associations.

In his *The Kingdom of Serbia and the Serbian People from Roman Times until the Present*, Kanitz wrote as follows: "…I arrived at the village of Kostolac and found there 4,000 carts [sic!], that is, 4,000 carts loaded with Roman bricks ready for sale in the Požarevac market at a price of between 10 and 15 paras per brick…"

**Fig. 19**




A Wegnahme der Feindl Schiffe durch den kk: Hauptmann Gabrieli bei Gradislie. den 9ten Febr: B. Die Türken umringen Rama, Unterlieutenant B: Lobresli vertheidiget sich bis auf den letzten mann. den 28 Juni: C. Der Major Miholievich mit den Freiwilligen überfallen Hassa pacha palanka und machen reiche Beute. den 19 Julii: D. Die Türken machen einen

Fig. 20

**Fig. 21**

**Fig. 22**

## THE FIRST ARCHAEOLOGICAL EXCAVATIONS

In the 19th century, the contours of the ancient city and military camp of Viminacium were still visible: wide streets intersecting at right angles, public squares, an amphitheatre, baths, water supply conduits, city walls and towers.

Viminacium also drew attention of the local educated class, for example Aćim Medović, a "*doctor of medicine and physician of the Požarevac district*", who recorded that "*in Kostolac, hither and thither on the Mlava river*" there were artefacts from antiquity (Медовић, A., 1852, 187). Yet another researcher, Jovan Dragašević, who studied the antiquities of Moesia Superior, wrote about the significance and importance of Viminacium (Драгашевић, J., 1877, 19–20).

The collected epigraphic material from Viminacium, which extended for over 300 years, is highly important. Numerous explorers, epigraphic researchers, antiquaries and historians published or sometimes only gathered inscriptions mentioning Viminacium or coming from Viminacium. Count Marsigli copied the earliest Viminacium inscriptions from the fortress of Smederevo, from Kovin and Kulič, and made a significant contribution to the *Corpus Inscriptionum Latinarum* (Mommsen Th., CIL III, 263). Testimonies of Viminacium inscriptions were also made by people who worked there, like the much respected Jesuits Johannes Deyrer or Edschlager. Johannes Deyrer, being one of the participants of the negotiations about Požarevac in 1718, also found enough time for the inscriptions from Viminacium, while Edschlager was another respected Jesuit who paid attention to the inscriptions. Some people, while travelling to other destinations, dwelled at Viminacium for a certain period of time, like the English traveller Edmund Chishull (Chishull, E., 1747, 28, as well as Antiquitates Asiaticae in Cod. mus. Brit., number 5106, 2). The destination of Edmund Chishull was Turkey, but his manuscript referring to this trip also included inscriptions from Viminacium. One of the founders of the Belgrade Gymnasium and a much respected scientist, a doctor named Janko Šafarik, also left testimonies about inscriptions from Viminacium. Dr Janko Šafarik, was one of the founders of the National Museum in Belgrade and conservator in this Museum from 1861 to 1869. Some other gatherers included Steva Nikolić from Kostolac or Luka Ilić Oriovčanin, who helped Kanitz to assemble valuable inscriptions (Kanitz, F., 1867, 49) Ortvej (Ephemeris epigraphica, 4, 1881, 79, N°. 213), Ormós from Timisoara – Theodor Ormós visited Viminacium in 1878 and published epigraphic material (Theodor, O., TE, 4, 1878, as well as in Die Alterthümer von Viminacium, Budapest, 1878), Caroly Torma who worked on the inscriptions from Dacia and Pannonia and studied some of the inscriptions from Viminacium (Torma, C., AEM, VI, 1882, II, as well as CIL III, 159), or Kalinka and Erich Swoboda (Kalinka, A., Swoboda, E., AEM XIII, 1890, 29 etc.), Romer or Domaszewski, who paid attention to valuable artefacts engraved in stone. Some of them studied inscriptions from Upper Moesia, actually Viminacium, thus making a great contribution to the *Corpus Inscriptionum Latinarum*. One of them was the European expert Alfred von Domaszewski, a professor from Heidelberg, who, while preparing supplementa for *CIL (Corpus Inscriptionum latinarum*), paid a visit to Viminacium in 1886, as well as all the major cities in the Morava Valley and the Timok region. During his stay, not only did he note new inscriptions, but made revisions of the already noted and published

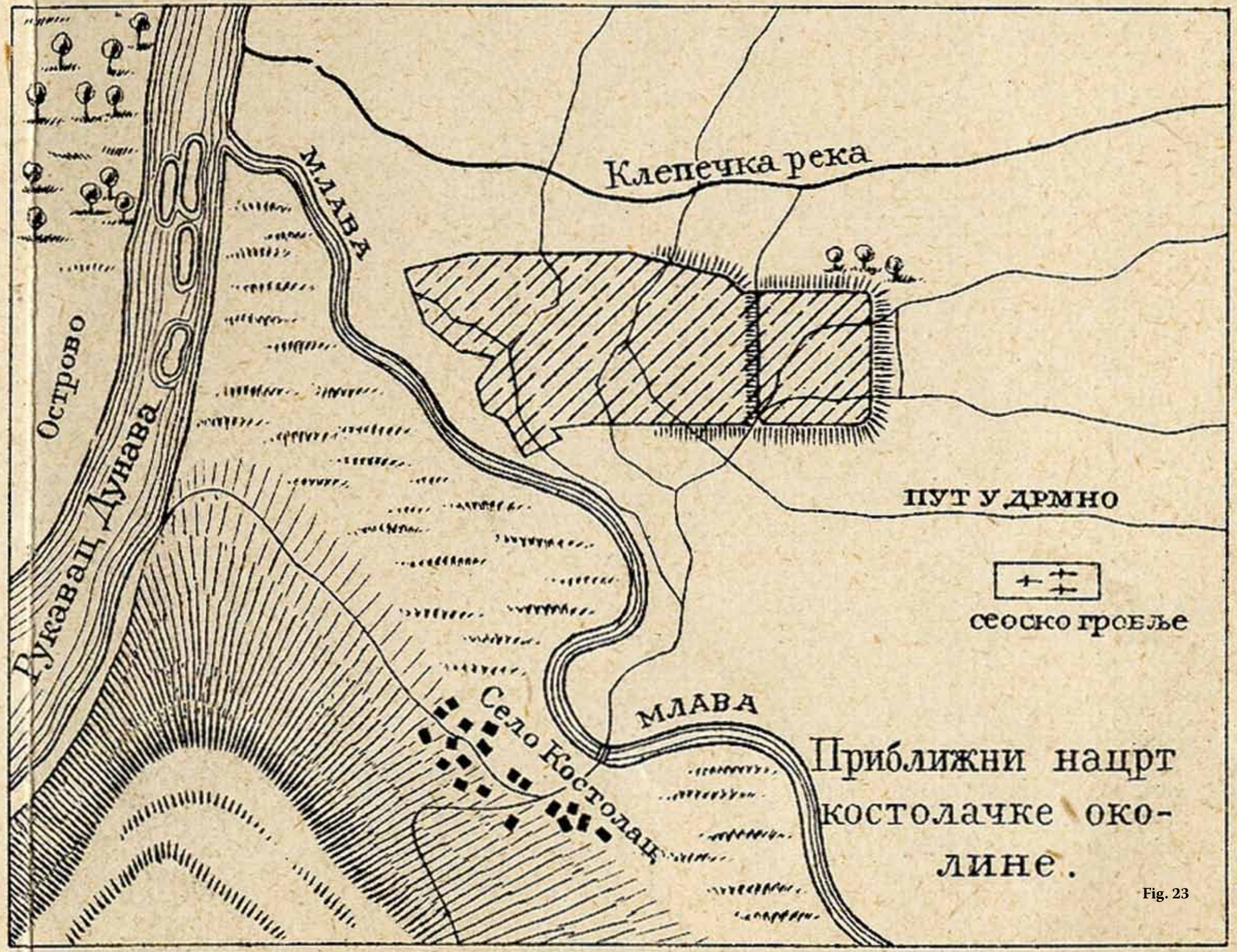

Клепечка река
МЛАВА
Острово
Рукавац Дунава
ПУТ У ДРМНО
сеоско гробље
МЛАВА
Село Костолац
Приближни нацрт
костолачке око-
лине.

Fig. 23

Fig. 24


КОСТОЛАЦ
VIMINACIVM
I. Раније откопани и растурени гробови.
II а-к. Места на којима је копано 1882 год.
III а-г. Ровови од ископаних темеља.
IV. Велика јама.
V. Салаши.
Fig. 25
МЛАВА
Бања
Темељи
ПУТ НА ЊИВЕ
ПУТ У СЕЛО КАЛУЂЕРОВИЋ
ПУТ У СЕЛО ДРЕНОВО
ПУТ ИЗ СЕЛА
КАПИЛА
Клепечка река
Острово
Кулавица
Дубава
Село Костолац
0 50 100 200 300 400 М.
Приближни нацрт костолачке околине.

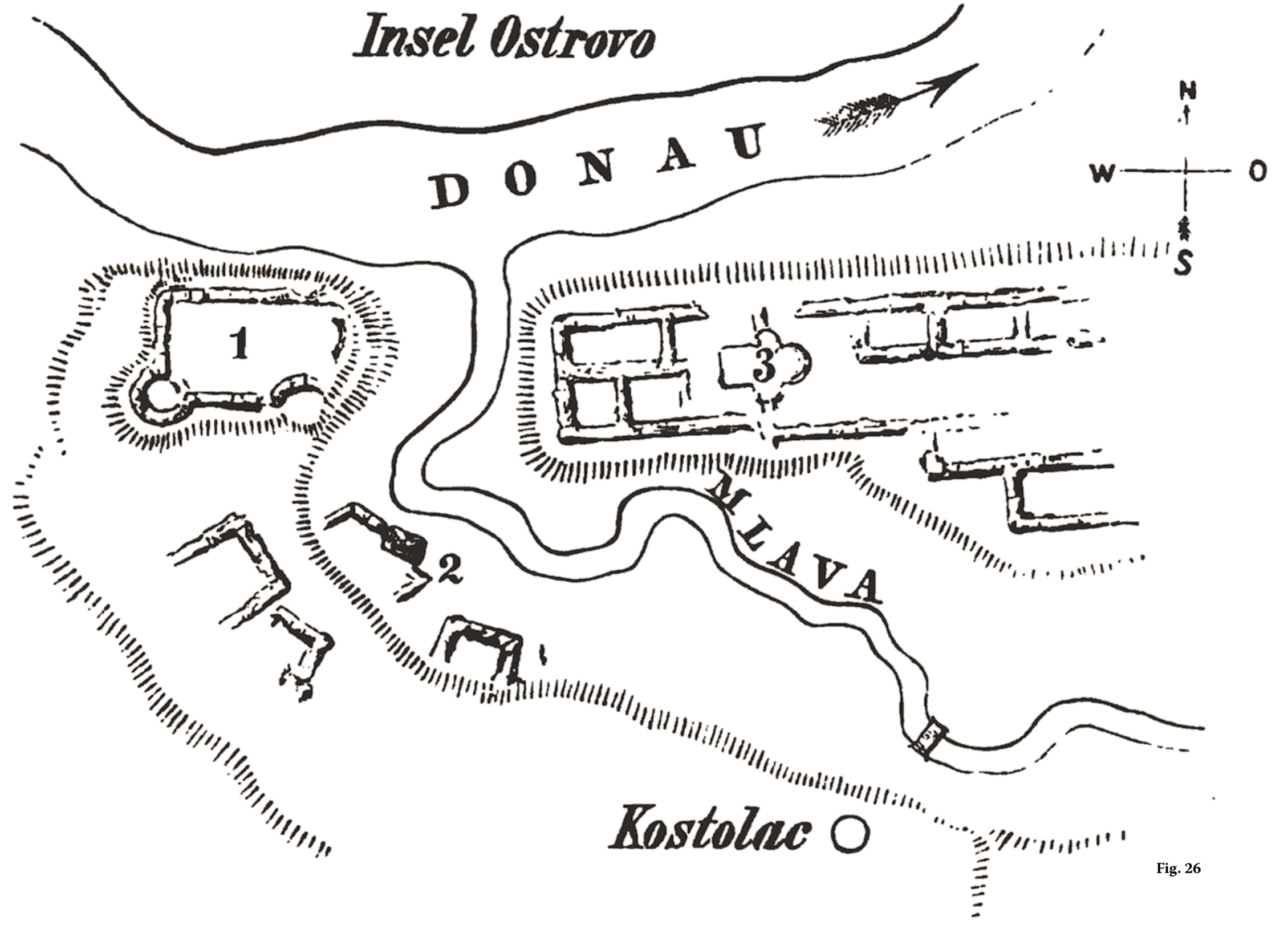



Fig. 26

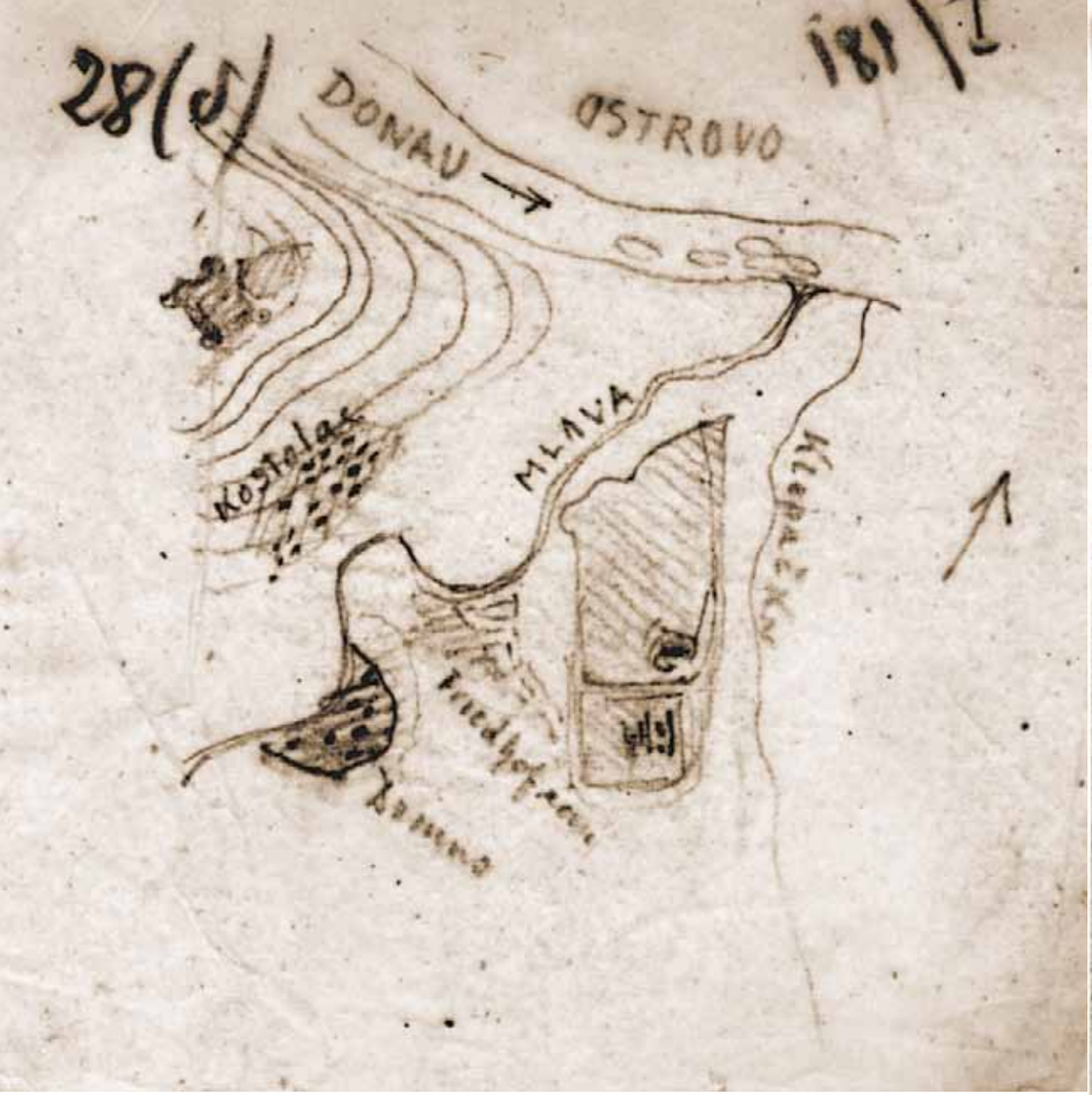

28(5)
DONAU
OSTROVO
MLAVA
KOSTOLAC
Hügel

Fig. 27

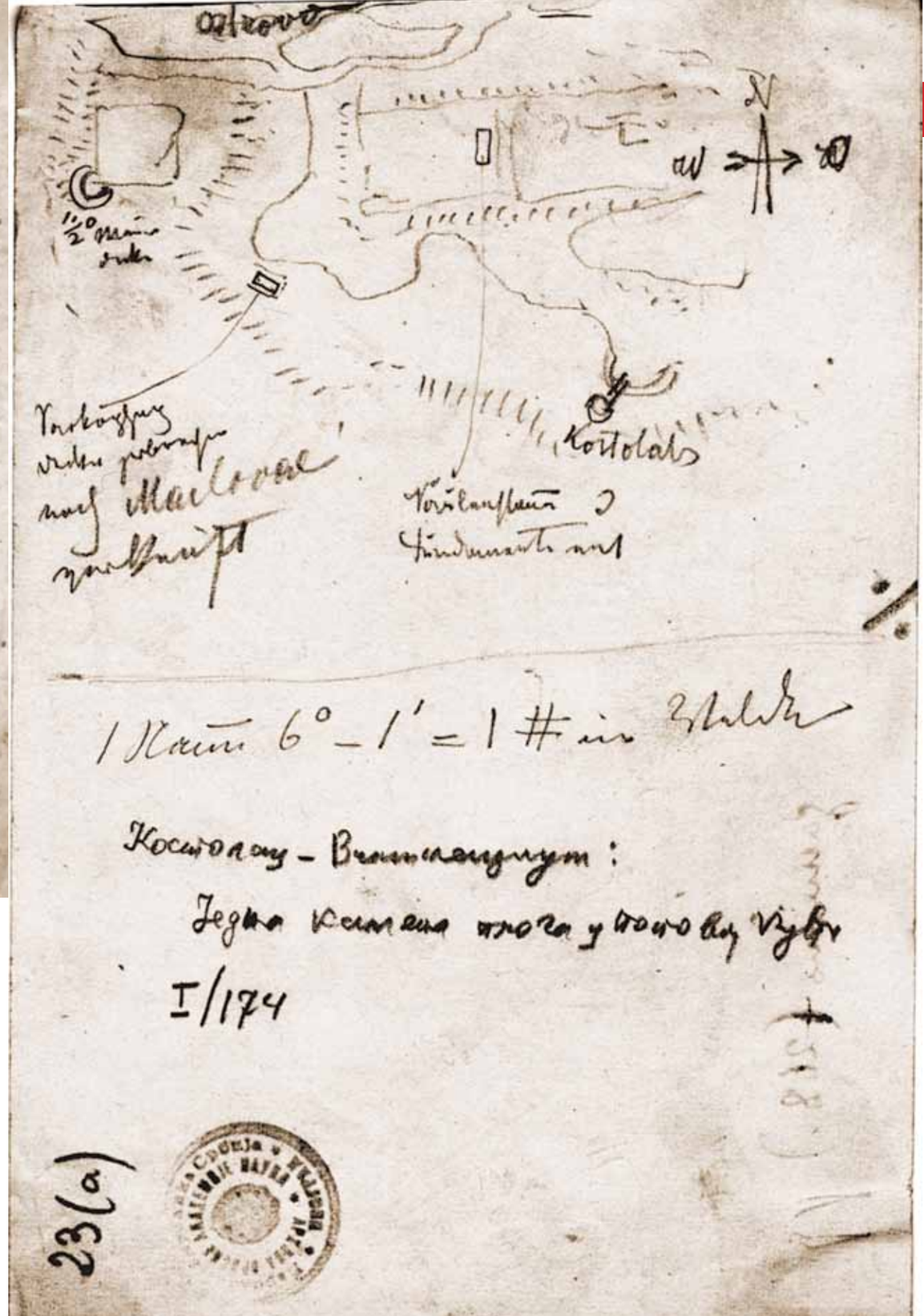

Ostrovo
N
W
O
Kostolac
1 Kilometer = 1 Stunde
Kostolac - Braunkohlen:
Jetzt Kamera stroga u donoj Vilji
I/174
23(a)

Fig. 28

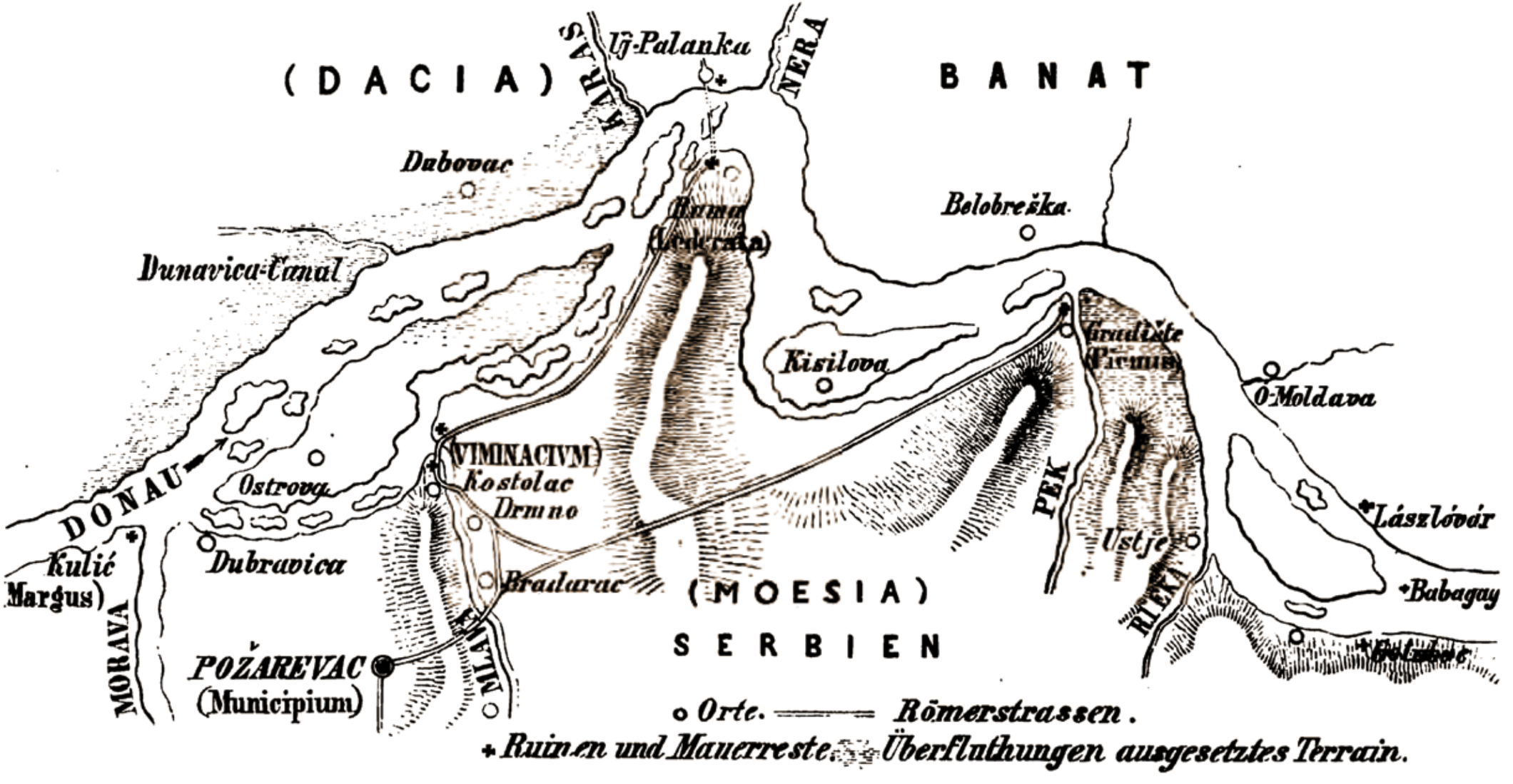

(DACIA)
BANAT
(MOESIA)
SERBIEN
Uj-Palanka
Dubovac
Dunavica-Canal
Belobreška
Kisilova
Gradište
Ö-Moldava
DONAU
(VIMINACIVM)
Kostolac
Drmno
Ostrova
Dubravica
Kulić
Margus)
MORAVA
Brailarac
POŽAREVAC
(Municipium)
PEK
Ustje
RIEKA
Lászlóvár
Babagay
o Orte. —— Römerstrassen.
+ Ruinen und Mauerreste. Überfluthungen ausgesetztes Terrain.

**Fig. 29**

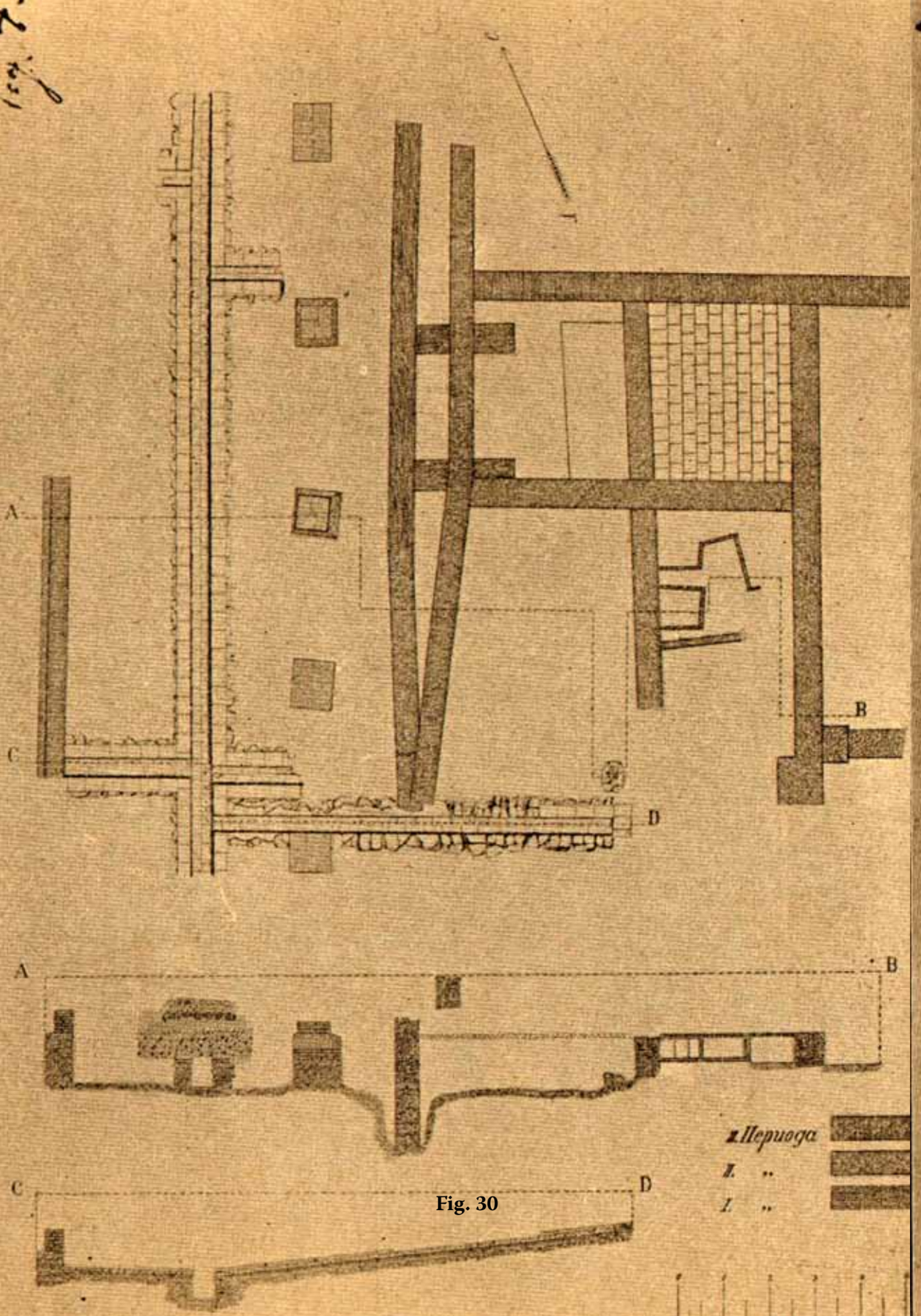



Fig. 30

Fig. 3.

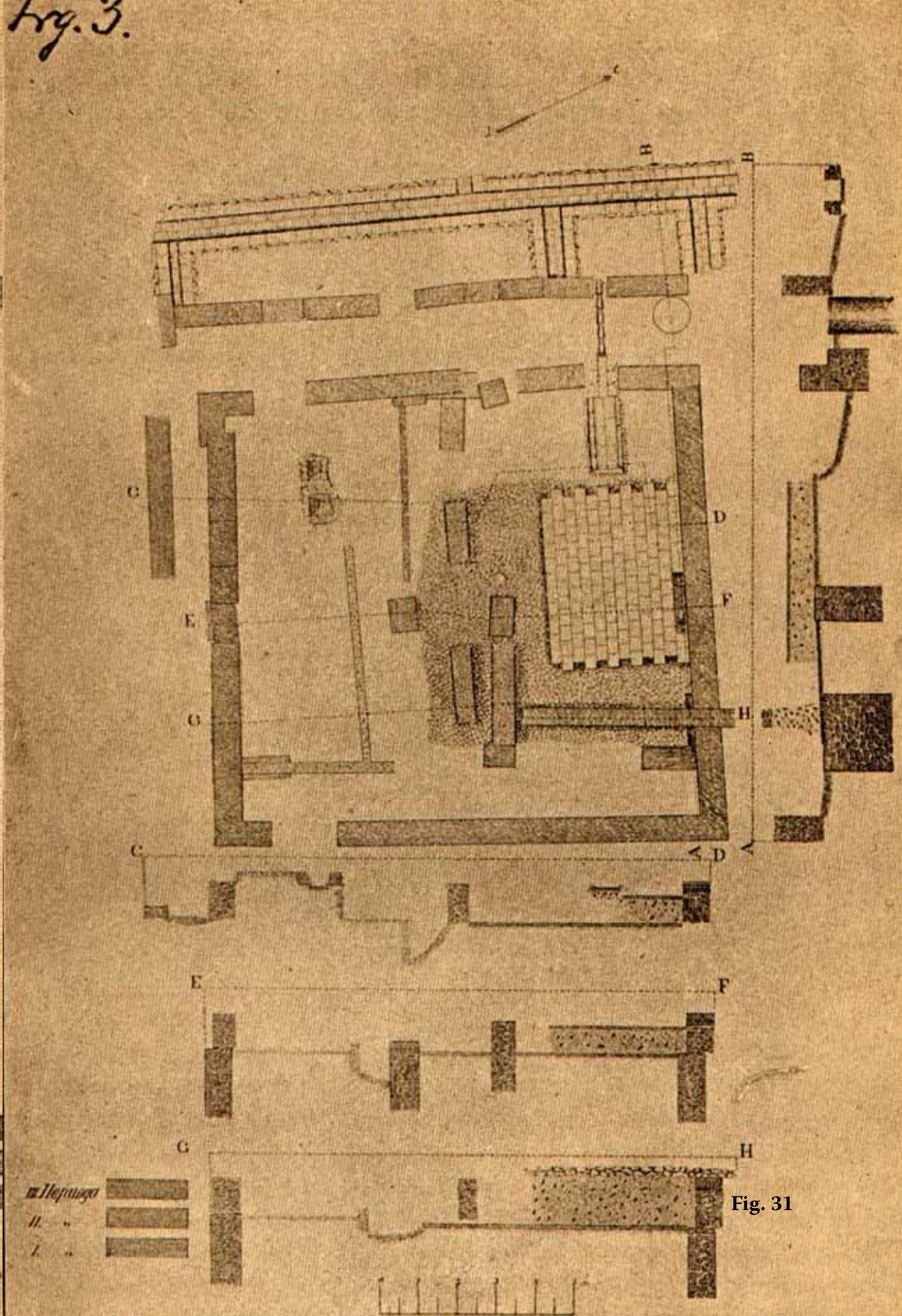



Fig. 31

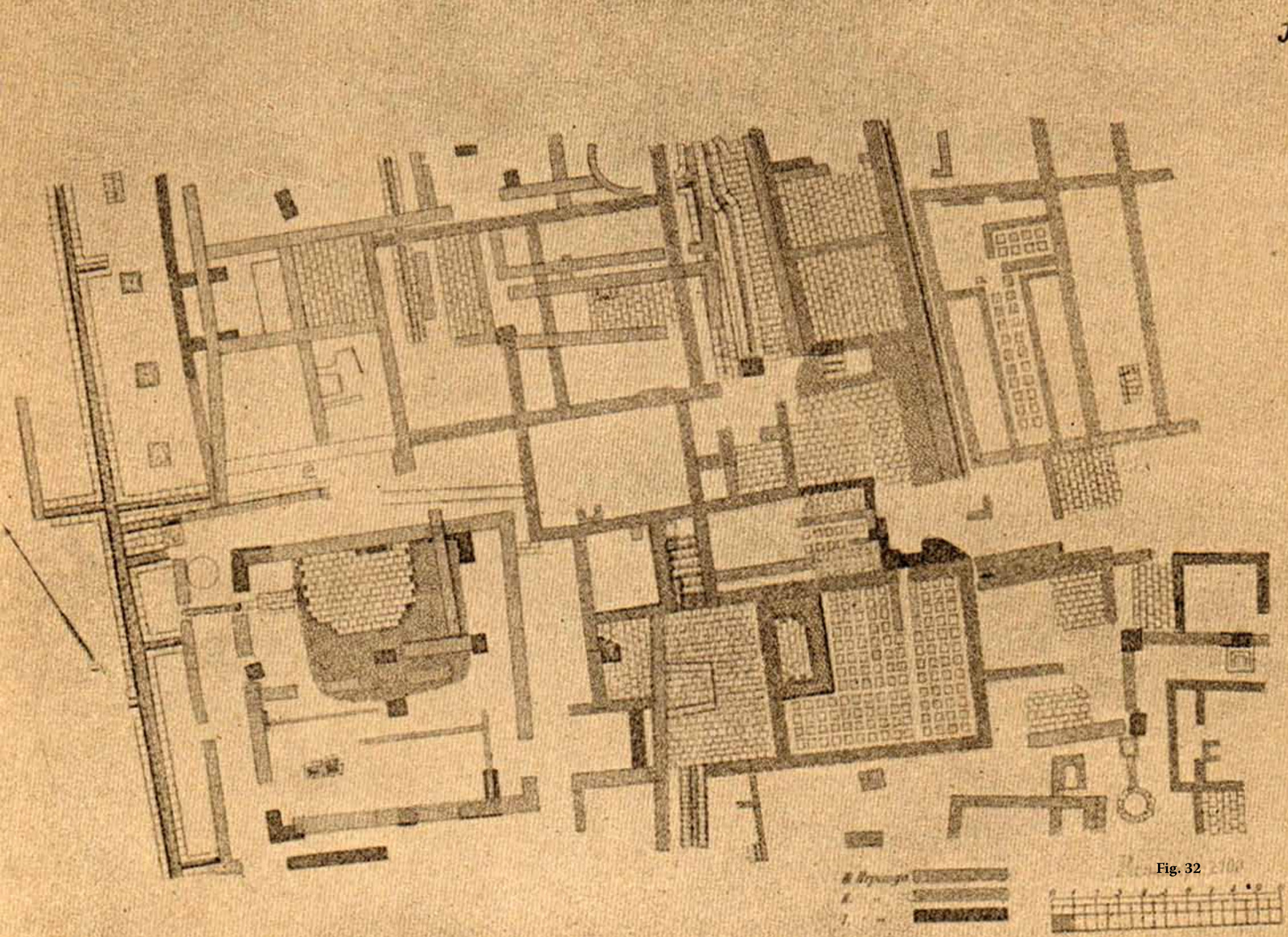


Fig. 32

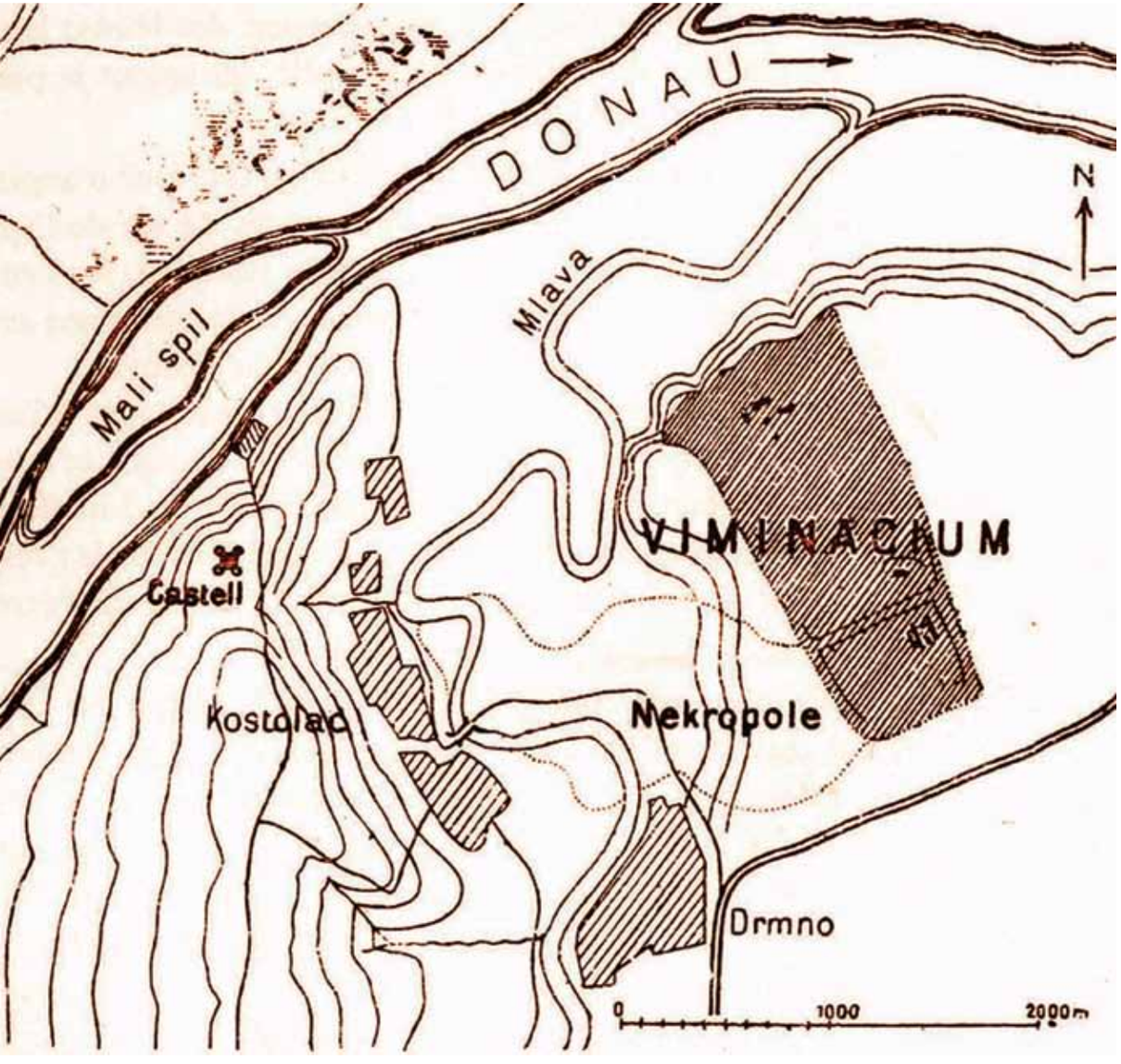



**Fig. 33**

epigraphic monuments (Domaszewski, A., 1890, 129–154; Domaszewski, A., 1902, 147). During his travels, he enjoyed the great help of Mihailo Valtrović and Ljubomir Kovačević, who founded the Serbian Archaeological Society. Viminacium was also visited by Franz Kimon in 1894, who also expanded the *Corpus* with a new inscription (CIL III, 1445.). Two explorers made a major contribution to the interpretation of the epigraphic material: Nikola Vulić and Anton von Premerstein, who visited Viminacium several times during the end of the 19th and the beginning of the 20th century. Their visits to Viminacium, actually the villages of Kostolac, Drmno and Bradarac, were of great importance to the interpretation and review of the inscriptions from this area (JÖAI 4, Wien, 1901, 8, 1905; 12, 1909; 13, 1910; 15, 1912; Premerstein, A., 1898, 146) They were a part of an exploration team, who gathered in the Iron Gates at the end of the 19th century, due to long-lasting works which were undertaken in the Gorge in order to regulate the navigation through this part of the Danube valley. The work was mostly done by G. Teglaš, A. V. Premerstein, N. Vulić and E. Swoboda, who gave the material to *CIL*. Also of great importance is the collection of Đorđe Vajfert, representing the base for the work of Nikola Vulić. During his visits to Viminacium, he made inscriptions in several issues of *Spomenik,* published by the Serbian Royal Academy (Vulić, N., 1931, Vulić, N., 1933, Vulić, N., 1935, Vulić, N., 1941–1948). The inscriptions from Viminacium were also published by Jaroslav Šašel, Petar Petrović and Miloje Vasić (Šašel, J., et Šašel, A., MCMXL et MCMLX, I, 1963; Idem., MCMLX et MCMLXX, II, 1978; Petrović, P., 1969, 231–232; Васић, M. P., 1979, 31–38). Miroslava Mirković gathered, studied and published material from Viminacium in a special edition named *Inscriptions from the Upper Moesia* (Mirković, M., 1986).

The work of early Viminacium researchers formed a starting point for the fathers of archaeology in Serbia, Mihailo Valtrović and Miloje Vasić, a professor at the Gymnasium in Belgrade, undertook the first systematic explorations of Viminacium in 1882 and 1902/3 respectively. On the 1st of July, on the initiative of acknowledged Belgrade intel-

Fig. 34

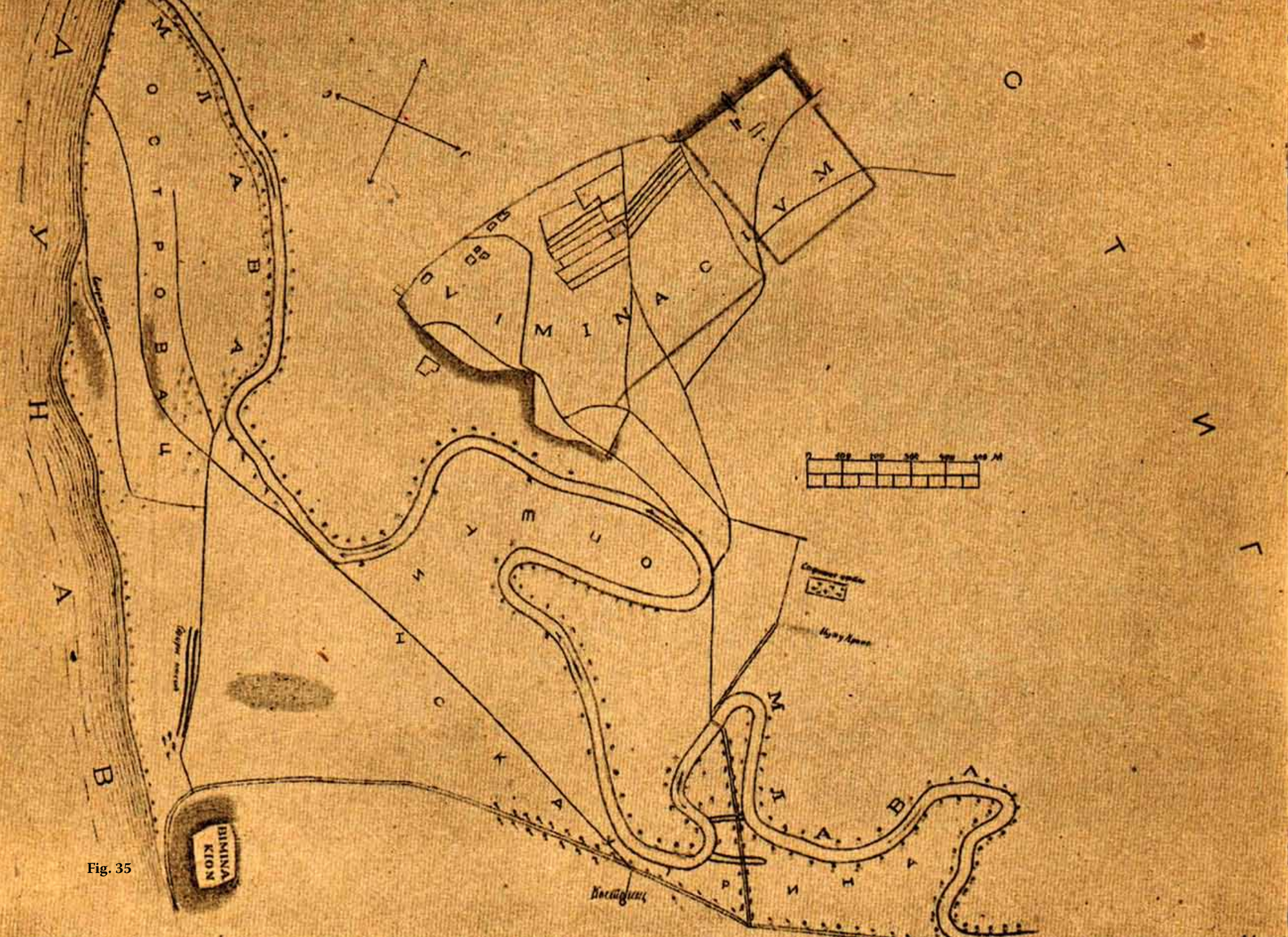



Fig. 35

lectuals, the Serbian Archaeological Society was established. A month later, its most remarkable founders – Mihailo Valtrović, archimandrite Nikifor Dučić, Ljubomir Kovačević, Dragutin Milutinović and others, informed the city council about the beginnings of the work of the Serbian Archaeological Society. Mihailo Valtrović, the professor of archaeology at the Faculty of Philosophy of the Great School, the founder and the first president of the Society, laid down the principles of archaeology in his "*Pristupna beseda*" and "*Poziv na upis*".

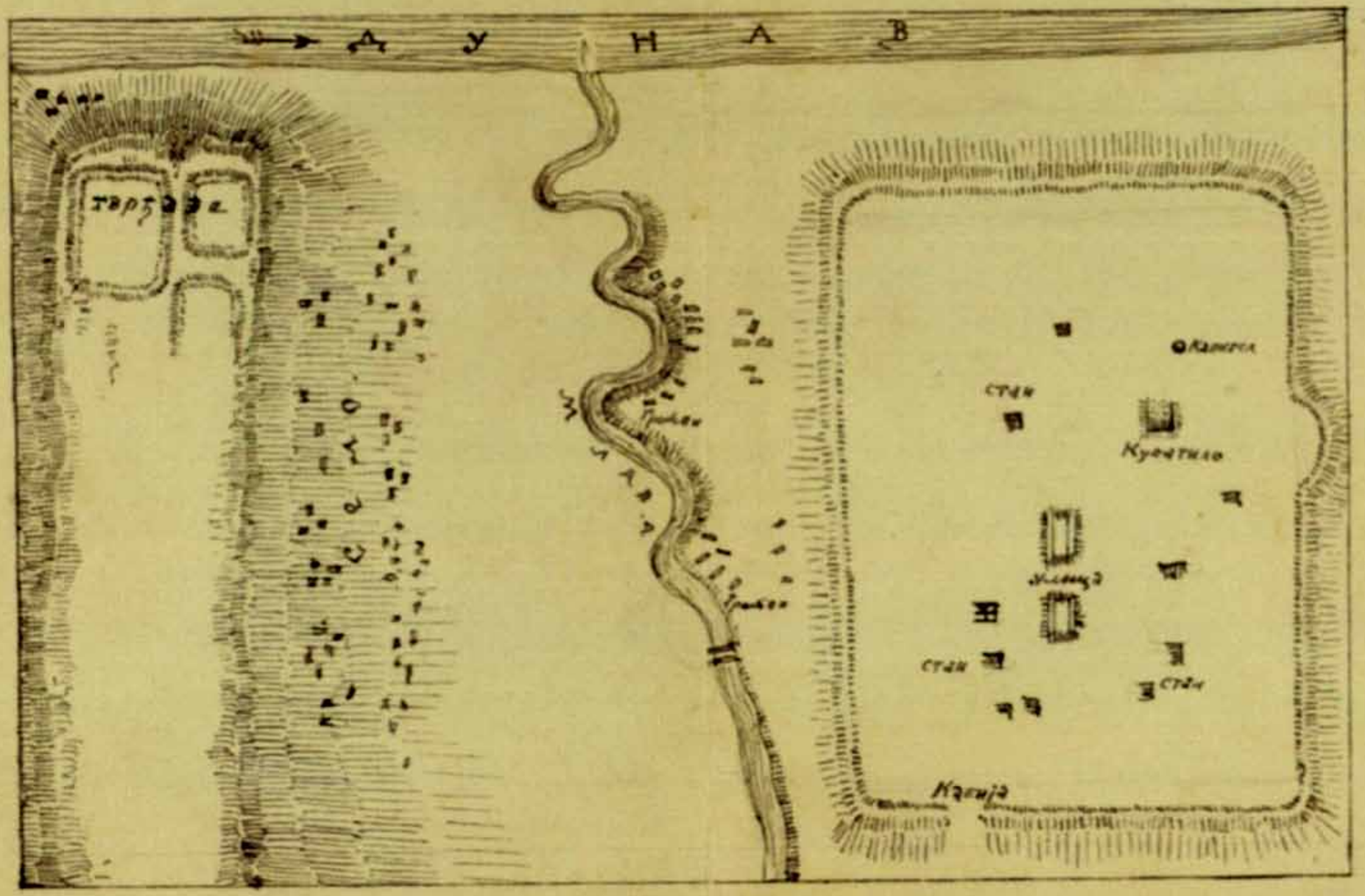
Mihailo Valtrović and Miloje Vasić began archaeological excavations on the right Mlava bank, at the site named Čair, but Miloje Vasić also undertook sondage excavations on the left Mlava bank, at the site nowadays known as Todića Crkva.

Architect Mihailo Valtrović was the first to excavate Viminacium under the so called "civil settlement" in 1882, when he gained the ground plans of the military camp and the city (Valtrović, M., 1884, I-1, 2–14; I-2, 49–63; I-3, 91–114; I-4, 121–142). His plan is of great value and the dimensions of the military camp given in it and measuring 430 x 350 m have been recently confirmed with geo-physical methods. It is interesting that in his concept of archaeology, Valtrović showed a rather modern attitude for the 19th century. He considered that *starinar,* which was a word describing archaeologists in his time, should seek help from the natural sciences and scientists. It is well known that after the Second World War and especially from the '50s onwards, the development of archaeology could not be imagined without connections to natural sciences. As one can see from Valtrović's notes, in the 19th century the development of Serbian archaeology was anticipated. His notes testify about his great thoroughness.

Soon after his arrival at the Belgrade Gymnasium, he made an excavation plan of Viminacium near Stari Kostolac. Before the beginning of the excavations, he visited the site, then made a plan and only then conducted test excavations in the territory of the city of Viminacium, as well as at the necropolis' area.

Valtrović's huge engagement in archaeology was taken over by his student Miloje Vasić. Some twenty years later, he visited Viminacium (Васић, М., 1902, 201–228; Idem., 1903, 248–259) and undertook new archaeological research in 1902 and 1903. It is interesting that Miloje Vasić, while he was a professor in

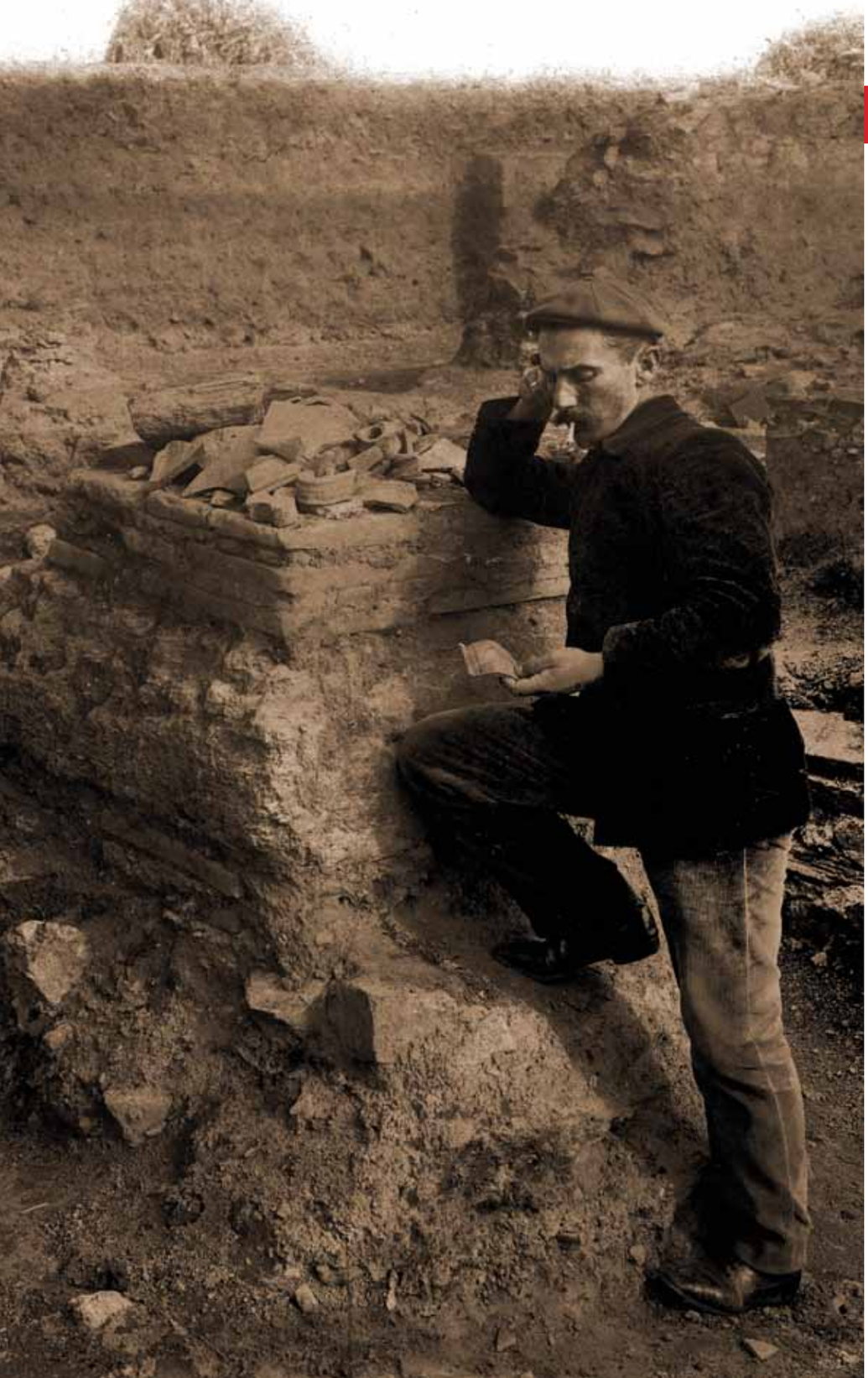
**Fig. 36**




Костолац. Виминацијум.

Fig. 37

Fig. 38





the Belgrade Gymnasium, published two works of great importance for that period. The first one – *Pinkum ili Veliko Gradište*, about his birth-place, actually represents a study of the Roman Pincum, published in *Starinar* (*Старинар*) in 1894. *Kolonija Viminacijum*, his second major study, appeared in 1895, referring to the big city near modern Kostolac, Viminacium. Until the 1960s, this paper represented the base for excavating and studying Viminacium. During this period, he made a great contribution to the exploration of Viminacium.

Vasić, as well as Valtrović, presumed that the legionary fortress had a rectangular ground plan, although with somewhat different dimensions. According to the cardo and decumanus, Vasić presumed that the Viminacium legionary fortress measured 442.70 x 385.60 m. He noted that castrum was not regularly orientated and that it deviated in a north-east direction by 25° and 30°. Just next to the western legionary fortress wall there was a civilian settlement, covering an area of approximately 178 acres/72 hectares. Its longer side measured about 850 m. Although the city centre and the most important Viminacium remains are situated on the right Mlava bank, remains of round towers were also visible on the left Mlava bank, next to the "Todića Crkva" site. There were also remains of an arched corridor which led from "Todića Crkva" site, down the "Sopotska greda" hill towards the Danube.

In 1902, Vasić undertook a major archaeological excavation at the Čair site. Focusing on the urban structure of the civilian settlement, he began the excavations of the Viminacium insulae, actually the very city centre. He published the results of those excavations in German (Vasić, M., 1905, 102–109). The street with the porticus – as Vasić reports – "orientates 28° towards the east", meaning that is was parallel with the cardo. This fact led him to the conclusion that the streets of Viminacium were built accoridng to the Hippodamus system.

The *Serbske Novine* from 1902 recorded that Queen Draga of Serbia came with her entourage to visit Viminacium. During the royal visit, Prof. Vasić, who was educated in Germany and by then an archaeologist with an international reputation, was excavating a colonnaded street, which he named Queen Draga Street in her honour. The newspaper went on to say that the Queen presented him with 100 ducats that he used to continue his archaeological research of Viminacium. The Duke and King Milan, as well as his son, were great antiquaries. Numerous artefacts from the National Museum in Belgrade were actually parts of their private collection.

**Fig. 39**

Fig. 40

## MAJOR SALVAGE EXCAVATIONS

However, almost three quarters of a century passed after the research of Miloje Vasić, before large-scale archaeological excavations were resumed at Viminacium in the 1970s, conducted by Ljubica Zotović from the Institute of Archaeology, Belgrade. From 1972 to 1975, Zotović launched the whole project initially in collaboration with Vladislav Popović and Vladimir Kondić (Zotović, Lj, - Kondić, V., 1974, 47; Zotović, Lj, - Kondić, V., 1974, 96); from 1976 to 1997, Kondić was personally in charge of salvage excavations at Viminacium. This work resulted in numerous significant finds.

From 1977 to 1997, explorations were completed in the ancient cemeteries that extend to the south and west of the city.

Over 14,000 graves were uncovered, which included both cremated and inhumed burials with various types of artefacts. The tombstones and the sarcophagi often featured sculpted reliefs depicting mythological or everyday life scenes. Numerous built grave structures were also identified, with the wall painted tombs from the 4$^{th}$ century being the most remarkable. A wall painting depicting a young woman represents one of the finest examples of the art of painting in late antiquity. Additionally, a cemetery from an even later period, the time of the Great migration, has been partially explored.

It is important to stress that of all the legionary fortresses that existed at the territory of the former Roman Empire, from Great Britain to Iraq, today very few are located in uninhabited places. One of these, located on the Danube like Viminacium, is the legionary fortress at *Carnuntum* (Petronel) in Austria, not far from Vienna, which has been the object of excavations for over a hundred years.

The legionary fortress and the city at Viminacium are very important because it is one of the few sites of this type where the application of modern methods can yield a rich range of objects of material culture and valuable information about the Roman Empire. Moreover, researchers at Viminacium have an exceptional opportunity to advance our understanding of not only settlement in and around the city and camp at Viminacium but also of human culture in the Balkan provinces of the Empire. Today the archaeological situation at Viminacium is unusual because the ruins and associated artefacts are buried in the shallow topsoil layer, making its remains easily accessible to archaeologists but also, regrettably, to looters.

It is painful to admit that, due to illicit excavations on the site, outstanding but plundered finds from Viminacium are better known in the world than are the results from many years of scientific investigation. Unfortunately, even objects recovered in legitimate field investigations and housed in the Požarevac Museum have been repeatedly plundered. In the storerooms of the National Museum in Požarevac there is treasure from Viminacium which contains over 40,000 artefacts and which has become a real magnet for looters. This exceptional collection, which includes over 700 objects made of precious metals in gold and silver, contains numerous pieces that are priceless in a European or even global context.

Fig. 41

**Fig. 42**

## RESEARCHERS

For centuries, Viminacium represented an attraction to many researchers. At the end of the 17th century, it was visited by count Marsigli, who published his observations in 1726, in a work entitled *Danubius Pannonico-Mysicus*. On several occasions during the 19th century, Felix Kanitz visited the site and, in various books, he wrote comments about what he saw. Many foreign and domestic authors (Ladek, Premerstein, Mommsen, Brunschmid and Vulić) also wrote about Viminacium. At the end of the 19th century, the earliest excavation was conducted by Mihailo Valtrović, with an exceptional outcome. At the beginning of the 20th century, his research was continued by Miloje Vasić, professor of the "Visoka škola" in Belgrade. He discovered a row of structures, tombs and a street, 5 meters wide, with a sewer and water pipes.

Research of the Viminacium cemeteries was initiated during the building activities for the thermo power-plant "Kostolac" and later, during the work of the strip-mine "Drmno". The research lasted from 1977 to 1997 and was conducted by Dr Ljubica Zotović from the Institute of Archaeology, in Belgrade. The Institute for the Protection of Cultural Monuments of Serbia and the National Museum in Požarevac also participated in this excavation.

Since 2000, new enthusiastic research was initiated by Dr Miomir Korać from the Institute of Archaeology. He has been leading a team of young researchers on a bold excavation of the Roman city of Viminacium and its legionary fortress.

The aim has been clear - to protect Viminacium, trasnforming it to an important research centre and an archaeological park. A multidisciplinary team from several institutions was established, with a wish to apply the latest methods of geo-physics, mathematical modelling and analyses of 3D structures beneath the surface, mostly by applying methods of artificial intelligence and prognostics. In the team of natural scientists and engineers involved in the new research of Viminacium there were geo-physicians, remote detection researchers, geo morphologists, mathematicians, electro-engineers, and petrologists from several institutions (Mathematical Institute of the SASA, Faculty of Mathematics, Faculty of Mining and Geology and the School of Electrical Engineering).


Balatovi
Ostrovac
Lanci
Svetinja
Kameniti brod
Rudine
Obreševa bara
Selište
Tavanište
Todića crkva
Mali grad
Vlaške livade
Karaula
Rit
Veliki grad
Tamničište
Pajića salaš
Klepečka
Selo Stari Kostolac
Čair
Nosak
Pirivoj
Nad klepečkom
Velika kapija
Pećine
Kod cuprije
Na kamenju
Brest /
Kod Bresta
Svetinja
Korabe /
Kod Koraba
Pijavište
Više grobalja
Carine
Kod groblja
Humka
Burdelj
selo Drmno

Fig. 43


SONDA 180
SONDA 179
SONDA 177
SONDA 175
SONDA 65
SONDA 133
SONDA 165
SONDA 172
SONDA 160
SONDA 134
SONDA 53
SONDA 64
SONDA 66
SONDA 55
SONDA 61
SONDA 164
SONDA 146
SONDA 140
SONDA 141
SONDA 142
SONDA 72
SONDA 56
SONDA 57
SONDA 58
SONDA 82
SONDA 121
SONDA 96
SONDA 59
SONDA 69
SONDA 60
SONDA 67
SONDA 70
SONDA 84

Fig. 44

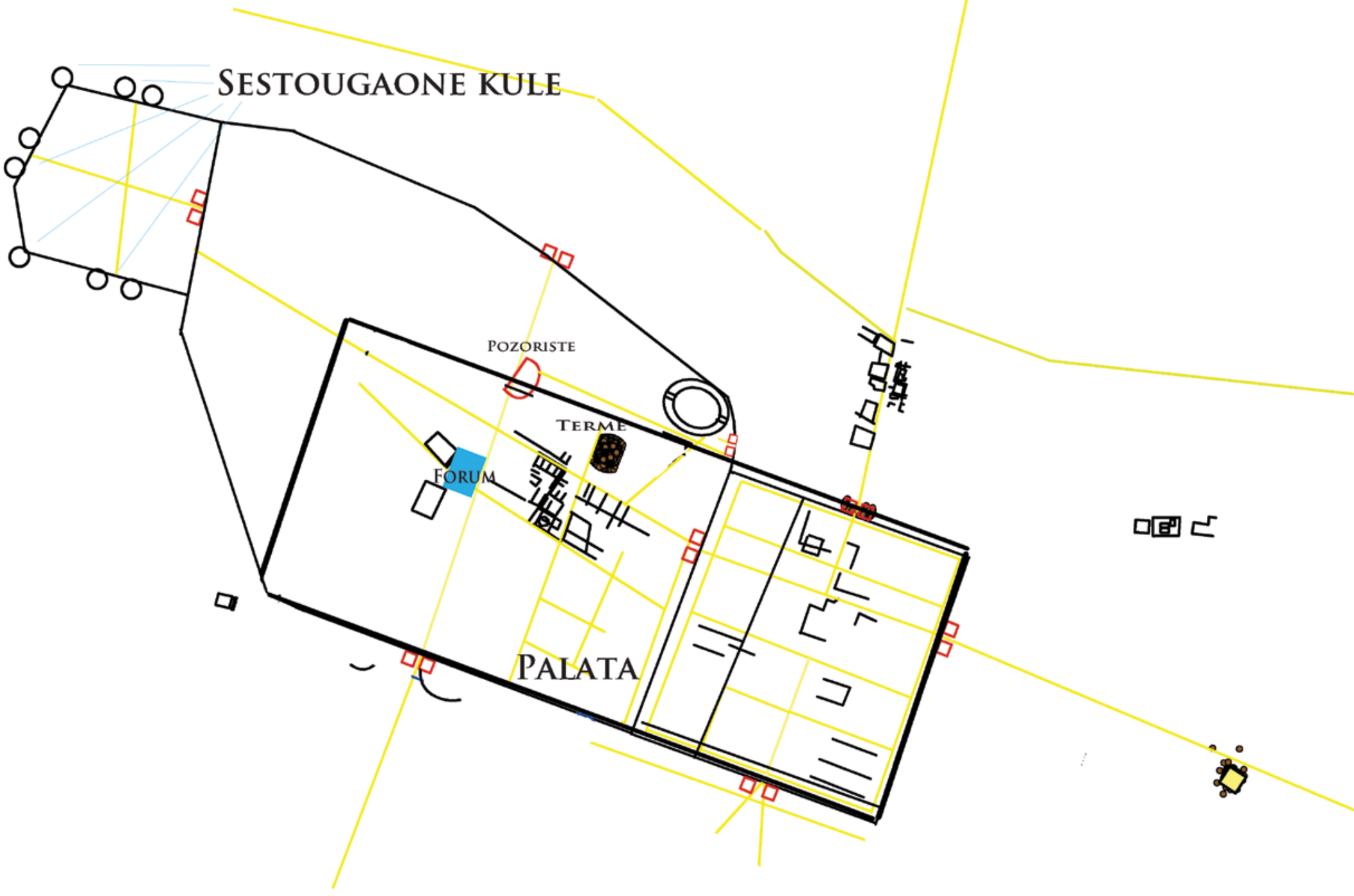
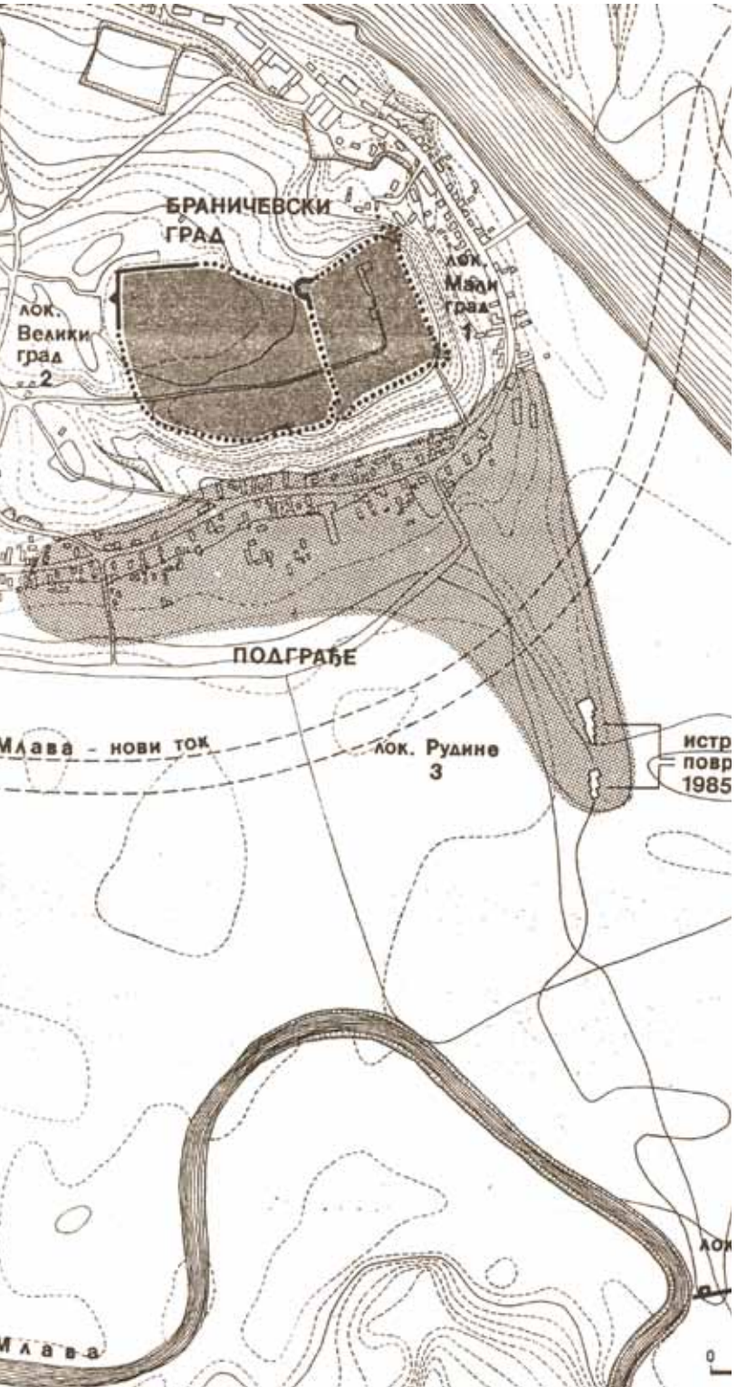



**Fig. 45**




Before the archaeological excavation, a stereoscopic analysis was made of the entire territory of Viminacium. For the first time ever, such an analysis was made for the entire site. Before any archaeological research was conducted, twenty-one large structures had already been detected.

In a short period of only six years, several structures of the city of Viminacium and of its legionary fortress were investigated. In 2006, the first archaeological park, not only in our country, but also in the wider surroundings, was officially opened. Plans were made and a foundation stone was set for the building of the Domus, the future scientific and research centre. Domus was made as a ground floor building, in the form of a Roman villa rustica, with an underground space divided into two levels. In 2011, Domus was finished and now, several dozens of researchers work there. Apart from the accommodation of researchers who conduct the excavation of Viminacium, in Domus, in one of the atria (atrium C), there are seventeen rooms (*cubicula*) for the accommodation of visitors and researchers who come there to work on common projects.

From 2002, Viminacium was given an international character, since cooperation with the University of Albany (NY-USA) was established at that time.

In 2016 and 2017, an important exchange of research occurred between professors and scholars from Cambridge University (UK) (Tonko Rajkovača, Christopher Evans, Liliana Janik, Marie Louise Stig Sørensen) and the Viminacium researchers Snežana Golubović and Nemanja Mrđić, who were invited, together with Miomir Korać, to give a lecture entitled "Viminacium (Moesia Superior): The Legionary Fortress, City and Cemeteries" at the Faculty of Classics, Cambridge University.

When dealing with the anthropological research at Viminacium, scientific exchange and institutional cooperation is very important, and Viminacium researcher Ilija Mikić coordinates three projects. In 2019, an agreement of collaboration was signed between the Institute of Archaeology, Belgrade and the Institute of Evolutionary Biology, Barcelona (ESP), on the project "The Fall of the Roman Empire and the Barbarian Invasions". As a result of the NSF (USA) workshop in 2018, work on a joint pilot project between the Institute of Archaeology in Belgrade, the University of Texas in Austin (USA) and the Vasile Pârvan Institute of Archaeology in Bucharest (RO) will result in joint research related to osteological material from Viminacium. Similar results can be expected from the cooperation between Viminacium, the University of Nebraska-Lincoln (USA) and the Ankara University (TUR).

A productive collaboration with the University of Vienna (AT), the Danube University Krems (AT) and the Károly Róbert College (H) was realised with the project Danube Limes Brand, while during the project *OpenArch*, the collaboration with the University of Exeter, Department of Archaeology (UK) and professor Linda Hurcombe introduced methods of experimental archaeology and improved this segment of research at Viminacium. These projects and collaborations among the partners have improved Viminacium research in the domain of its cultural heritage, with a focus on protection, presentation and popularisation. During 2016, an exchange of knowledge related to the research of the *Legio VII Claudia* was the topic of the bilateral project "Monuments of VII Legion in Dalmatia and Moesia", resulting in important study visits for Viminacium researchers and associates from the Faculty of Philosophy in Zagreb (CRO).

**Fig. 46**

## VIMINACIUM – AN EXCEPTIONAL ARCHAEOLOGICAL SITE

Modern considerations on how the site should be presented to the public in the future are based on the importance of Viminacium as the capital of the Roman province of Upper Moesia, that covered most area of central Serbia, west Bulgaria and part of the North Macedonia. Another fact is that the remains of Viminacium are easily accessible to modern excavations.

These factors guide our present considerations for future research at Viminacium. That research, on the one hand, firmly builds on the results of earlier investigations by our distinguished colleagues, and on the other, expands the scope of exploration to provide new knowledge for experts in the field and, above all, to a general public interested in the preservation and presentation of our common cultural heritage.

It is our firm intention to show that the inhabitants of Viminacium and its surroundings were once part of global developments in their day and that the numerous emperors who passed through or lingered here, appreciated its significance and donated many important monuments to the city.

Exploratory excavations of the urban area and the legionary fortress have revealed that the ramparts, streets, public squares, temples and amphitheatre have been preserved and that after their clearing of the debris accumulated through the centuries, Viminacium will be presented to the world in its full splendour.

**Fig. 47**

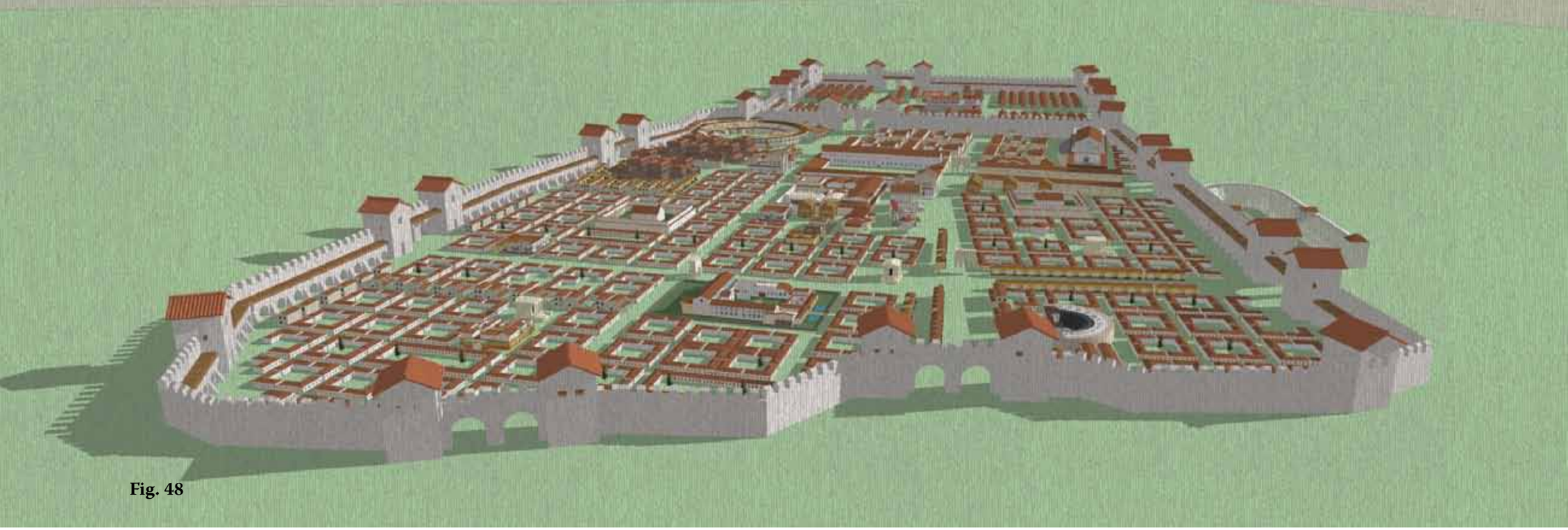


Fig. 48

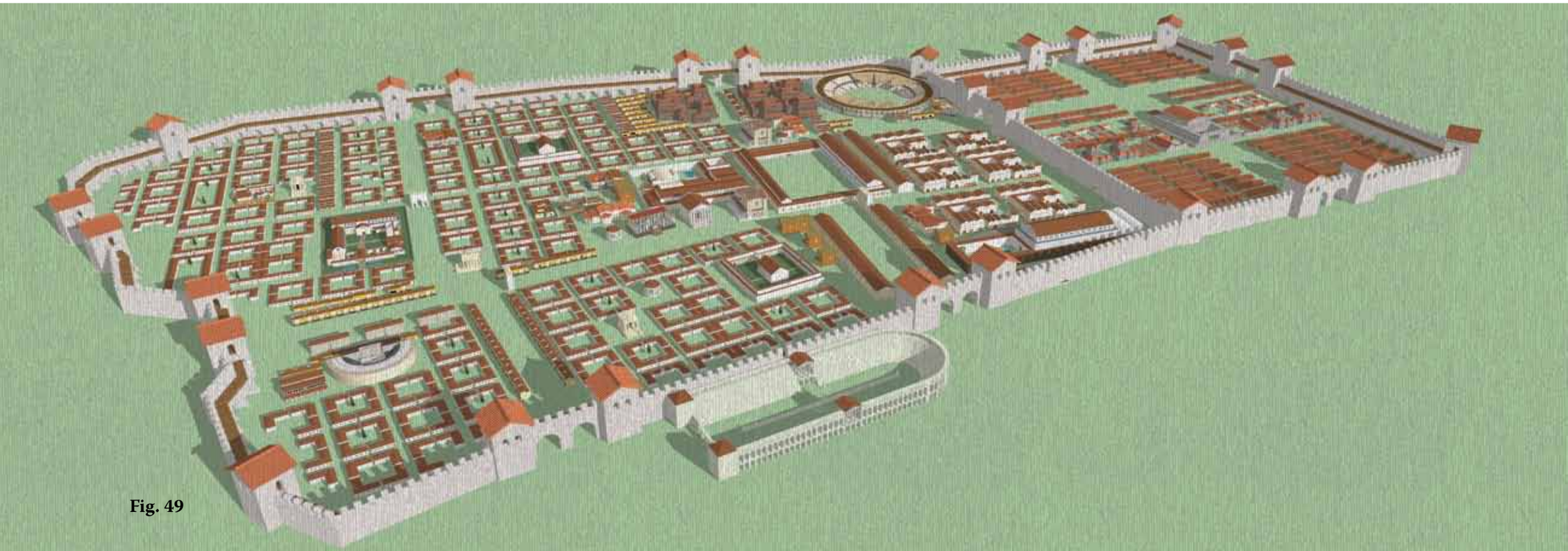


Fig. 49

## ARCHAEOLOGY AND SCIENCES

The history of Viminacium research is an inseparable part of Viminacium's history as a whole. The earliest history and archaeology lovers, together with the earliest trained and educated investigators and researchers provided a solid foundation for modern research. Besides the historical sources and archaeological layers in the soil, which undoubtedly provide the most important data in archaeological excavations, traditional archaeology depended very much on fortunate, personal choices of the person engaged in the excavation and research. Luckily, our predecessors left valuable and precise data on which it was easier to base our future work. The modern age brought many benefits to the excavations and research, as a result of new technologies and tools. All of these have led to improvements in the methodology employed in excavations and have contributed to a faster dissemination of the research results. Owing to this modernisation of excavations, our knowledge of Viminacium is rapidly growing, although it still somehow coincides with the results and conclusions of our famous predecessors, as is the case with their plan of the castrum and the city of Viminacium, which almost perfectly match the plan obtained with the use of Ground Penetrating Radar. This is why an overall image of Viminacium can be created only if we use traditional and modern methods in excavations and research and if we fully appreciate the legacy of the great minds and people who initiated the story of Viminacium's research.

**Fig. 50**


Fig. 51

Fig. 52

Fig. 53

Fig. 54

## RESEARCH METHODS

The research of Viminacium can be divided into three basic phases: the initial ones, conducted at the end of the 19th and the beginning of the 20th century, those between 1972 and 1997, and those started in 2001. The first two phases were mentioned in the previous chapter about the research history. The latest research is characterised by the systematic application of multidisciplinary methods used in the preparation of archaeological excavations and later in their documentation and final processing of the results.

Archaeological excavations have two essential characteristics:

a) they are time consuming and expensive and,

b) on completion, they are attractive to the public and, therefore, potentially profitable.

We are aware of the fact that archaeology is an expensive science, but also that advances are being made in new technologies from other fields that can be employed for archaeological investigations. By applying natural sciences' contemporary methods we will do everything possible to expedite the process of archaeological investigations and make them as cost-efficient as possible. Working on a project like Viminacium needed a certain amount of preparation, including a multidisciplinary concept. One of the pioneers of well-planned archaeological projects was Robert J. Braidwood from the Chicago University, who conducted excavations at sites in the Iraqi part of Kurdistan during the 1940s and 1950s. Conducting this project, he then formed a multidisciplinary team for exploring the origins of the agricultural communities of the Near East.

The key elements of working on a big archaeology project and applying modern exploring techniques include a carefully defined exploration aim – the project must offer exact answers to certain questions concerning the past. An important element is an ecological approach. The third place is taken by the realisation of new techniques and technologies, which require intensive excavations of the site.

In addition to the classical methods of archaeological exploration, different methods of natural sciences have also been applied at Viminacium, including remote sensing and geophysical surveys (ground penetrating radar, magnetism, electric resistivity, seismic). The interpretation of ground penetrating radar signals with artificial intelligence and mathematical models to define space and obtain three-dimensional maps are among the state-of-the-art methods we apply. By analysing aerial photographs in stereo pairs, structures can generally be identified over a wide area and then more precisely defined by geophysical methods.

GPS (Global Positioning System) satellite navigation is used to establish the precise position of structures and features in space as well as for recording the find locations of all archaeologically identified artefacts, with sub centimetre accuracy. A professionally accurate total station is used to survey and map identified structures and features.

## GEOPHYSICAL METHODS IN ARCHAEOLOGY

**Overview of the methods**

The success of archaeological fieldwork mostly depends on excavation and it is, therefore, of utmost importance to understand the distribution of underground structures. Information on the distribution of structures is obtained from the results of the excavated cuttings or trenches. Nevertheless, there is the possibility for a cutting or a trench to miss some of the important areas of the site. Obtaining information about substructures before archaeological excavation can be of vital importance for archaeologists. As a result, geo-physical methods became part of modern archaeology. In modern times, worldwide, but also in our country, especially at the site of Viminacium, no archaeological fieldwork is conducted before geo-physical prospection.

The application of geo-physical methods requires collaborative work of geo-physicists and archaeologists. Evaluation of an archaeological site fit for the application of this method, its stratigraphy, geo-physical contrast, an overview of archaeological documentation and the measurement projection itself, has to be the result of collaborative work. It is clear that for a complete interpretation of geo-physical data, multi-disciplinary work is required, including archaeologists, geo-physicians and mathematicians, but sometimes also other experts.

The application of geo-physical methods at this site started in 1972, after the first geo-magnetic surveys was conducted on several locations within the city and the fortress. For several years now, at the site of Viminacium, systematic geo-physical research has been conducted. They are performed within a network of cuttings measuring 20 x 20 m. Each cutting is simultaneously examined by applying several methods and, after that, the results are combined and overlapped. Apart from the general area of the Roman city and the legionary fortress, some specific structures within them were also detected: an amphitheatre, urban city structures – *insulae*, the northern gate – *porta praetoria*, the eastern gate – *porta principalis sinistra*, the baths – *thermae*, a mausoleum – *mausoleum*, a hippodrome, the headquarters of the military camp – *principia*, as well as aqueducts – *aquaeductus* of about 1.5 km in length. It is foreseen that the area of the Roman city and the legionary fortress should be geo-physically investigated over a period of about two and a half years. During this period, the results obtained with geo-physical methods will be tested archaeologically.

**Fig. 55**


**Fig. 56**

The northern gate of the legionary fortress – *Porta praetoria,* and the imperial city baths have been examined, as well as the mausoleum and the aqueduct. Furthermore, the fortified port (*portus)* and one part of the urban quarters (*insulae)* were also investigated.

In three or four years, prior to the excavation, we expect to create the full content of some parts of the legionary fortress in a 3D version, which will enable a quicker investigation of certain archaeological complexes of the legionary fortress and their public presentation.

Geo-physical research methods are non-destructive and they enable a rather low-cost and relatively quick investigation of large surfaces. An image of all of the sub-structures is obtained before the beginning of the excavation, which enables a better selection of the position of the archaeological excavations. After the excavation, it enables a better understanding of the results within the wider context of the entire site.

Since there are basically only a low intensity of registered anomalies of the examined physical fields, relevant modern highly sensitive instruments are required that can detect these anomalies. The development level of contemporary instruments and computers surely enables the application of different methods for archaeological research. The initial basis for any such research is the results of applied remote detection and the analysis of satellite and aerial images of the selected area. These analyses enable selection of potentially important locations for archaeologists, actually a selection of the research methodology, along with consideration of the actual situation in the field. Usually, such images also represent a very good basis for submitting the results of geo-physical methods and they are both integrated into GIS.

Among the numerous geo-physical methods, four were proven to be extremely suitable for application in archaeology. They include:

- Remote sensing
- Geoelectric method
- Geomagnetic method
- Georadar method

The selection of methods and the success of their application basically depend on differences between certain physical features of the examined archaeological structures and the soil around them. Bricks and clay, for example, show small differences in the value of dielectric permittivity and, in most cases, by applying georadar methods, they

Fig. 57

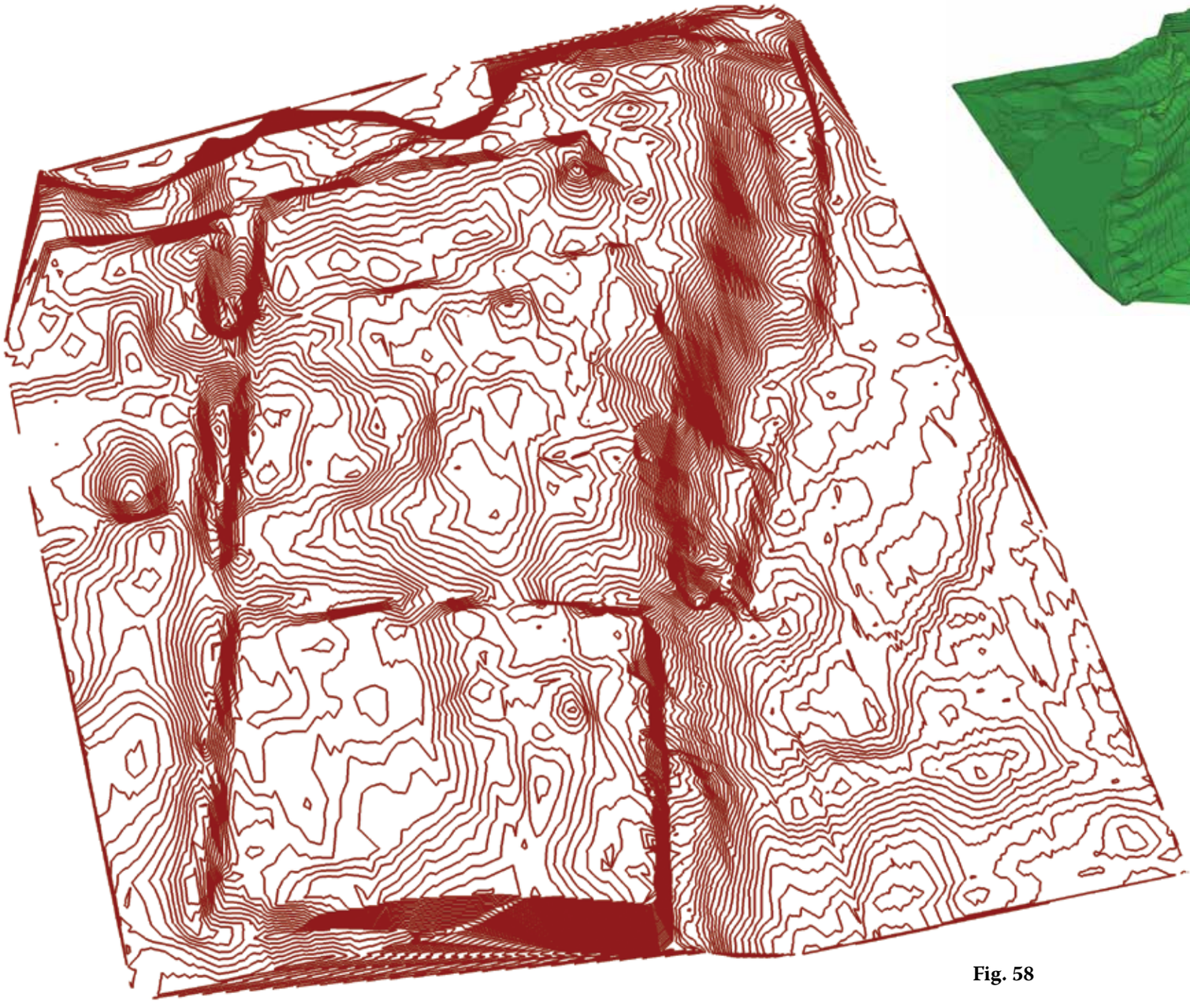


Fig. 58

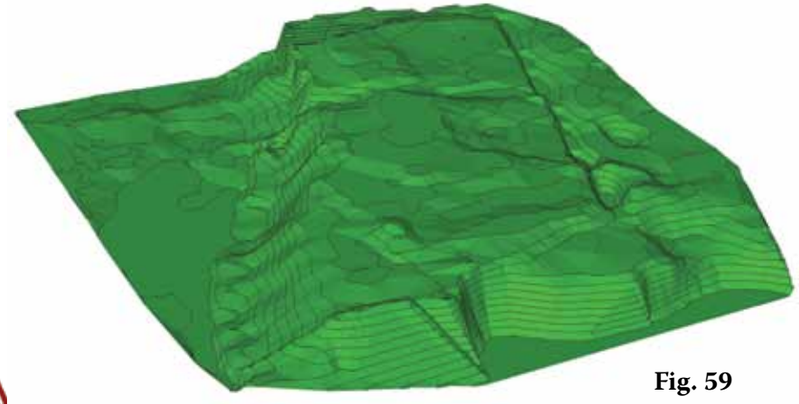


Fig. 59

are very difficult to distinguish from one another. On the other hand, their magnetic differences are huge, which makes them suitable for the application of geomagnetic methods.

**Remote sensing**

The initial condition for working on the project Viminacium was the application of remote sensing. For the first time, an archaeological site in Serbia was explored using the stereoscopic analysis of aerial photographs on a large scale. The stereoscopic analysis of aerial photographs from Viminacium was carried out by Radmila Pavlović, who works as a professor at the Mining-geological Faculty and teaches remote sensing. While

working together on these analyses, the author did not suspect that, apart from the paper that came out as a result of this work, the author would also gain a close friend. The author is very grateful to her for that. (Korać, M., Pavlović, R., 2004; Korać, Pavlović, Mrđić 2006, 21–36).

Modern archaeological excavations could not be imagined without the application of remote sensing. The first archaeological aerial prospecting was undertaken in 1913, when Ostia, a port near Rome, was investigated. Sir Henry Wellcome took the first aerial photographs of this site. Contrary to those first photographic experiences, today, many institutions exist, like the National Library of Aerial Photographs, in England. From 1906 to the present day, it has included over 750,000 oblique and over 3,000,000 vertical aerial photographs taken from 1940 to 1979 (Bradford, I. S. P., 1957; Wilson, D. R., 1982). Apart from studying natural conditions, by using this method one can recognise archaeological remains on the surface to be explored, events can be reconstructed that led to the covering of the area and precise plans can be obtained (Renfrew, C., Bahn, P., 2000, 71–116). Results gained by remote sensing can often be combined with geo-radar and magnetometric methods, as is the case at Viminacium.

It is known that there are two kinds of aerial photographs: oblique and vertical. Both of them have advantages and disadvantages, but both of them, combined in stereoscopic pairs, can be used for gaining three-dimensional models. PC applications for reading stereo-pairs have given a new dimension to this research area. Archaeological aerial photographs are now of primary importance when combined with PC applications, i.e. for the fine detection of archaeological objects (Gumerman, G. J., Lyons, T. R., 1971, 126–32).

The application of remote sensing in archaeology, especially at Viminacium, includes the application of various kinds of images for gathering data about archaeological objects or for making precise bases of already explored areas. Depending on the sensors used to explore the ground, different images can be obtained. Black and white, colour and infra-red images are in standard use, always presented using the stereo technique. Multispectral scanned images, infra-red scanned and radar images have an important place in archaeological research. The choice of the kind of images used as a data source depends on its aims, needs, the kind of research and the financial means available (Schaber, G. G., Gumerman, G. J., 1989, 712–713).

An important feature of the images is the possibility to gain a picture of the whole area. The importance of perceiving the whole is gathering a new quality and quantity of data about the site. New quality is made possible because of the analysis of the invisible spectral parts of electro-magnetic energy. This is facilitated by multispectral scanned, infra-red thermal and radar images. In these images, one can perceive certain terrain features, inaccessible to a field survey, especially parts of the site covered with metres of debris or some other material.

By transforming images into digital form, or their use in such a format, new possibilities of remote sensing are revealed. Such an image can be easily transformed into an orthogonal projection, which gives an extraordinarily precise topographic background for locating data. Besides that, digital images can be processed, with the use of an appropriate program (Limp, W. F. 1989, 22). Image processing as a method of data gathering has become a standard process with multi-channelled multi-spectral images.

Although the application of images in archaeology has an almost century old tradition, experience in our country is somewhat limited. Unfortunately, there is no archaeological site for which the stereoscopic analysis of aerial images on a larger scale has been carried out using an analysis of infra-red, thermal or radar images. There is also no site for which the processing of high resolution satellite images on a large scale has been done.

The detection of archaeological objects in terrain relief, today covered with layers of various materials, can successfully be done by the stereoscopic analysis of aerial images. Images made while the sun is low, early in the morning or late in the evening, can highlight shadows of old channels or deposits that were dug out during the erection of new objects. Differences in soil consistency reflect in soil humidity, which can easily be identified on such images. These differences reflect old archaeological structures and human activity on the ground. Reflections in relief and fine soil variations are actually invisible while walking on the terrain.


Fig. 60


Fig. 61

Fig. 62


Fig. 63

Contemporary vegetation also reflects soil diferencies. Variations in the density, height and colour of vegetation, spontaneous or controlled by humans, can indicate the existence of different structures such as trenches, remains of walls, channels etc. Such phenomena repeat year after year, even when archaeological remains lay much deeper that the modern pedological layer. That is why the analysis of classical stereo aerial photographs, infra-red or radar images made at different times is of great importance.

An important characteristic in the tone or colour of soil, in vegetation or terrain relief, is its form. Archaeological structures always possess regular geometrical forms. Geometrical forms can be confirmed by tone differences of soil, differences in vegetation, as well as differences in the micro relief of the terrain. Shapes of the relief, that came into being because of exogenous geomorphologic processes, never show such regularities.

In order to obtain qualitative prospecting, a detailed stereoscopic analysis of aerial photographs was done. Aerial photographs from two generations on three different scales were analysed. Older images were made in 1979, in 1:7,500 scale. The analysis was carried out on photograms. The second generation of images, from 1996, was made in 1:26,000 scale and the analysis was made on contact-copies and their enlargements in 1:10,000 scale. Both generations consist of black and white panchromatic images. Archaeological data was gathered using standard criteria. The results of the analysis of both image generations and in all of the three scales were drawn on special oleates laid down over the images. During the analysis of the images that were made in 1979 and 1996, certain similarities were observed, but also some differences. The difference is that the images made in 1979 belong to the period before the redistribution of land, which took place in 1981. Differences were also caused by the conditions in which the images were acquired, such as the time of day and the year, vegetation and plants planted in this area at the moment considered. In the images from 1979, under influences of some of these factors, some objects can be seen that are not visible in the images from 1996. For example, objects situated in front of the Viminacium city walls can be seen. They most likely represent round towers of the Viminacium suburb, which is a very important archaeological discovery (object 1 on the oleate).

What new facts, important for archaeological research, can be obtained by a comparative analysis of such images? The analysis of aerial images from Viminacium showed a great number of finds, some of which were confirmed with archaeological excavations. Some of them were confirmed with geo-physical methods, with the application of geo-electrics and geo-radar.

Just next to the old Mlava bed there are archaeological objects that indicate the existence of an ancient port. A wall was detected, probably a part of an old clausure (*clausurae),* that connected the port with the city. The wall length is 70 m and one can presume that another part, just as long as the first one, is missing (object 2 on the oleate).

The volume of the city and the legionary fortress of Viminacium could approximately be determined. The city centre itself measures about 1.5 x 0.85 km, actually somewhat more than 125 hectares. Still, the area around the city of Viminacium, with its necropoles and suburbs, measured much more, approximately 450 hectares. With careful analysis of aerial images, the city walls were determined. The results of this analysis were also confirmed by geo-radar images (object 3 on the oleate). The thickness of the northern wall was exactly determined with geo-radar (a geo-radar image of the northern city wall).

A row of round objects forms a right angle to the southern city wall. The function of these objects could not be determined. It is possible that they represent temples or objects connected to the imperial palace that surely existed somewhere in Viminacium. This hypothesis is based on the fact that almost every Roman emperor visited Viminacium, some of them visited the city several times and some lived in it for a longer period of time (object 4 on the oleate). An object detected to the north of the round objects mentioned could represent a temple (object 5 on the oleate). To the east of the presumed temple, there is an object indicating the existence of a city communication (object 6 on the oleate). This communication continues towards the city bath (*thermae*) (object 7 on the oleate). To the south-east of the city bath there is an amphitheatre (*amphitheatrum*). It has a round base, measuring approximately 100 m in diameter. It is interesting that the northern city wall was used as one of the amphitheatre sides (object 8 on the oleate, as well as a geo-radar shot).


Fig. 64


Клепечка река
ПУТ У ДРМНО
МЛАВА
Село Кост
Рукавац Дунава
острво

Fig. 65


Fig. 66

The legionary fortress (*castrum*), in which the Roman legion *VII Claudia Pia Fidelis* was stationed, represents one of the objects detected with the application, combination and analysis of aerial photographs, geo-electrics and geo-radar (object 9 on the oleate). Consequently, the dimensions of the fortress were determined, and they measure 448 x 392 m, i.e. about 17,5 hectares. In the middle of the legionary fortress an object with a square base can clearly be determined. It was certainly the head-quarters (*praetorium*) (object 10 on the oleate). The east gate of the legionary fortress was also detected (object 11 on the oleate).

Analysis of the aerial images led to an extraordinary possibility to overview the historical picture of Viminacium, which prompted many discussions. There is actually a possibility that the legionary fortress (*castrum*), which was established during the 1st century, was twice as big i.e. that it measured about 993 x 448 m or about 44 hectares, and even that two legions were stationed in it – *IIII Flavia Felix* and *VII Claudia Pia Fidelis*. Until now, the question of the first legionary fortress of the legion IV *Flavia Felix*, before it was stationed in Singidunum, remained unanswered. One of the possible places in which it could have been stationed until 86 is Viminacium. This hypothesis was given by Ritterling and R. Sajm. They both considered that the legion IV *Flavia Felix* could have been stationed there at least during Domitian's Dacian war. The main obstacle for accepting this hypothesis was the size of the legionary fortress in Viminacium. Usual speculations about the size of the military camp in Viminacium rely on data given by Mihailo Valtrović and Miloje Vasić. The first one considered that the legionary fortress measured 430 x 350 m, and the second one – 442.7 x 385.6 m. Those data were taken over by later explorers (M. Mirković, V. Popović and others). It is known that legionary fortresses in which two legions were stationed measured much more, like Novaesium, which measured 680 x 700 m, or more than 40 hectares (Valtrović, M., 1884; Vasić, M., 1905, 108; Ritterling, L., 1924, 1544; Syme, R., 1933).

Some interesting facts could confirm this: the south wall of the legionary fortress continues to the south city wall. The images clearly show that the walls continue, which is rather indicative, considering that the northern city wall and the city structure in this area do not continue into the northern wall of the legionary fortress. The basic question is: how is it that the southern city wall could be identified so clearly and shows continuity to the southern wall of the legionary fortress? The answer arising from this is that it used to have some function. Careful analysis of aerial images showed that there was an object on this spot, placed just next to the southern city wall. It had a rectangular base and rounded sides. One can presume that ever since the early stages of the city, most likely during the second half of the 1st century, there existed a hippodrome (object 12 on the oleate). If indeed it is true that two legions were stationed within the fortress, they could have been together only before the Edict of Domitian in 86, which prohibited the stationing of two legions within the same fortress. After 86, only the legion *VII Claudia Pia Fidelis* was left in the fortress and there was no need for such a large space, so the fortress (*castrum*) was reduced to the dimensions of 430 x 377 m. A part of the southern legionary fortress wall was used as one of the sides of the newly built hippodrome.

The round object can also be connected to this, indicating the existence of a communication or even an imperial palace, especially when one bears in mind the great importance of Viminacium to the Roman Empire.

To the south of the eastern legionary fortress gate (detected by geo-radar), several objects were detected, which were built in two groups. The first one is connected to communications that led to the neighbouring military fort of Lederata (object 13 on the oleate). The second one can be associated with the supply of water to the city and the legionary fortress (objects 14, 15, 16 and 17 on the oleate, as well as pictures of the aqueduct, a geo-radar and an archaeological figure).

Object 18 is tumulus-like, although its function remains unclear.

Defining the objects marked as numbers 19, 20 and 21 also demands archaeological excavations and interpretation.

An object detected with geo-radar and excavated afterwards should also be mentioned. It is a late antique basilica from the 4th century (geo-radar picture of the object and a photo of basilica after it was excavated).

With the application of remote sensing for the exploration of the city and the legionary fortress of Viminacium, more that twenty important objects were detected, like an aqueduct, a mausoleum, an amphitheatre, the northern military camp gate, the so called *porta praetoria*, and the city baths. In the future, a stereoscopic analysis of the site will be carried out with the use of infra-red images. Undoubtedly, satellite images will yield precious information about this extraordinary site.

**Geoelectric method**

Geoelectric method is based on examining electric features of soil by applying different methods. Results of such testing basically depend on soil species, level of soil humidity and content of dissolved ions. The geoelectric method, actually geoelectric soil scanning, was applied as an initial geo-physical method in Viminacium. In 2000, these initial geoelectric tests were conducted by the Institute for the Development of Water Resources "Jaroslav Černi".

Since 2008, systematic measuring has been conducted by applying the geoelectric method. The instrument used is the RM15D, produced in Britain. This instrument was specially constructed for application in archaeology and it enables high-speed and high-resolution scanning with a method known in physics by the name of pole-pole. The data acquisition is performed within research fields measuring 20 x 20 m, along parallel profiles, at distances of 1 m. In such a way, it is possible to obtain 2D data processing and interpretation. The outcome of such measuring is a rather precise detection of archaeological subterranean structures, but also an excellent comparison of these results with results obtained through geomagnetic and georadar methods. In the case of the geoelectric method, high values of soil resistance basically indicate the presence of structures beneath the surface that are built of solid materials. Contrary to this, low values of soil resistance indicate the presence of former ditches, pits or channels. In 2008, geoelectric research was conducted along the strip mine and the surfaces were registered with a high resistance. During later archaeological excavations, they were proven to be the structures of the "Castellum aquae" (water tower) and a part of the aqueducts.

**Geomagnetic method**

For many reasons, geomagnetic prospection is the most commonly applied method in archaeology. First of all, this method enables recording of huge surfaces over a short period of time. Furthermore, the nature of archaeological sites are specific for their rows of magnetic variations. The geomagnetic method is based on measuring anomalies of the Earth's magnetic field. In archaeology, magnetometers and gradiometers are applied because of the high resolution required. The values obtained with a gradiometer, based on the disposition of magnetic sensors, refer to the sector of a geomagnetic field anomaly caused mostly by anomalies close to the surface. On archaeological sites, there are different phenomena that cause magnetic anomalies. Layers with different types and densities of magnetic iron compounds are indicated with high values of magnetic fields, but also burnt soil, exposure of the upper soil layers to different weather conditions and

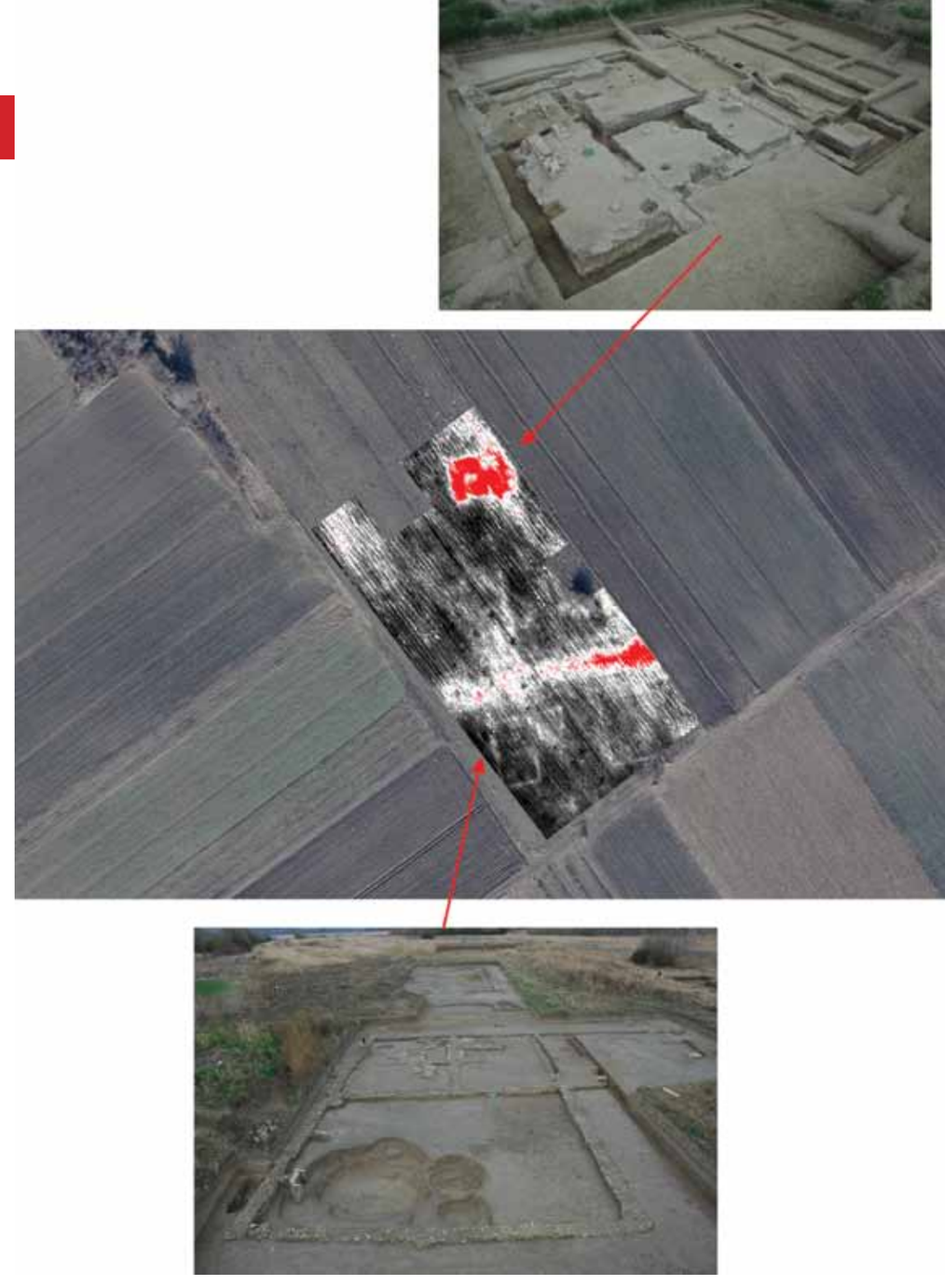


**Fig. 67**

Fig. 68

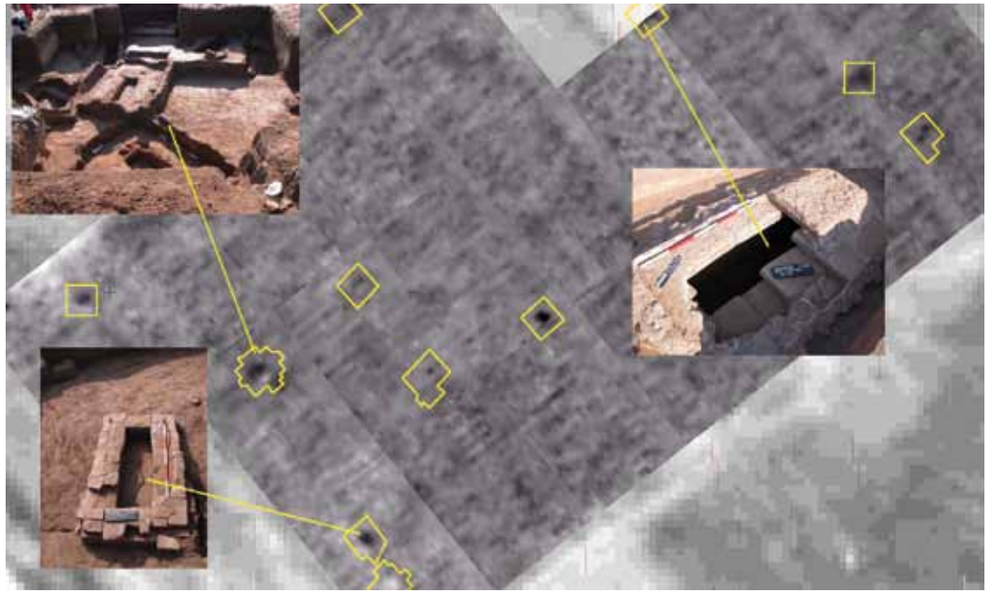
fermentation processes, the presence of certain bacteria that leads to a concentration of iron compounds, the accumulation of organic and burnt materials as a result of human actions, the accumulation of upper soil layers while constructing mounds and bulwarks, ditches, pit fillings after they were no longer in use, the presence of magnetic rocks like magmatites and burnt bricks used for building houses and pavements and especially metal objects. Minimal geomagnetic fields are created while removing magnetic upper soil layers, while digging ditches, building houses or creating other kinds of depressions, but also while using other building materials, like lime, which is less magnetic when compared to the surrounding soil.

As already mentioned, in 1972, the geomagnetic method was the first one to be used in Viminacium. In accordance with contemporary technical possibilities, recordings were performed with a relatively small data density. From that time onwards, geophysical instruments have advanced considerably and nowadays there are high resolution geomagnetic instruments. Since 2003, systematic geomagnetic measuring has been conducted at Viminacium, with an instrument called "Overhauser magnetometar-gradiometar GSM19gw" by the Canadian GEM Systems.

The geomagnetic method can be described as a surveying method and it has already been conducted over a large part of the Roman city and the legionary fortress. Based on the results of the geomagnetic research, detailed geophysical and archaeological research is planned.

In the following image, the geomagnetic research conducted so far within the area of the Roman city and the legionary fortress of Viminacium is shown. The gradient values of the magnetic field registered in this area vary from only a few nTs (nano-Tesla) to over 50 nTs in very urban city parts. Such high values represent the consequences of long lasting room heating during Antiquity, the long usage of the area and of the material used for construction. According to the data obtained with georadar prospection, conclusions are drawn about the general distribution of architectural complexes within the city and the fortress, the dimensions of certain complexes, the directions of the main communications etc. To date, the geomagnetic method has been applied almost to the entire area of the legionary fortress, the amphitheatre and its surrounding, the city centre, as well as the area of the southern city wall and its surroundings. This research was conducted within cadaster lots accessible to the team of geo-physicists, since many of them are still private property. Furthermore, detailed geomagnetic research was conducted on locations close to the strip mine that were endangered by its spread. They include Roman cemeteries and the ancient city surroundings.

**Fig. 69**



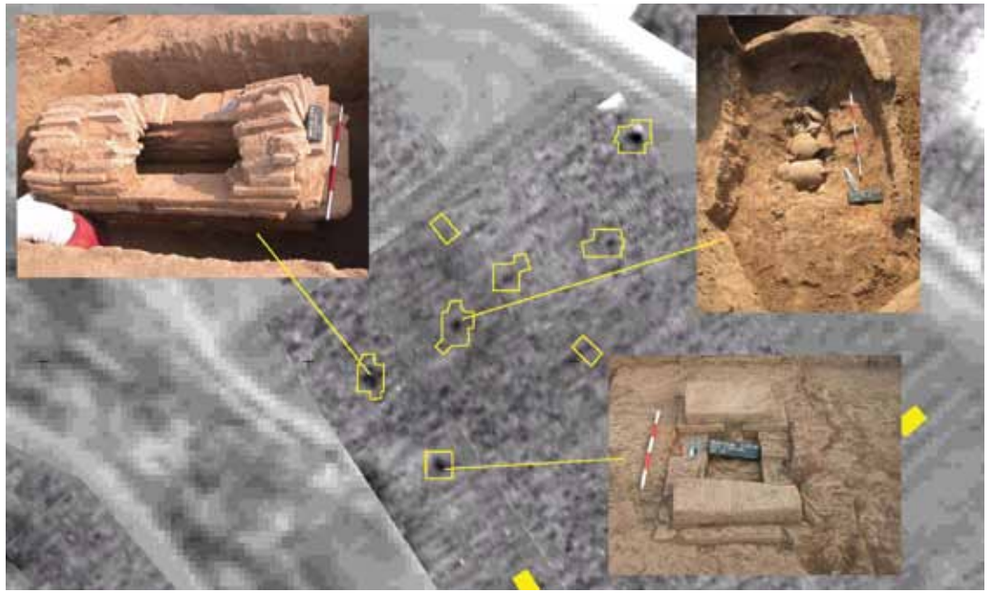


**Fig. 70**

Fig. 71


Бања
Пут за с.ело Кајчевци
Пут за с.ело Кајчевци
Пут на њиве
Пут на њиве
Пут на њиве
Пут на њиве
Пут у с.ело Арино
Шанац
Табл. V.

Fig. 72

Considering the protective research of the necropolis situated close to the edge of the mine, archaeological trenches were positioned according to the results of the geomagnetic research. It was ascertained that geomagnetic anomalies with magnetic field gradient values higher than 6 nTs (nano-Tesla) represented tomb constructions, but also cremations at small depths. In such a way, a rapid advancement of archaeological research and the covering of huge surfaces within a short period of time was made possible.

**Georadar method**

The georadar method belongs to sophisticated geo-physical methods and also to the group of electromagnetic methods. It is based upon the emission of electromagnetic waves from the transmitting part of the instrument's antenna, reflected from specific boundaries or structures beneath the ground and then registered in the receiving part of the antenna. The strength of the registered amplitude, or the success of the detection, depends on differences in the electromagnetic features of the examined structure and its surroundings, most of all the differences in dielectric permeability. The advantage of this research method is its continuous and fast data collection, high density of registered data, the non-destructivity of this method, the possibility of generating 2D and 3D models, a good control of depth and instantaneous antenna position, but also the low level of disturbance while working in urban areas.

Georadar recordings have been conducted in Viminacium since 2002 (Korać, M., Mrđić, N., Stojanović, V., 2005, 37–46; Redžić, S., Raičković, A., Miletić, V., 2005, 47–56). The instruments used are the RAMAC GPR CUII of the Swedish company MALA Geoscience, with antennas from 50, 250, 500 to 800 MHz. The RAMAC/GPR CU II is a modern system of extremely high resolution and produces high quality georadar images. The measured data is recorded in a raw format, which makes it possible to apply a huge number of accessible programs for processing the georadar data once the recording has been completed. Many filtering procedures can be performed and information of extremely high quality can be obtained from the registered material.[5]

The correct selection of the georadar antenna frequency and the measurement timing are the bases of good georadar measuring. Depending on the chosen antenna and foreseen depth, different measuring timings are applied. Measurements are performed in time mode, meaning that data is registered in certain regular time intervals. When needed, a measuring trol-

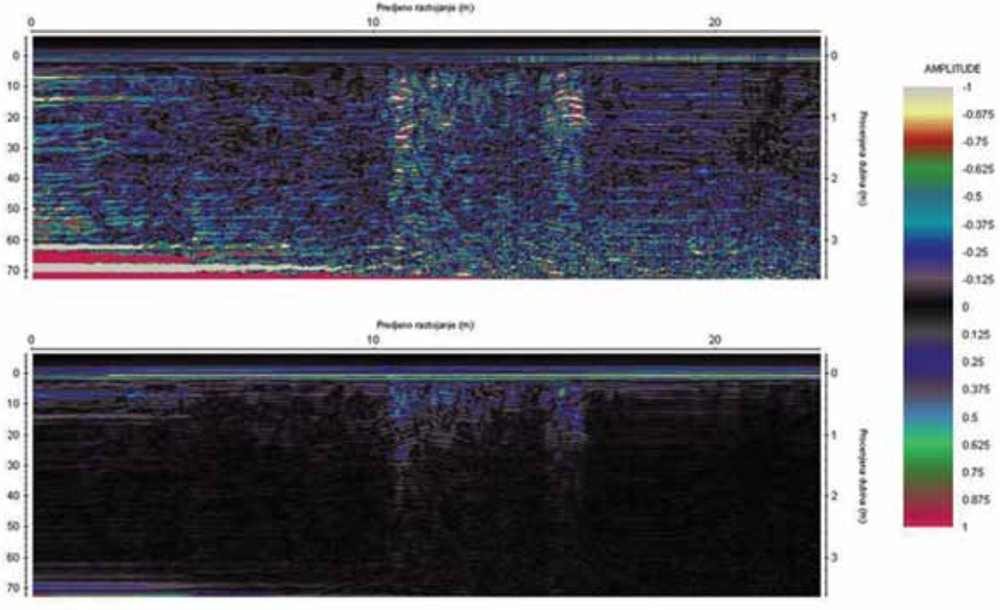



**Fig. 73**

[5] For data acquisition, the system uses the "Ground Vision" program.

ley or a measuring wheel is used, with automatic measurement of distances. In some parts, insufficiently prepared for georadar measuring, a special pad is used, made of textured threads. This reduces recording disturbances to a minimum, and improves the ratio between the signal and the noise.

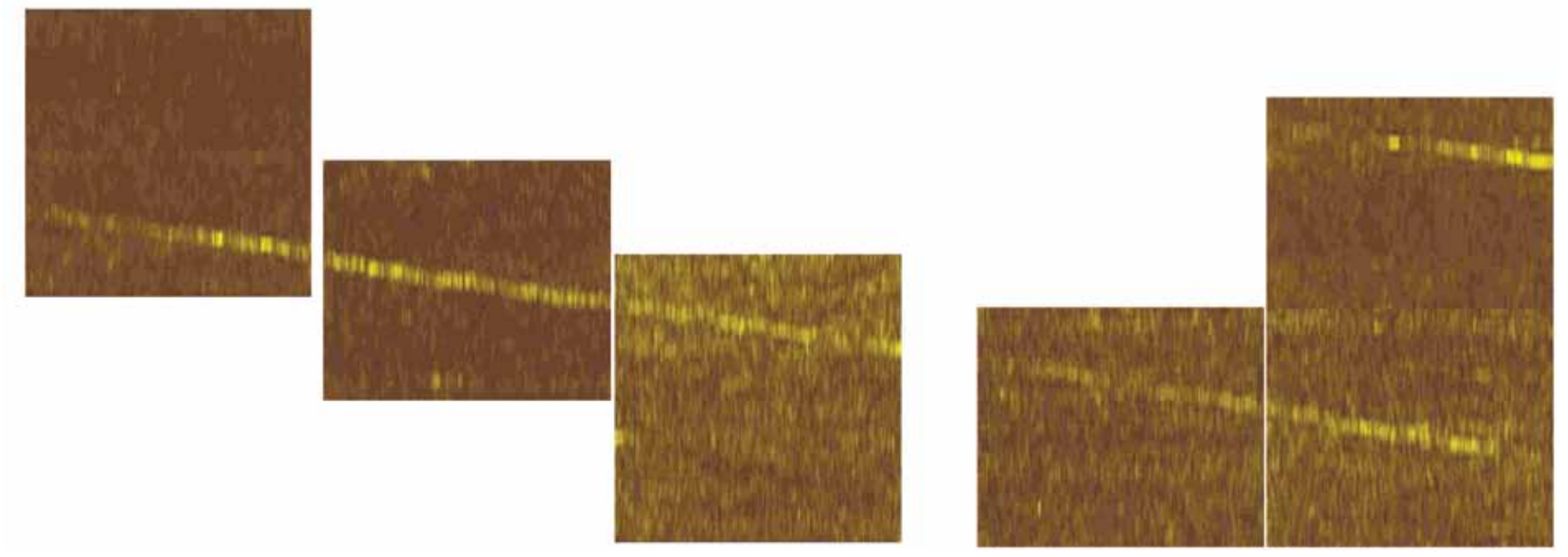


**Fig. 74**

By applying this method, it is possible to detect structures made of materials with a dielectric permeability value different from the surrounding clay soil. In order to generate 3D models, improving the further interpretation and presentation of the obtained results, measuring is performed by positioning a row of parallel profiles.

Data is processed using programs that enable digital filtering, like spatial filtrating, migration, deconvolution, summing, filtration in a frequency domain, but also different displays of georadar recordings in order to highlight specific information. Furthermore, terrain configuration is also considered. The obtained results are transferred into a suitable format in order to make them accessible in a program for mathematical modelling in order to obtain a 3D model.[6] Such a model represents a three-dimensional matrix, actually a matrix in which every point possesses a specific depth value, a distance from profile point zero, a number of profiles and an absolute value of the measured signal amplitude. A 3D visualisation is made which, apart from the georadar profiles that represent vertical cross-sections of the underground, also makes it possible to obtain 3D underground structure forms, but also horizontal cross-sections at specific depth levels.

[6] 3D modelling is performed by prof. Dr Milan Milosavljević, professor at the Faculty of Electrical Engineering.

## SOME OF THE SURVEYED LOCATIONS

**The northern gate – Porta Praetoria**

For the first time at Viminacium, the georadar method was used to investigate the northern gate of the legionary fortress, i.e. the porta praetoria. This investigation was performed along a row of parallel georadar profiles at distances of 2 m. After the georadar data were processed, a 3D model was made. Archaeological excavations fully attested the existence and shape of the subterranean structure obtained through matrix modelling.

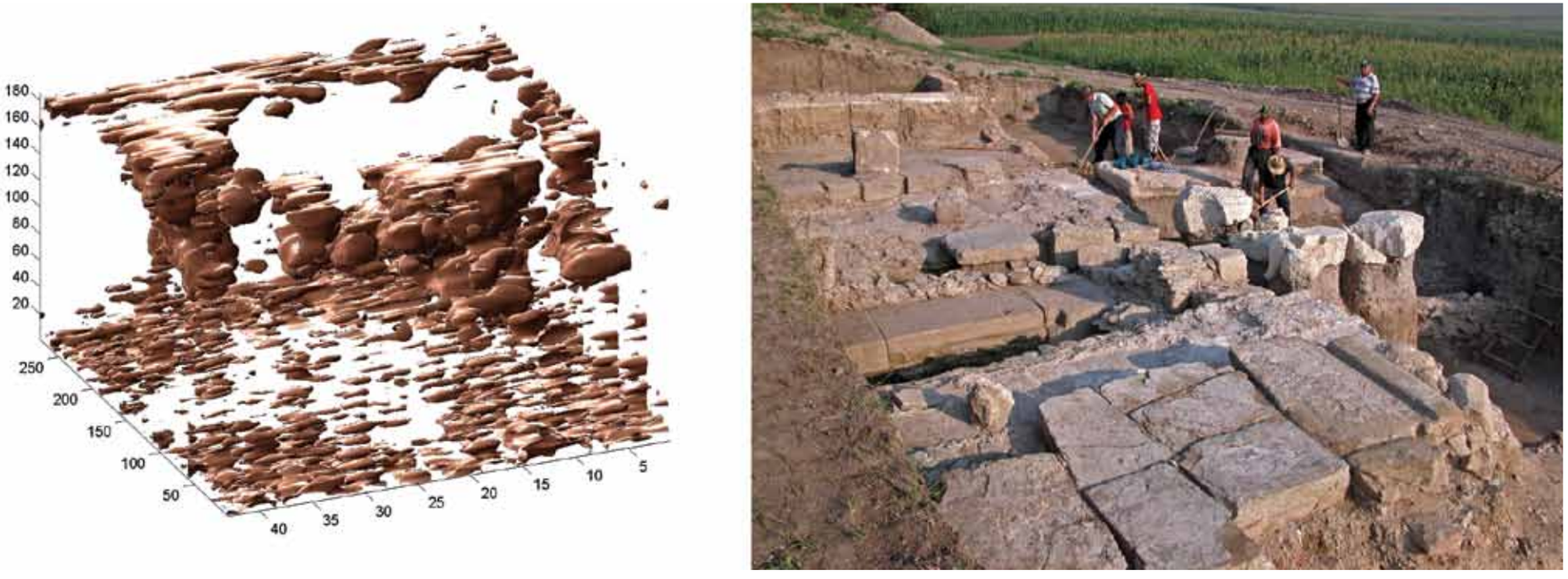



**Fig. 75**

**Walls**

By using geo-physical methods: geoelectric, georadar and geomagnetic, the dimensions of the legionary fortress and the city have been attested, previously seen on various aerial views. The city walls and the walls of the legionary fortress have been detected in all of their suspected directions.

Initially, geo-physical investigation was conducted by applying geoelectric scanning according to the terrain configuration. Within the area of the Roman legionary fortress, the goal was to detect the subterranean disposition of the wall remains. Scanning was performed at the northern, eastern, western and southern

castrum parts, by placing geo-physical profiles orthogonally to the suspected positions of the former walls. In the southern castrum part, geoelectric scanning was performed orthogonally to the suspected position of the ditch. In the area of the legionary fortress, geoelectric terrain scanning was conducted in five profiles, each of them 50 m long, with fifty-one electrodes at ten depth levels. The minimum distance between the electrodes was 1 m. During the interpretation process, and according to the relative electrode elevations, topographic correction was used.

**Geo-electric soil scanning**

As an initial geo-physical method, geo-electrics were applied, actually geo-electric soil scanning. Geo-physical exploration using the method of geo-electrical scanning was undertaken in five profiles, according to the site geometry given.[7] The measuring aim was to determine unearthed wall remains within the legionary fortress (*castrum*). Scanning was undertaken in the northern, eastern, western and southern legionary fortress parts by placing geo-physical profiles vertically to the supposed positions of the former legionary fortress walls. In the southern legionary fortress part, geo-electrical scanning was undertaken vertically to the supposed trench position.[8] Within the legionary fortress, geo-electric soil scanning was undertaken in five profiles, each measuring 50 meters, with 51 electrodes at ten depth levels. The minimum distance between the electrodes was 1 metre. During the interpretation, and based on the measured (relative) electrode peak elevations, topography correction was used.

*Geo electric profile I – the eastern legionary fortress wall*

In profile 1, at a distance of 15 to 22 m and at a depth down to 5.5 m, there was an anomaly zone with a specific electrical resistivity greater than 250 Ohms (dark-red - dark-purple colour on the final section). This anomaly zone shows a sharp line that distinguishes it from the surrounding geo-electrical areas and shows a tendency of horizontal spread, thus representing an "intrusion" in the naturally layered quarter sediments. This is why the anomaly zone could represent the legionary fortress's wall foundations. The absolute error of 1.2 %, points to the high quality of the measurements and a good 2D terrain model.

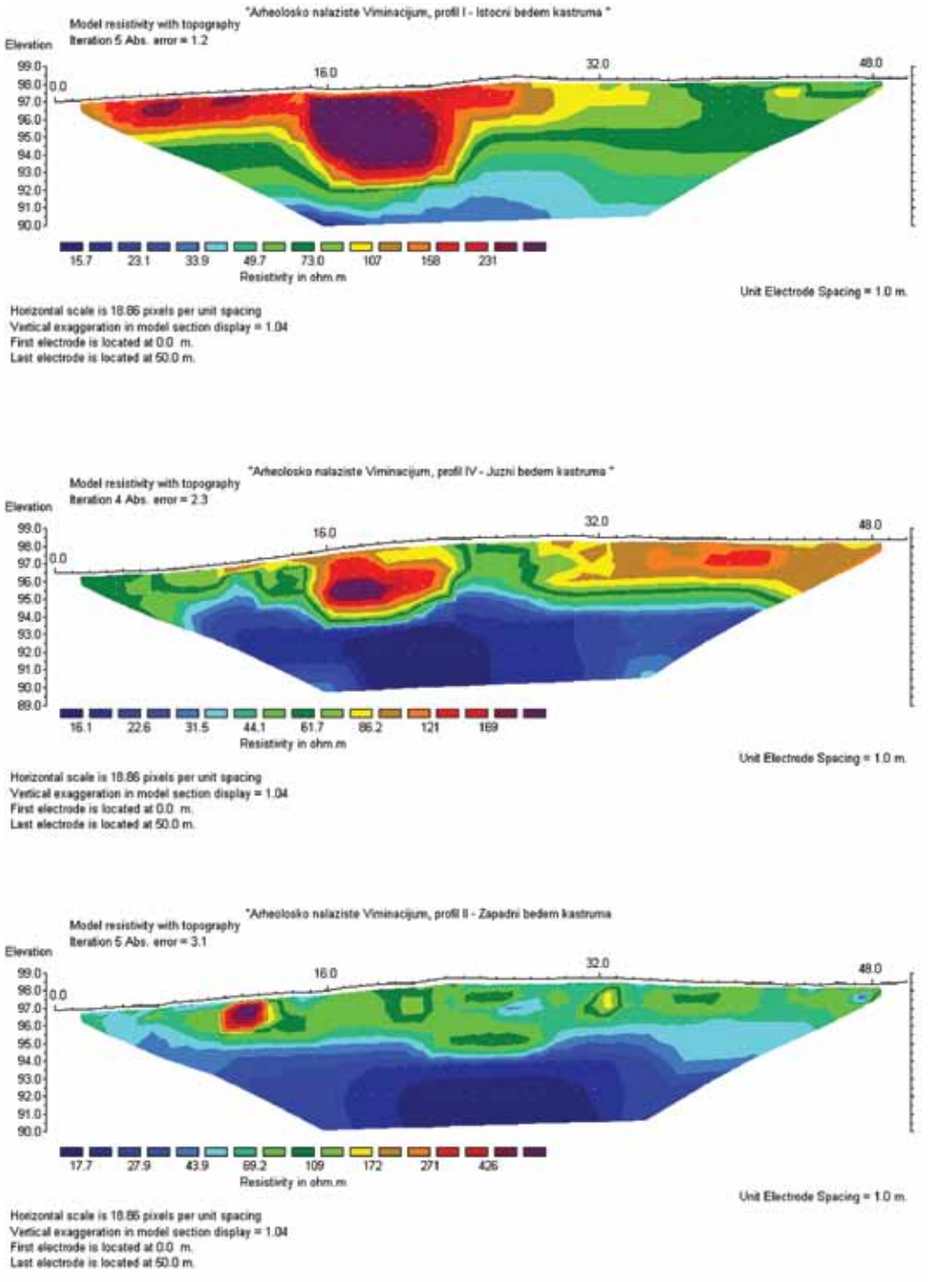



**Fig. 76**

[7] Site exploration using geo-electric scanning is done with several metal electrodes that are stuck in the soil and connected to the apparatus (resistivity meter) by cables. Measuring can be done in a chosen number of depth levels.

[8] Geo-electrical soil scanning was undertaken by M. Vukadinović and R. Vasić from the Jaroslav Černi Institute, and I am most grateful to them.

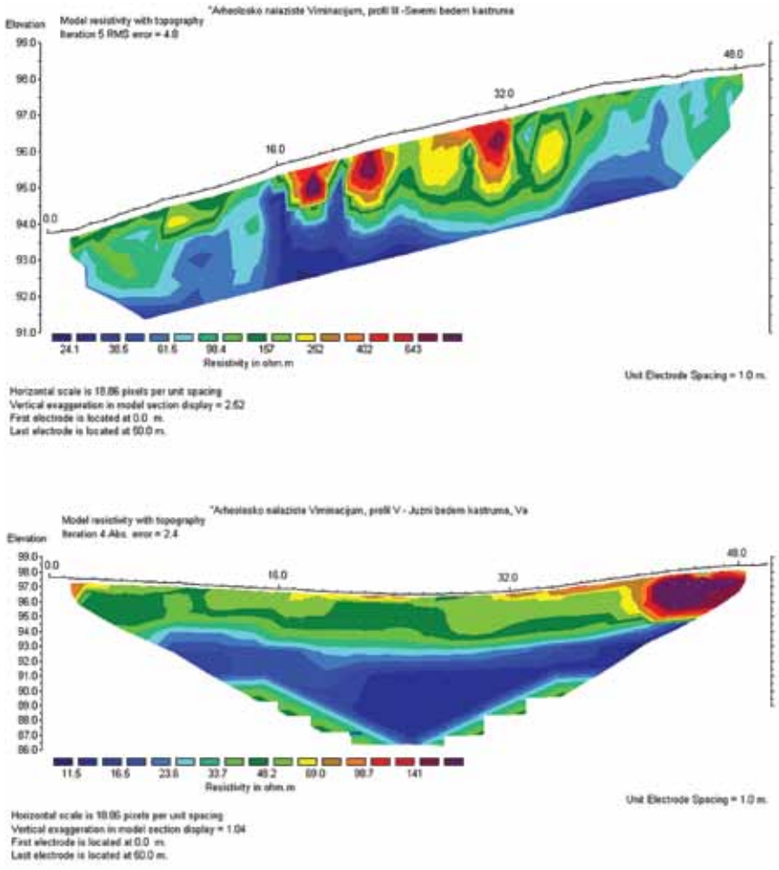



**Fig. 77**

*Geo electric profile II – the western legionary fortress wall*

In profile 2, at a distance of 9.5 to 12.5 m, directly beneath the surface and at a depth down to 2 m, there was an anomaly zone with a specific resistivity greater than 250 Ohms (red - dark-purple colour on the final section). Because of the relatively small dimensions of this zone with erected SEO, a question arises as to whether it may represent a foundation or a part of a wall foundation that was left over after the destruction. The absolute error is 3.1 %, which is a consequence of the greater differences of certain measuring points within the same depth level.

*Geo electric profile III – the northern legionary fortress wall*

In profile 3, an anomaly zone with a specific resistivity greater than 250 Ohms (yellow - dark-purple colour on the final section) spreads from 16 to 32 metres. It unquestionably covers the foundations of the legionary fortress walls, but its great width is not quite clear. The depth of the zone measures 2 to 3 metres.

All this indicates the possible destruction of the legionary fortress walls and the spread of the material from which it was made (to the inside of the castrum). This could explain the great geo-physical width of the anomaly zone. According to that, as well as to the large depressions in the lower sediment layers, one can presume that the wall foundation was 26 to 32 m long, while its foundations went down to 2 meters deep.

*Geo electric profile IV – the southern legionary fortress wall*

In profile 4, at a distance of 15 to 23 m and at a depth down to 3.5 – 4 m, there was an anomaly zone with a specific electrical resistivity of 86 to 200 Ohms (yellow - dark-purple colour on the final section). This anomaly zone probably represents the legionary fortress wall foundations. A zone of similar electrical resistivity can be observed in the profile, that spreads horizontally from 30 metres to the end of the profile with a depth of 2 meters, which most likely represents the remains of some object within the legionary fortress.

*Geo electric profile V – the southern legionary fortress wall, trench (Fossa)*

In profile 5, an anomaly zone of the defence wall from 42 to 48 metres and directly beneath the surface could be detected. Its specific electrical resistivity measures over 200 Ohms (red - dark-purple colour on the final section). At a depth of 4 metres, a conical structure depression of geological layers of 18 to 32 metres could be observed. Such a structure could correspond to the structure of a trench (*fossa*), i.e. to a fortification trench built around the military camp wall.

In all four scanned profiles, foundation structures could be observed, i.e. walls of the legionary fortress (*castrum*), indicated with SEO 250 Ohms to 1,000 Ohms, which corresponds to stone as the material. This differs from the surrounding, that shows a relatively low resistivity of 20 to 80 Ohms.

For the first time, the area of the legionary fortress and the positions of the northern, southern, western and eastern walls could precisely be determined. Precise measurements of the castrum in which the legion *VII Claudia Pia Fidelis* was stationed, were also precisely determined.

**Ground Penetrating Radar**

*Walls*

In 2002, a georadar investigation was conducted on the walls. The city and legionary fortress walls were cut in several places with a large number of profiles. One of the profiles that cut the northern wall of the legionary fortress is shown. In this profile, the wall contours can clearly be recognised, going down to a depth of about 3 m.

After georadar prospection along single profiles, a conclusion was made that, in order to follow such long linear structures, it would be necessary to perform recordings along parallel profiles that would make it possible to generate 3D models. Furthermore, it was necessary to make horizontal cross-sections at specific depth levels on which such structures could easily be traced. This recording method was applied on one part of the northern city wall and on the eastern wall of the legionary fortress. Apart from the fact that the anomaly zones had already been traced in the profiles themselves, a 3D model was also made. From this 3D model, horizontal cross-sections were made on which the existing structures could be perfectly seen. It is suspected that they represent remains of the city walls. Such a methodology of georadar research makes it possible to precisely trace the existence of the walls and their preservation level, but also clearly shows damage on some of their parts (for example the northern city wall).

On the southern city wall and the western wall of the legionary fortress recordings were performed along several isolated profiles. They indicate that the walls are, in places, very well preserved, but in others totally destroyed.

The walls of the city and the military fortress were also detected during a systematic survey of this area using the geomagnetic method.

Georadar surveys were also made along one part of the eastern legionary fortress wall, suspected to have included a part of the gate. This is indicated with the existence of foundations at a depth of 80 cm, their dimensions being about 4 x 4 m, which could indicate a tower.

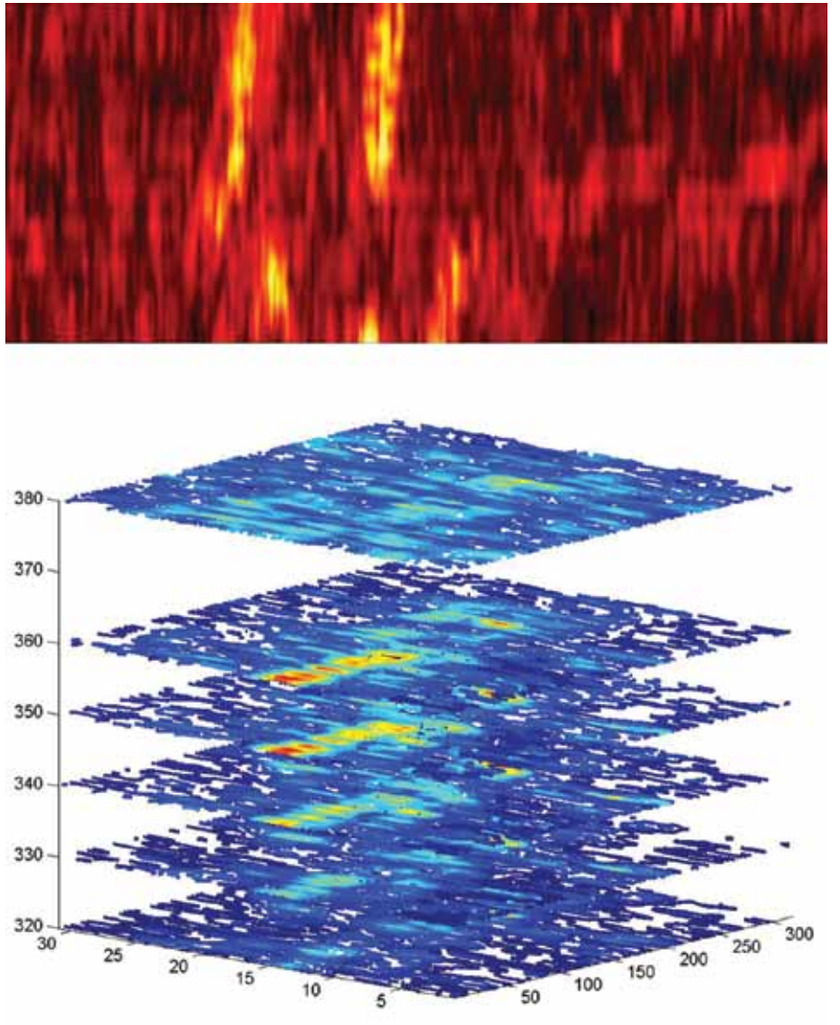
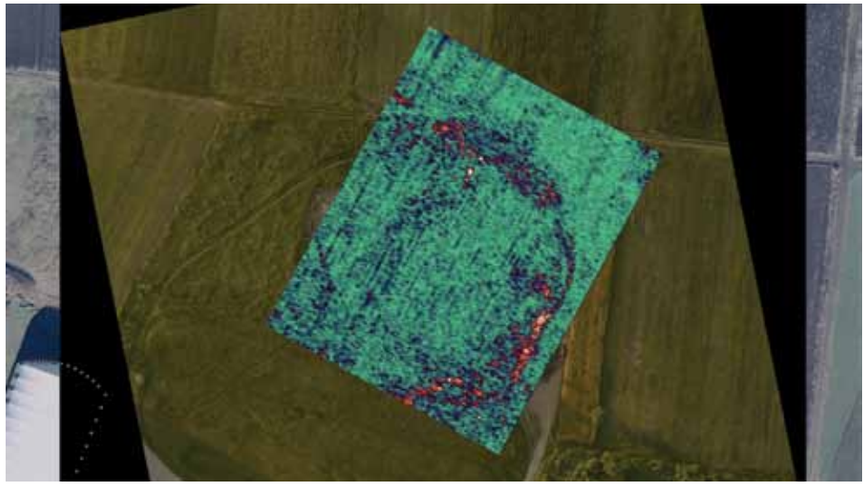



**Fig. 78**



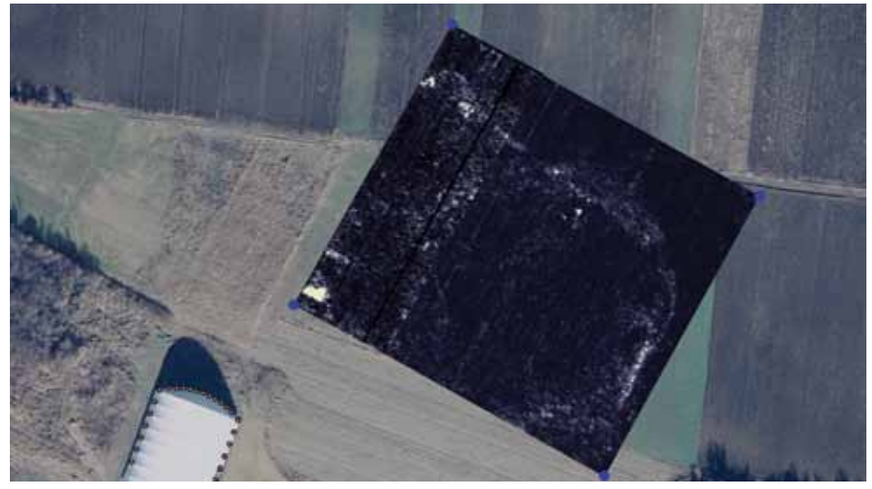


**Fig. 79**

*Amphitheatre*

On several occasions, the area around the Viminacium amphitheatre was examined using different methods. In the beginning, in 2003, the georadar method was applied. During the survey, conducted in winter, the terrain was covered with snow, which enabled a maximum reduction of disturbances, and actually improved the signal-noise ratio. The terrain was covered with 140 parallel profiles, each 125 m long. The results indicated the existence of massive architectural remains beneath the surface, their morphology indicating the existence of such a structure. It should be mentioned that in this area, the natural surface was damaged with deep plugging (up to about 1 m deep), mostly by plunderers. This additionally made the georadar survey difficult and reduced the examination depth to only about 2.5 m. Regardless of such a difficult situation, the georadar survey indicated the existence of an amphitheatre, along with its dimensions and volume.

*Geomagnetic survey – amphitheatre*

Later, the area was also recorded by applying the geomagnetic method. Since this method is much less influenced by surface disturbances occurring due to recent obstructions in the natural surroundings, good prospection results were expected.

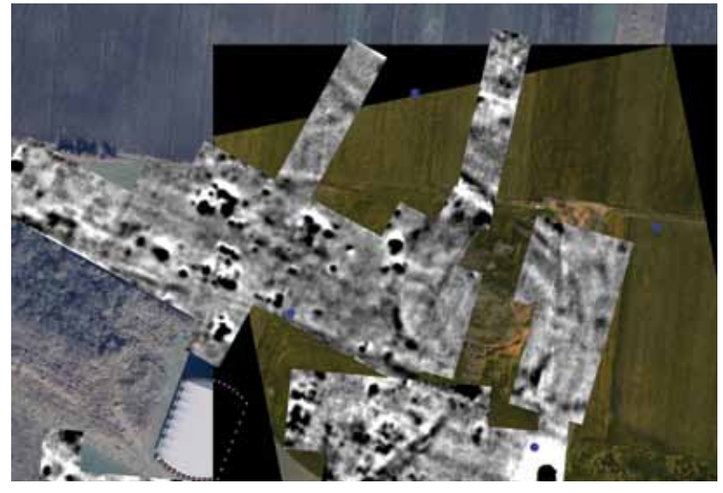


**Fig. 80**

According to the geomagnetic prospection, it was attested that this structure is positioned slightly differently than the one indicated with the aerial view and in the field itself. On the one hand, this is due to erosion, but on the other hand, it was as a result of being filled due to aeolian process. The geomagnetic image clearly shows contours, actually the dimensions of the amphitheatre, but also the north-western and the south-eastern entrances.

*Aqueducts*

At the beginning of 2003, at the eastern edge of the Drmno strip mine (Elektroprivreda Srbije, JP PK Kostolac), a dredge destroyed the remains of an ancient structure, clearly visible in the barren

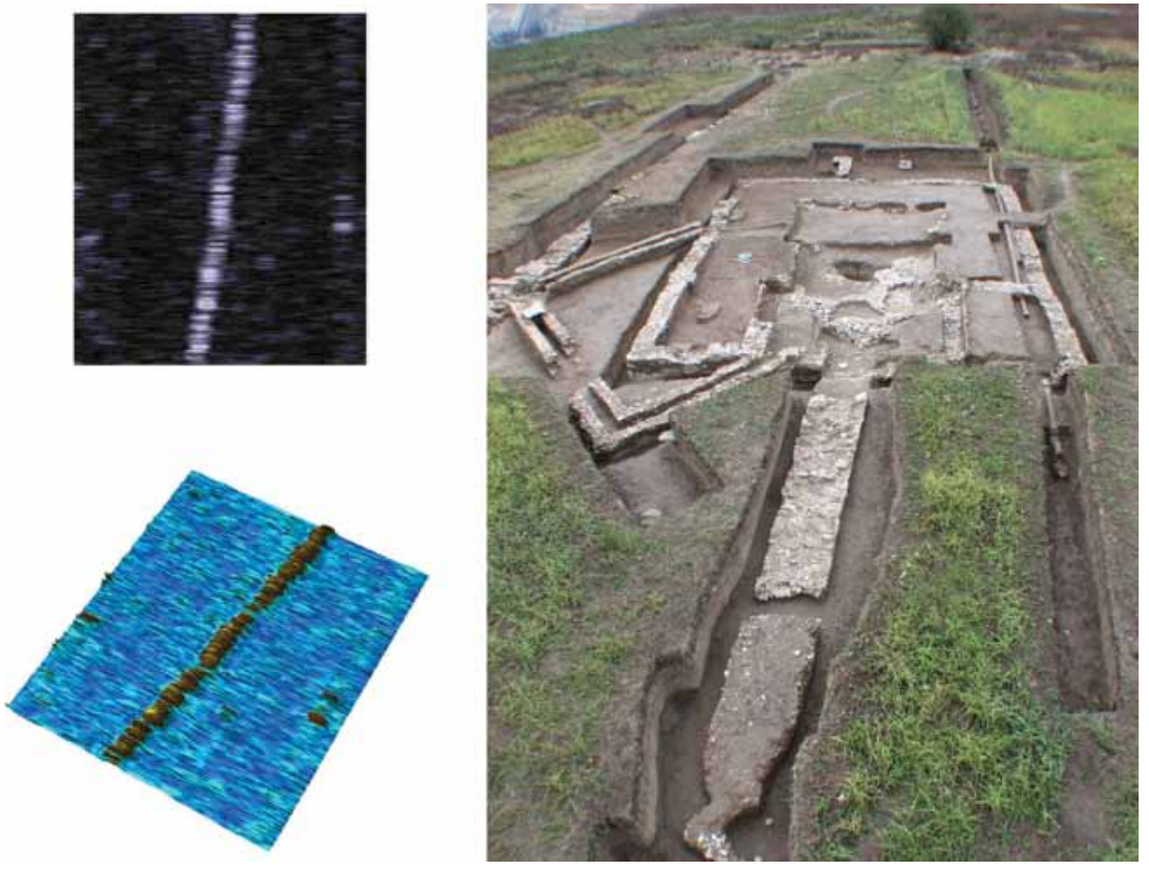


Fig. 82

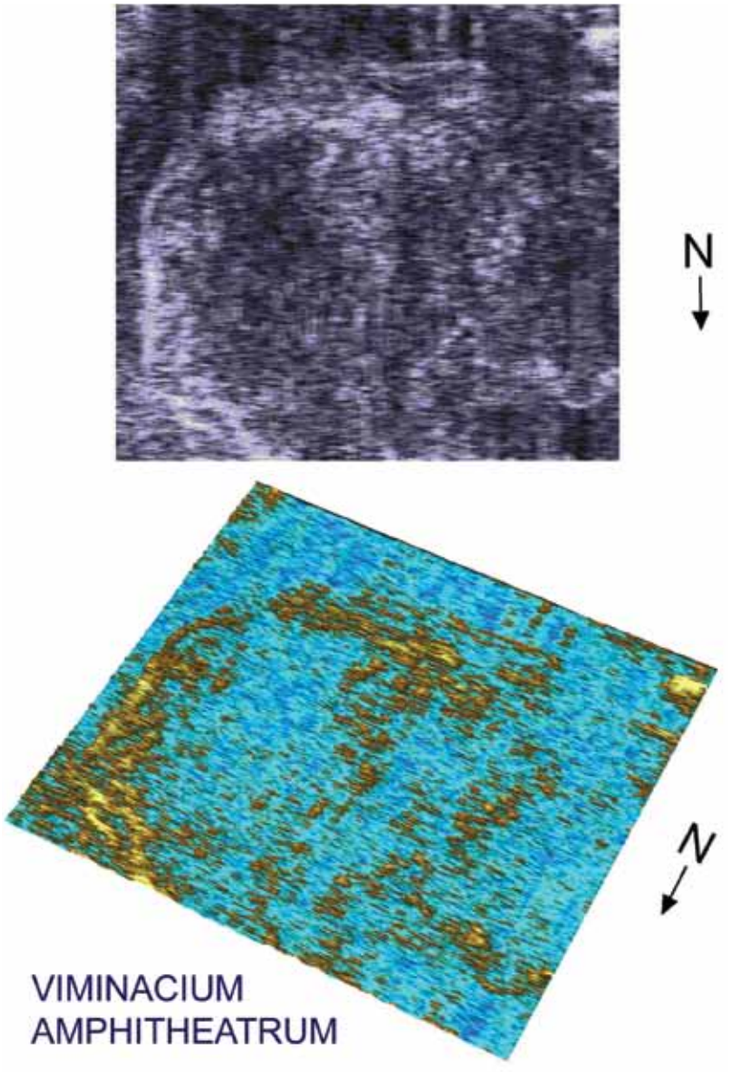



Fig. 81

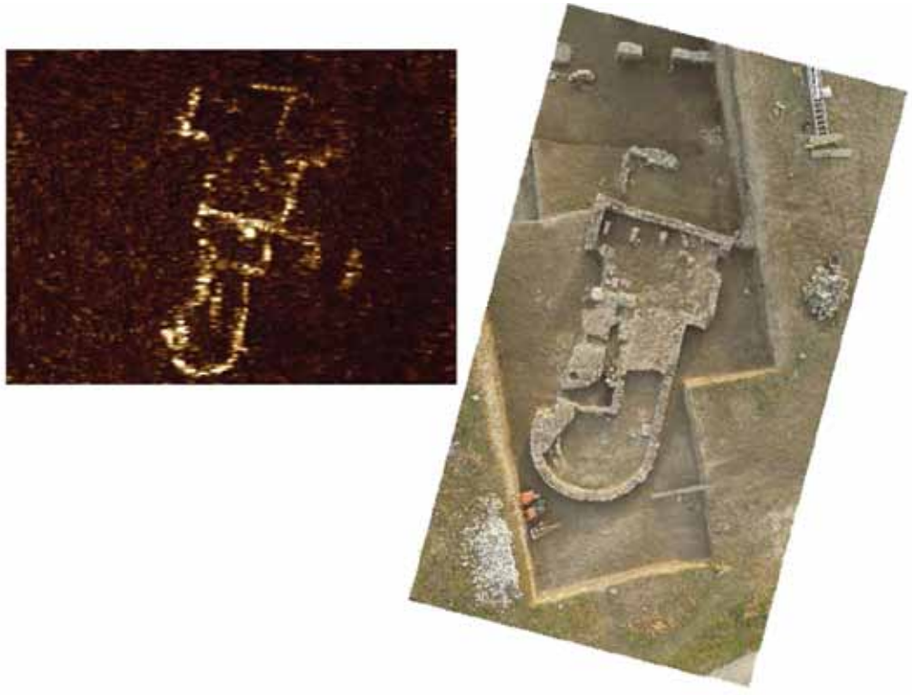


Fig. 83

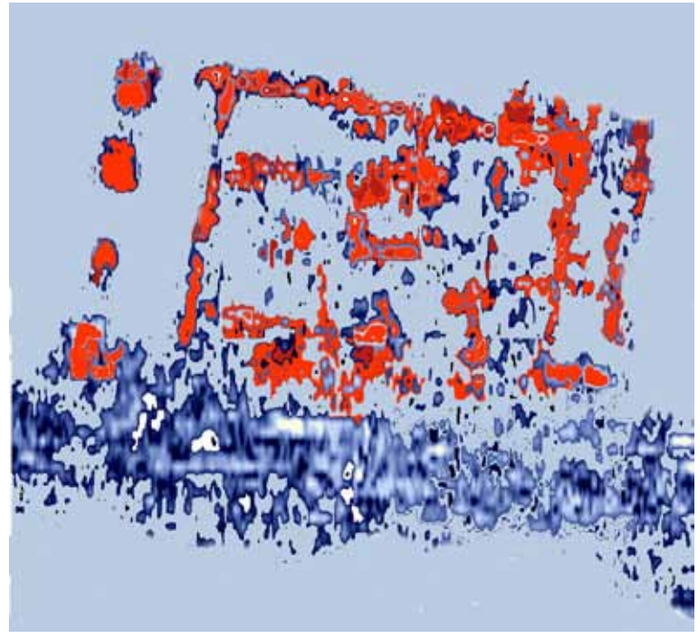


Fig. 84

layer profile. The strip mine activities were immediately interrupted and a salvage excavation begun. In order to make detection and protection more effective, a georadar survey was conducted in the areas located in front of the dredge. The recording was performed in several examining fields, by placing parallel georadar profiles at distances of 0.5 m.

The processing and 3D visualisation of the registered georadar data were made, along with a study of the horizontal cross-sections from several depth levels, which made it possible to obtain a complex image of the investigated surface. Anomaly zones were distinguished that confirmed the existence of two aqueducts. They were positioned at a distance of about 25 m from one another and each of them was around 8 km long. With the georadar investigation, the aqueduct length of about 800 m was attested (Korać, M., Mrđić, N., Stojanović, V., 2005, 37–46). Both of the aqueducts brought fresh spring water to the ancient city and the legionary fortress.

*Basilica*

During salvage archaeological excavations in the broader aqueduct area, georadar measuring showed the existence of another structure from the Roman period. This structure was later excavated and it was revealed that it was a Late Roman basilica from the 4$^{th}$ century (the georadar image of the structure and the image of the basilica after the archaeological excavation).

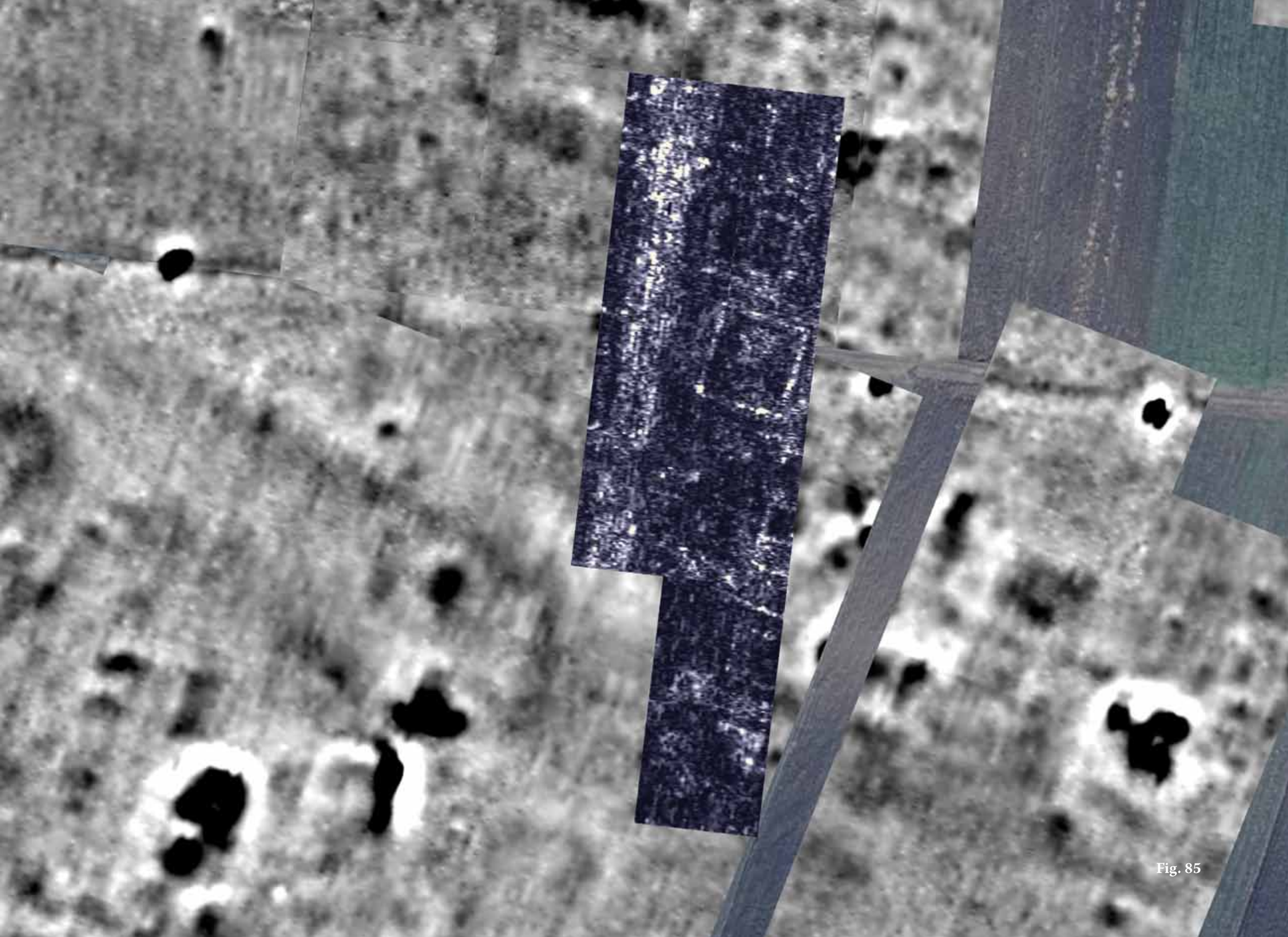


Fig. 85

**Fig. 86**

**Fig. 87**

*Insulae*

At the beginning of 2004, a systematic investigation of the Viminacium city centre was conducted, to the north of the thermae. Revealed were urban structures that belong to the Roman type *insulae*. Both geomagnetic and georadar methods were applied. An area measuring several hectares was investigated. According to the results of both measuring methods, anomaly zones were noticed, indicating the existence of a row of structures and pavements that correspond to a city centre structure. One needs to say that, in the case of the geomagnetic method, the highest magnetic field values correspond to the structures that possessed floor heating or furnaces. With georadar prospection, the highest amplitudes of the registered signals correspond to the structures made mostly of stone or brick with large quantities of binding material.

## GEOMATICS

**Geodesic methods**

Recently, with the appearance of the Geographic Information System (GIS), a need arose to precisely define the positions of finds and complexes examined during archaeological excavations. New instruments were needed in order to successfully accomplish this task. For a number of years at Viminacium, high accuracy geodesic devices have been used. The devices were made by an American company, Trimble, and they include an optical and a GPS total station. The obtained results are incorporated into GIS. The existence of GIS means that all data of different types, with adequate coordinates, is stored in the same place and, therefore, is accessible for different analyses and scientific research. At the same time, data collected and systematised in such a way can be suitable for establishing data bases.

In 2007, the most modern geodesic instrument was applied in Viminacium – a 3D scanner. The 3D scanner is an instrument that records a high number of points over a very short time, noticing not only geographic coordinates, but also the colour and texture of the measured points. Within the instrument there is a video camera that takes geo-referenced images from the recording site. Data acquisition itself is made with an average recording speed of 3,000 points per second and with a data density of every 2 mm of the recorded site. Such a density ensures quality data modelling, but the data can also be used and applied while presenting cultural heritage, planning activities connected to the protection of the site and for pure scientific purposes.

The results of these recordings represent the most modern type of archaeological documentation. The result is actually a virtual image of a structure on which any kind of measuring is possible, such as surface or volume calculations, but also a calculation of cross-sections in any possible direction. When reconstructing a structure, these results represent an ideal architectural basis.

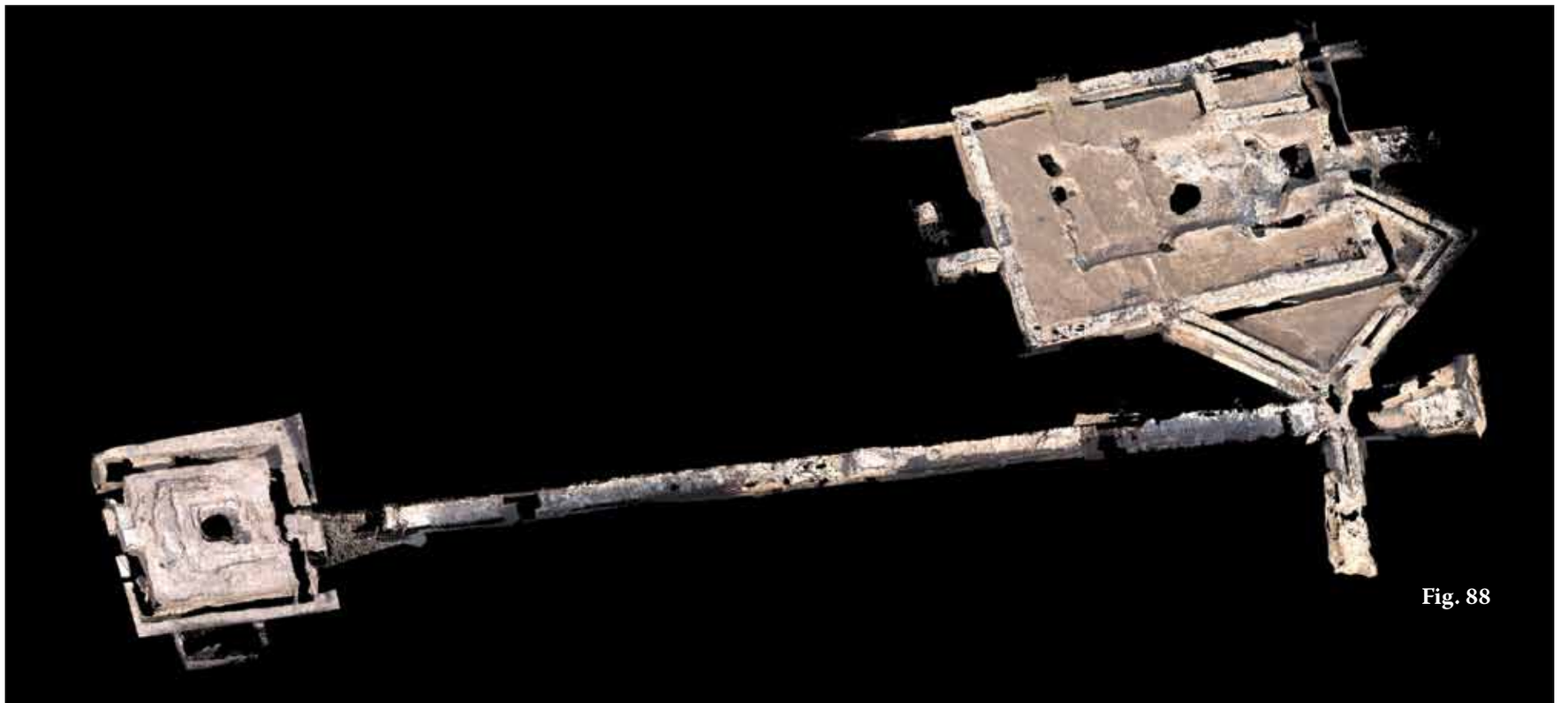


**Fig. 88**


amf2
kost
bronza
kamen
staklo
keramika
F3
D7
olovo
gvožđe
pasta
H7
G9
amf1
h6
i6
i7

Fig. 89

In Viminacium, 3D laser scanning was performed with an instrument called a *3D GX Trimble Scanner* (made in the USA), combined with a GPS receiver (used to obtain geo-referenced recording positions). Recordings were made at the site of the Mausoleum and the Castellum aquae.

**Digital terrain modelling**

In the area that includes the ancient city and legionary fortress of Viminacium (about 146 ha), geodetic survey was undertaken, with the aim of enabling the design of a digital terrain model (DTM – digital terrain model). The measuring was carried out with a GPS total station of high accuracy, which enables data acquisition with maximal deviations of less than 2 cm. Making a digital terrain model represents part of the research methodology that has been applied within the Viminacium project. It also includes the application of modern geo-physical research methods, as well as the application of remote detection (analyses of aerial and satellite images). Within this methodology, the digital terrain model is used as one of the bases for further investigations. Since it relies on specific terrain measuring, the results of the analysis of the digital terrain model enable the visualisation of the outer boundaries of the city and the legionary fortress, but also of some important structures within this space.

Besides defining the outer boundaries and dimensions of the city and the legionary fortress, by analysing the digital terrain model, one can also see the positions of the fortress gates (I), the depression along the northern city wall that indicates the position of the amphitheatre (II), as well as two further depressions along the southern city wall, which could indicate the position of the southern city gate (III). There are also two possible structures that are attached to the city walls structures (IV and V). Further on, on the southern side of the city, another depression was detected (VI), but at the moment there are no presumptions related to it.

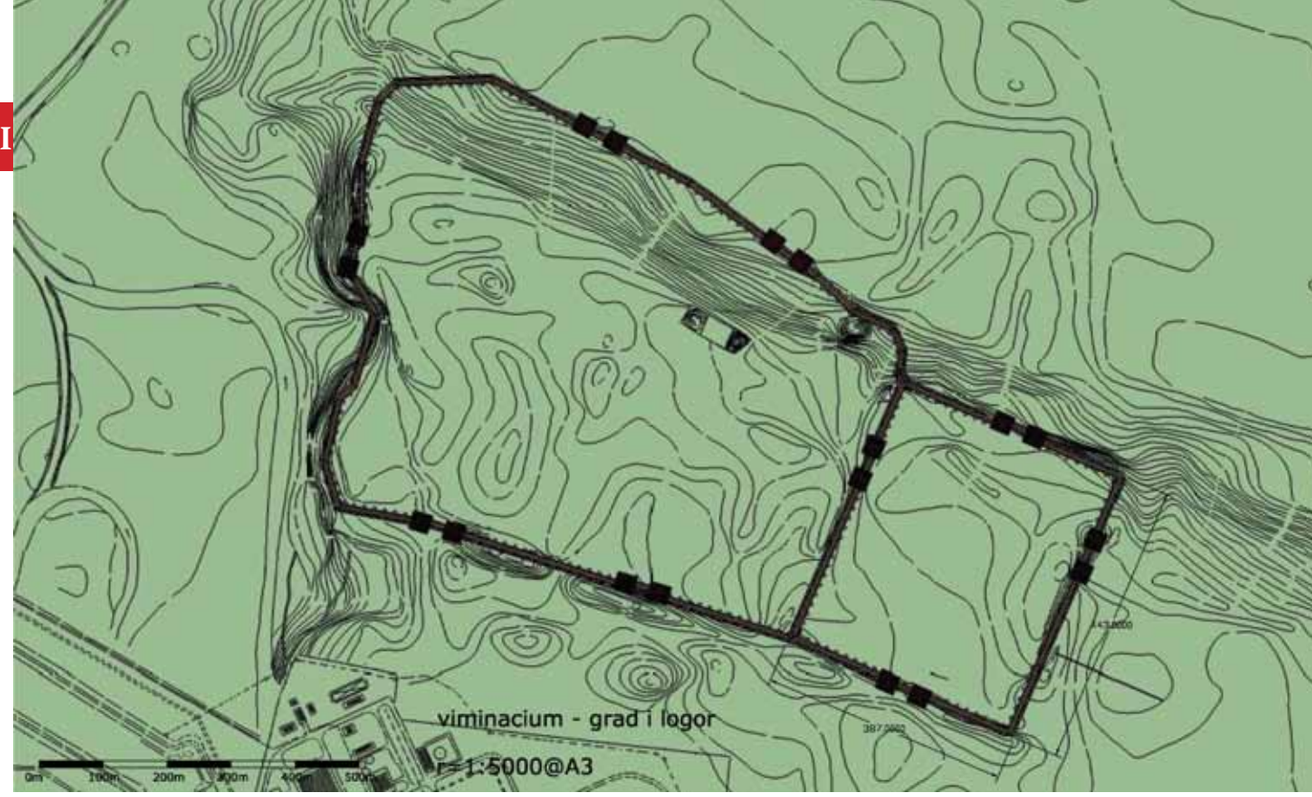



**Fig. 90**

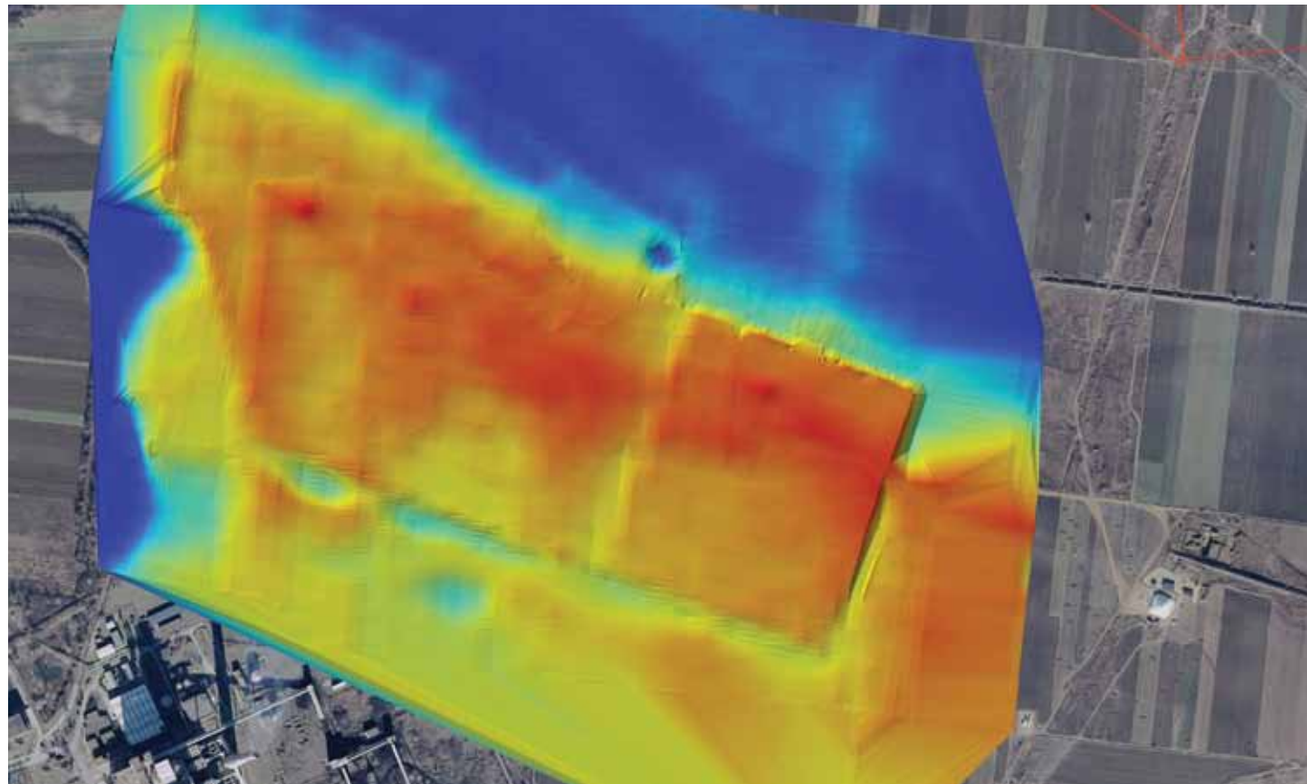


**Fig. 91**

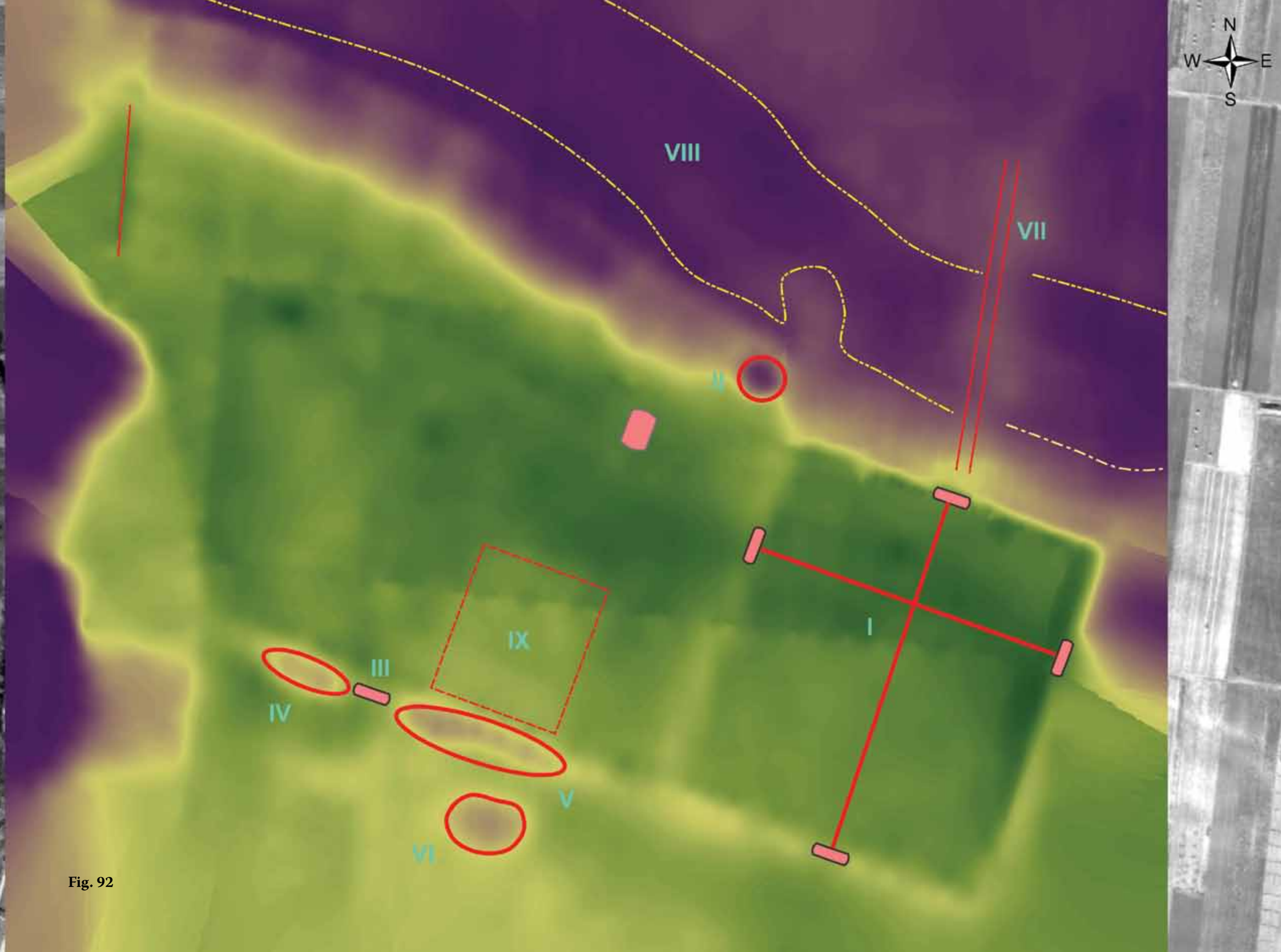



Fig. 92

On the northern fortress side there is an elevated level of terrain that stretches straight forward and leads towards the northern city gate (VII). According to its position and direction, it can be presumed that it was a road leading to the fortress gate.

Besides these presumptions, there is another connected to the depression along the northern wall of the city and the legionary fortress (marked in yellow – VIII). According to the analysis of the digital terrain model, and also assuming that the city was erected close to flowing water, there is a possibility that in a specific period of time a river or a distributary flowed exactly at this location. In the future, this presumption should be tested with geological, geo-physical and archaeological research.

In the city itself, a rectangular elevation is visible, reminiscent of a flattened plateau. Its position within the city indicates that in ancient times it could have represented an important structure or a group of structures, positioned higher than the surrounding area.

In the future, all of these presumptions will be tested, first with a geophysical investigation and later with archaeological excavations. Regardless of any later confirmation or rejection of the presumptions, digital terrain model analysis has enabled a better understanding of the image of Viminacium as an archaeological site and represents an extraordinary base for planning future research.

**Fig. 94**

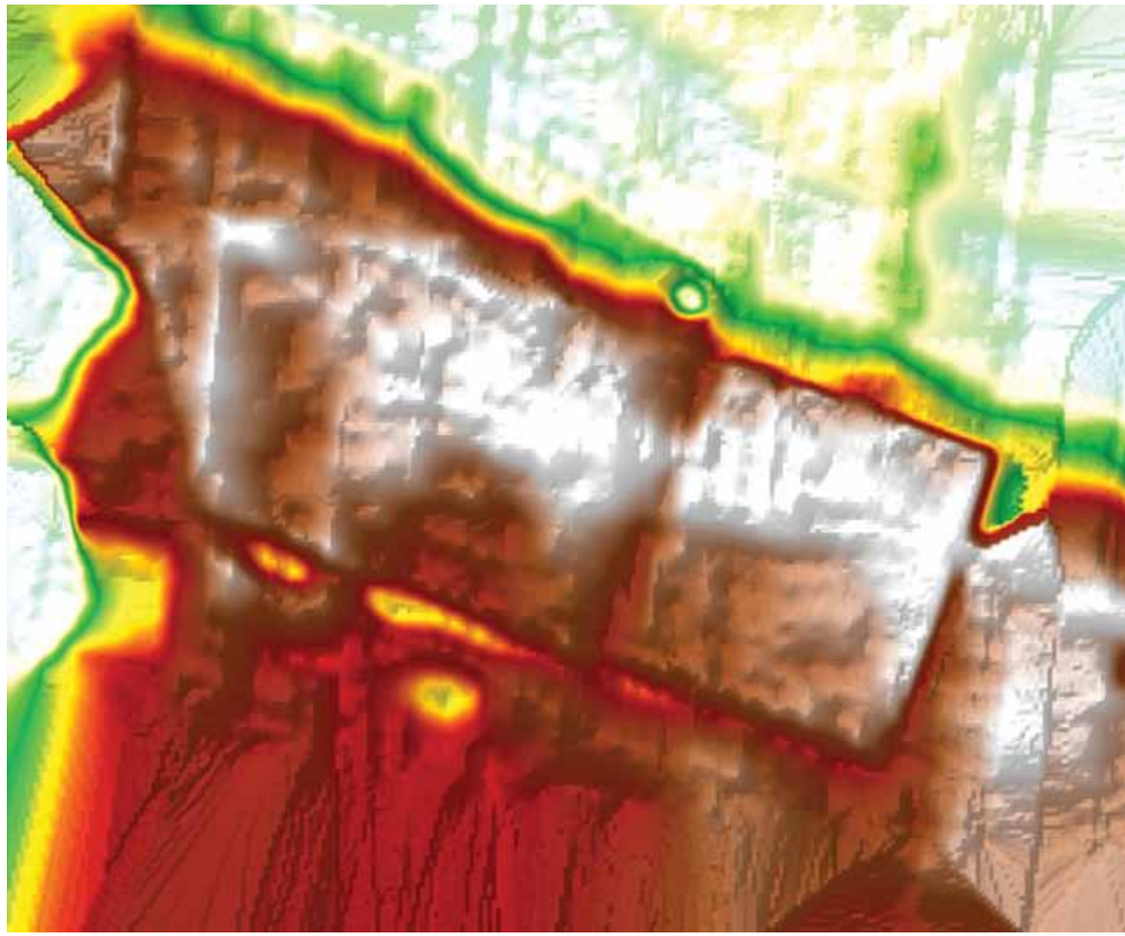


**Fig. 93**

**Application of artificial intelligence**

As a special kind of the latest methods of reading and analysing georadar signals, artificial intelligence and prognostics methods are used in order to define space and obtain three-dimensional models. Human perception cannot accept such a large amount of data as computers and, therefore, their usage became inevitable in all aspects of multidisciplinary research. Of course, all of the data obtained has to be controlled, since the limitations of programs still do not allow an independent artificial intelligence application. However, this is exactly the area for multidisciplinary work, since any result can be double checked and attested by applying several methods.

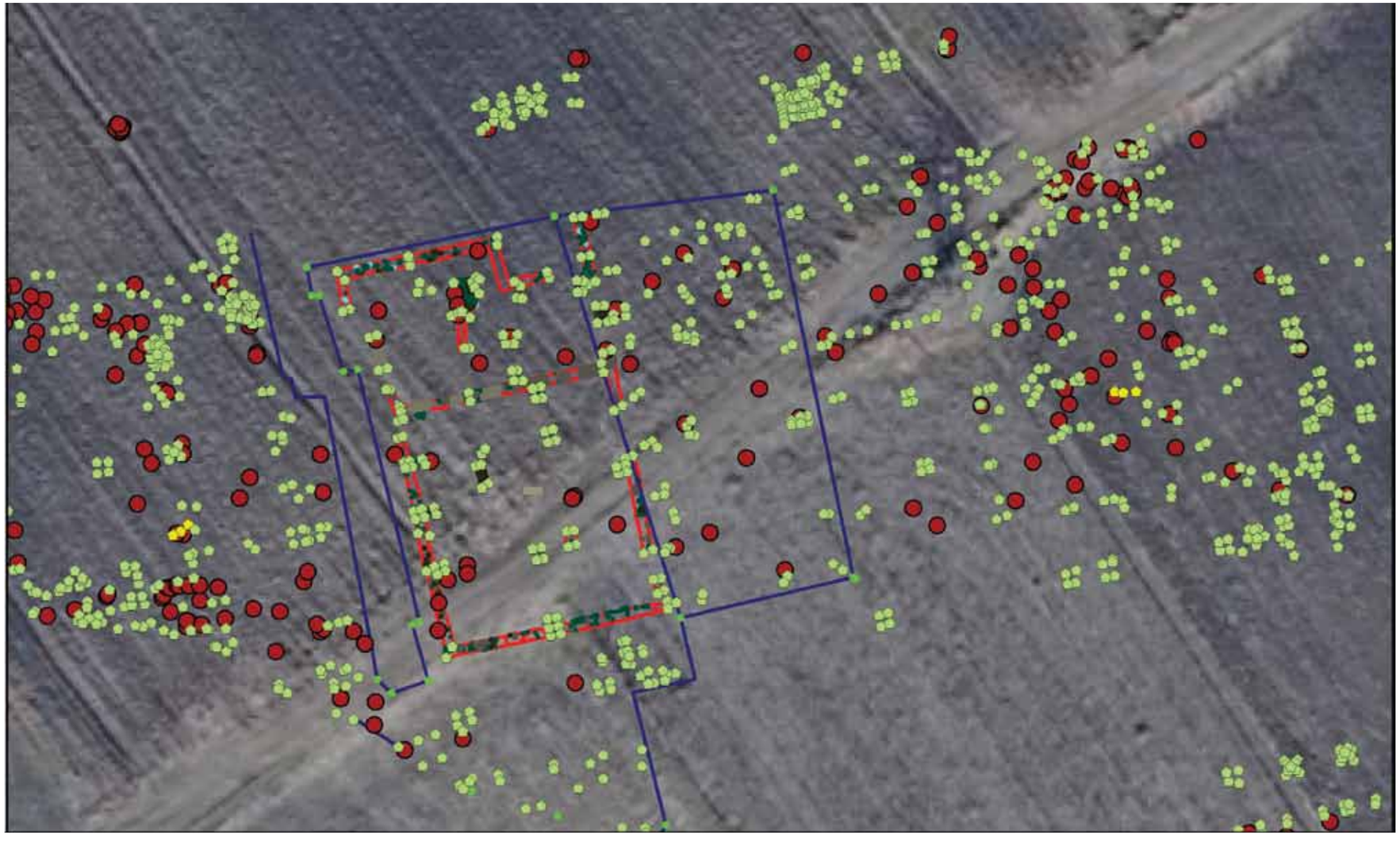




**Fig. 95**

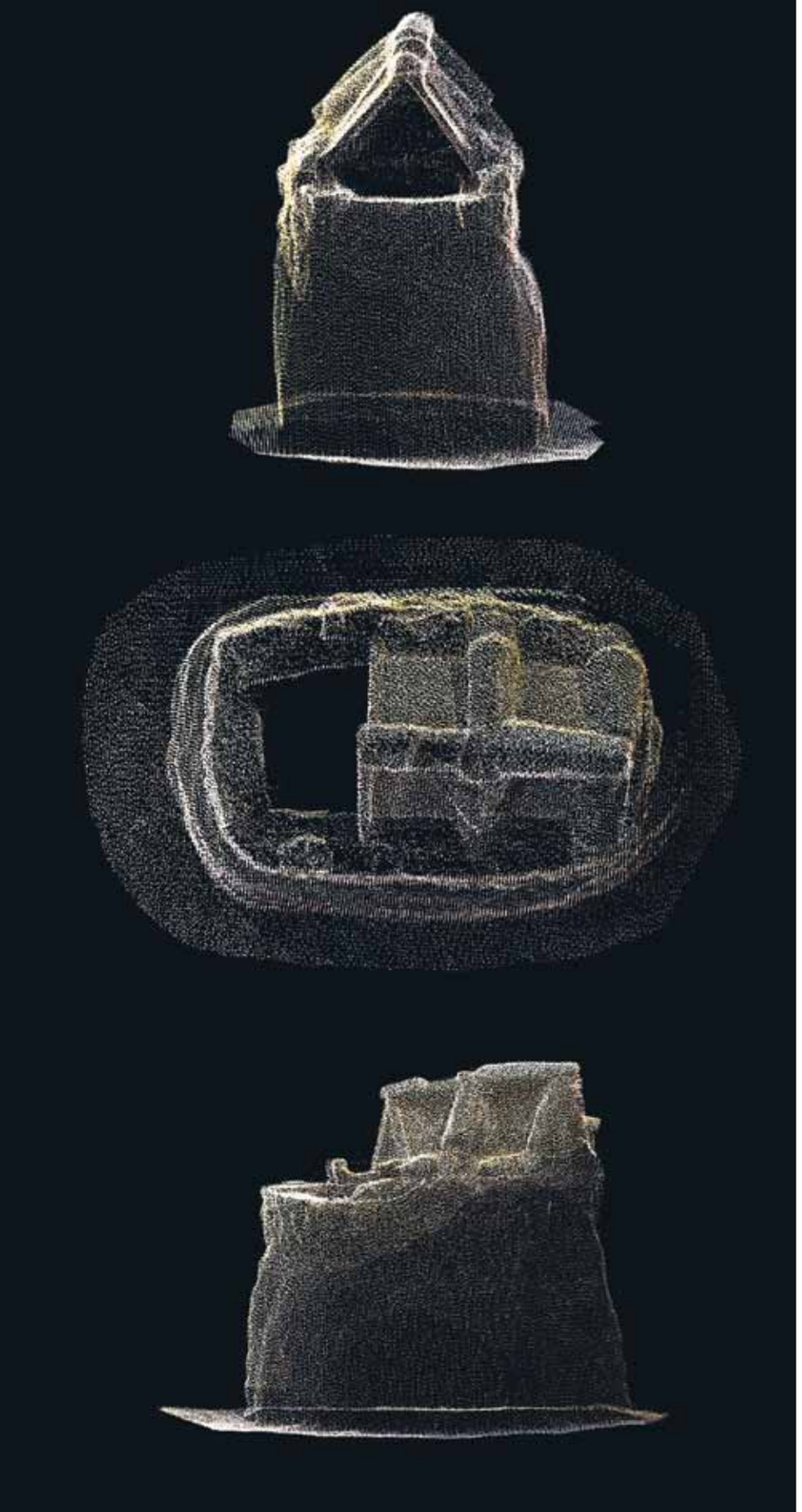
**Exploring with ground penetrating radar and magnetism**

The success of an archaeological survey in the field depends mostly on excavations, which is why determining the position of objects underground is of the utmost importance. Information about the position of objects can be concluded from results of sondage excavations. Still, there is a possibility that the sondages do not include some of the important objects of the site. Gathering information about the sub-soil structures before excavations can, therefore, be of great importance. GPR (Ground Penetrating Radar), actually geo-radar, is one of the methods with which such data can be obtained. Analysis and an understanding of the data obtained with such a method represents difficulties for archaeologists. In order to successfully do such research, a multidisciplinary approach is necessary, meaning that during the research, apart from archaeologists, geo-physicists and mathematicians need to participate, sometimes experts from other research fields too. The geo-radar research of Viminacium was carried out by a team of geo-physicists, led by Vladimir and Jelena Miletić. From April 2001 until January 2003, geo-radar research of Viminacium was undertaken by the team from the Centre for Geo-physical Research at DON International. After that period, geo-physical research was carried out by the Centre for New Technologies of the Innovation Centre of the Institute of Archaeology, the Electro-technical and Mathematical Faculty, the Mathematical Institute and Faculty of Mining and Geology (CNT).

The geo-radar method is based on the existing differences in the dielectric features of materials that lay beneath the surface. If the difference is greater on a geo-radar image, a greater amplitude can be registered on the bordering surfaces. By applying this method, one can detect objects made of materials that possess a dielectric porosity different from the surrounding clay soil. In this case, this would mean that objects made of stone could be easily detected, but objects made of bricks and other similar materials, that possess a dielectric porosity similar to the surrounding soil, could not easily be detected. The research was done with the geo-radar system RAMAC/GPR CU II, from the Swedish company Malá Geoscience. RAMAC/GPR CU II is a modern system with very high resolution, the measured data being recorded in raw state, which makes it possible to apply many various programs for working on geo-radar data and to apply a series of filtering processes after the recording is finished in order to obtain high quality data from the material registered.[9] While researching the Roman amphitheatre during winter, the terrain was completely covered with snow, which made the reduction of obstacles during the research as big as possible, i.e. made the relationship of the signal to the noise as good as possible. In order to make the generation of a 3D model possible, which allows an even better interpretation of the data obtained, measurements were made with the placement of several parallel profiles. The data was explored by using the program "Reflex W", which allows digital filtering (FIR, IIR, space filtering, migration, deconvolultion, summing, filtering in a frequency range), as well as different views of geo-radar images in order to stress important information. The obtained geo-radar profiles were converted into ASCII format in order to make their use in the program MATLAB possible. 3D modelling was done by Prof. Dr. M. Milosavljević from the Electro-technical Faculty. The program MATLAB is used for mathematical modelling and, in this case, it was used to produce 3D models. A 3D model is obtained by putting parallel geo-radar profiles into the ASCII format, from which the program makes a three-dimensional matrix, i.e. a matrix in which every point possesses a corresponding depth, distance from the zero profile point, number of profiles and an absolute amplitude signal value measured.

The area to be surveyed is marked out in squares of 20 x 20 metres (approximately 65 x 65 ft.). Two methods and two types of equipment are used for the survey: a ground penetrating radar antenna and a magnetometer (gradiometer) (Mikić, M., Stojanović, V. and Mrđić, N. 2006, 21–26). All the squares are examined simultaneously with both devices, and then the results are combined and collated. In addition to the general perimeter of the city and legionary fortress, a number of individual structures have been identified: within the city walls, an amphitheatre, city blocks - *insulae*, a public bath complex – *termae*; in the legionary fortress, the north gate – *porta praetoria*, the east gate – *porta principalis sinistra* and the headquarters of the fortress commander – *principia*; outside of the city and fortress walls, a mausoleum, a hippodrome, as well as an aqueducts approximately 6 miles/10 km long.

[9] For data acquisition the system uses the program "Ground vision".





Based on current plans, the survey of the city and legionary fortress area by geophysical methods should be completed in about two and a half years. During that period, the results of geophysical surveys were verified with archaeological excavations.

The north gate of the fortress – the *porta praetoria*, the city public baths – *termae*, the mausoleum and the aqueducts have all been identified and excavated.

We hope that within a few years, even before selective excavation is completed, three-dimensional mapping of the legionary fortress will be finished so that representative parts of the fortress can be quickly excavated and presented to the public.

A base for good geo-radar measurements is an adequate frequency choice of the geo-radar antenna and good measurement timing. The elevation of the terrain should also be measured, in order to make the generation of 3D models from geo-radar measuring data possible. By using adequate computer programs, a 3D visioning can be completed, next to geo-radar profiles that represent vertical cross-sections of the subsurface. 3D modelling of the subsurface of some objects can also be made, as well as horizontal cross-sections at selected depth levels.

Antennas of different frequencies were used – 250 MHz, 500 MHz and 800 MHz. Depending on the antenna used and the depth chosen, different recording timings were required. Measurements were undertaken in time mode, meaning that data was recorded in regular time intervals, while the distance measured was recorded manually, following measuring tapes placed along the profiles. Sometimes, a measuring cart with automatic measuring was used, as well as a measuring wheel that makes the automatic measurement of the explored distance possible. On parts of the terrain that were not adequately prepared for measurements, a special base made of plastic threads was used, which reduces the disturbance of the measurements.

**Survey in areas of supposed city walls**

In order to confirm suspected ions of the position of the city and the city walls, survey was undertaken. They logically followed the geo-electrical research that was earlier done by experts from the Institute responsible for water supply "Jaroslav Černi". Survey was undertaken on a great number of profiles, placed vertically to the supposed direction of the southern, western and northern city walls. Measuring was done with antennas of 250, 500 and 800 MHz frequencies.

**Survey in the area of the supposed gate in the northern city wall**

In this area, several surveys were undertaken with antennas of different frequencies. From the start it was clear that placing single profiles did not show satisfactory results that were easy to interpret and that placing parallel profiles at a small distance would make the acquisition of 3D models

**Fig. 96**

possible. It transpired that the 250 MHz antenna was of greatest use. Although of lower resolution than the other antennas, it possesses a much better signal penetration depth, which turned out to be necessary because of the loss of signal strength while penetrating soil with a high clay content. This process was also used for measuring in other parts of the site. Measuring was undertaken twice. During the first set of measurements, profiles were placed at a distance of 2 metres and 31 profiles were measured. During the second set, 33 profiles were measured at a distance of 1 metre. Terrain preparation was unfortunately much worse during the second measurement set, so that data obtained during the first measurement set had to be included in the final interpretation. Measuring was also undertaken in front of the supposed position of the gate. The total of 61 profiles were measured at an interval of 1 metre.

**Survey in the area of the supposed temple**

Owing to the temporary cover of the terrain with crops, the temple area was only partly measured. The accessible space was of an irregular shape, requiring measuring in rectangular areas, with a synthesis undertaken afterwards. The area was divided into three rectangular areas: A- temple, in which 34 profiles were measured, B- temple, in which 16 profiles were measured and C- temple in which 28 profiles were measured. All the profiles were 50 metres long and placed at intervals of 1 metre.

**Survey in the area of the supposed "Fortuna" temple**

In this area, measuring was undertaken on 42 parallel profiles, at intervals of 1 metre. A rather bad preparation of the terrain and large disturbance meant that the resulting measurements were not suitable for further interpretation.

**Survey in the area of the supposed amphitheatre**

In the amphitheatre area, a testing measurement was undertaken. According to the results obtained, it was concluded that in the existing conditions it is not possible to obtain measurements of satisfactory quality. For the time being, we have decided to cease this part of the measuring process. It may be possible to repeat the measuring during winter, when a lower level of disturbance and a better surface levelling due to the frozen surface could be expected.

**Processing and interpretation of survey results**

Data was processed using the "Reflex W" program, which makes digital filtering possible (FIR, IIR, space filtering, migration, Ohms, summing, filtering in frequency range), as well as different views of geo-radar images in order to stress important information. The geo-radar profiles obtained were later converted into ASCII format, to make their use in the MATLAB program possible. The MATLAB program is used for mathematical modelling and in this case it was used to produce 3D models. A 3D model is obtained by putting parallel geo-radar profiles in the ASCII format, from which the program makes a three-dimensional matrix, i.e. a matrix in which every point possesses a corresponding depth, distance from the zero profile point, number of profiles and an absolute amplitude signal value measured. It is later possible to obtain horizontal cross-sections out of such a matrix, by converting double time of the wave direction into the deep and by calibrating speeds of wave spreading, or by generating figures obtained by applying subsections of equal wave amplitude values to the bordering surfaces of the existing sub-soil objects. Such figures allow for the better perception, dimensioning and positioning of sub-soil objects. Their rotation and observation from different angles is also possible.

As already mentioned, the city walls were measured using a large number of profiles. In order to follow a long linear object, the measuring of parallel profiles, the generation of 3D models and the obtaining of horizontal cross-sections of the chosen depth levels were necessary. Such a recording method was applied only

on to small section of the northern city wall. Although anomaly zones could be detected in the profiles themselves, a 3D model was also made. From this 3D model horizontal cross-sections were made, on which objects could be observed that might correspond to the remains of the city walls, as well as a figure that allows a clear observation of the existing object.

Along the southern and western profile, several single profiles were measured and it could be concluded that the city walls remained preserved in some places and completely destroyed in some others. In order to obtain a clearer picture and better object detection in the space, measuring of parallel profiles should be undertaken.

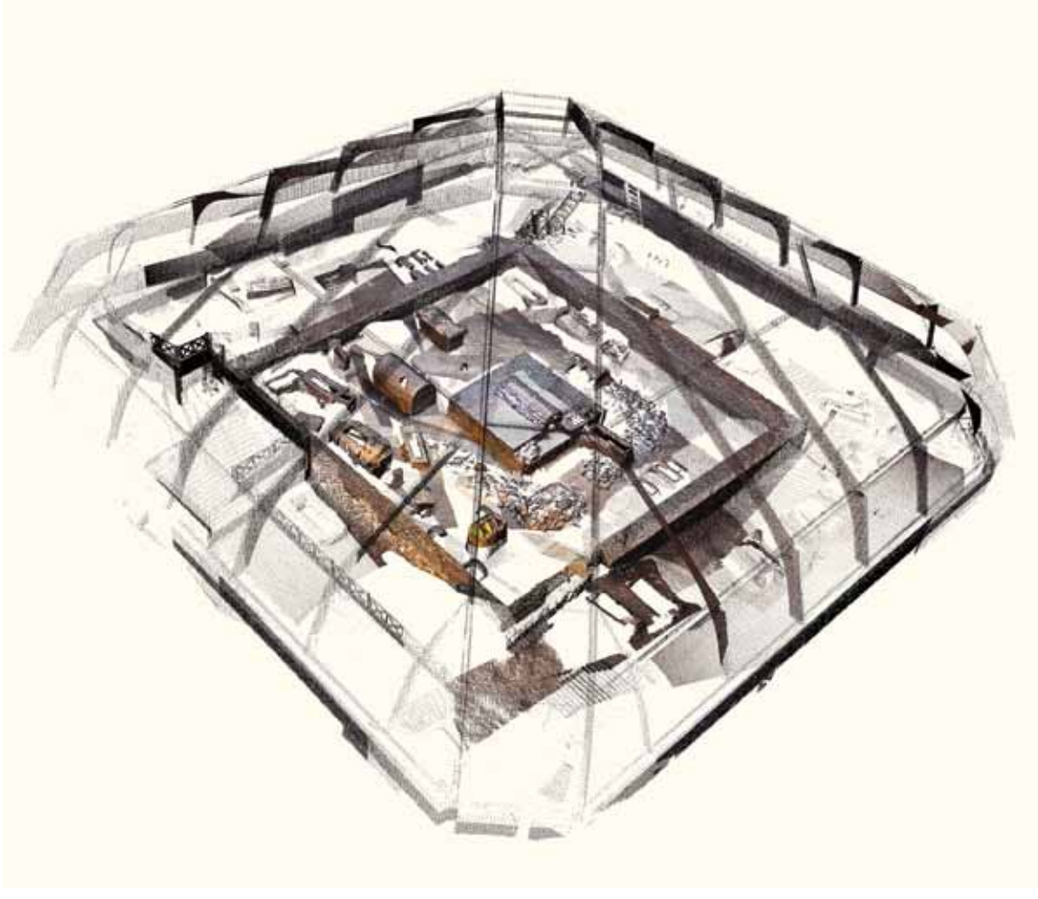


**Fig. 97**

From the data obtained with the measuring next to the gate in the northern city wall, after the application of topographic correction, a figure was made by generating the 3D model that corresponds to the street pavement, with a visible sewer or some other communication. During the summer of 2002, an archaeological excavation was undertaken in this area that fully confirmed the results gained with the modelling. An object was discovered, which, according to its dimensions and shape, corresponds to the object obtained with the mathematical modelling of the geo-radar measuring results.

The measuring results, represented in shapes of horizontal cross-sections at certain depth levels and with the existing anomaly zones, point to the existence of an object in front of the gate.

The most interesting results were obtained in the area of the supposed temple. After processing, data from different sections were synthesised. As a result of modelling in the MATLAB program, a figure was obtained representing a round object with a diameter of about 30 m. In two places, the remains of deep foundations could be observed, measuring about 8 x 3 meters and around 3 metres deep. Unfortunately, there is not enough data to obtain a figure of the whole object, but it is planned to include this part of the site in future research. Apart from this, several anomaly zones could be observed on horizontal cross-sections that could correspond with remains of different objects. At the cross-section at 175 cm, a kind of communication between objects could be observed.

## LEGIONARY FORTRESS

The Roman Legionary fortress *(castrum)* at Viminacium was built in the first decades of the 1st century A.D. The earthwork fortification, although not archaeologically confirmed, was very likely built as early as the beginning of that century, and is associated with one of the first Moesian legions, the Fourth Scythica or Fifth Macedonica. The erection of the first stone fortification, in the middle or in the second half of the 1st century A.D., is associated with the Seventh Claudia Legion, which was stationed there throughout the ancient Roman period. The fortress's dimensions have been determined with geophysical methods and by analyzing digital soil sampling. They were 443 x 387 m. These methods determined that the original fortress was twice that size and that there is reason to believe that two legions were probably stationed there, most likely until Domitian's edict of A.D. 86. That year an order was issued that, due to the threat posed to the Roman Empire, it was prohibited to station two legions at the same place. This order helped to determine the dimensions of the original fortress and they are 774 x 443 m. Although the Viminacium ruins were recorded as early as the 18th century by Count Marsigli, the earliest archaeological excavations on the site were associated with the works of Mihailo Valtrović, at the end of the 19th century and of Miloje Vasić, at the beginning of the 20th century. The protective excavations of 1973–1997 examined the Viminacium necropolis, while systematic archaeological excavations undertaken since 2002 have initiated the exploration of the Roman city and the legionary fortress. The excavations of 2002–2003 unearthed the north gate of the legion's fortress, the so-called *Porta Praetoria*. The remnants of the entrance gate with massive tiling, acess and lavishly decorated architectural elements point to the powerful defensive system of the fortress that was built to be integrated into the northern frontier defensive system of the Empire. The unearthed bronze coins hoard dating back to the beginning of the 4th until the middle of the 5th centuries A.D. indicates the time of the destruction of the fortress which, after the Hun invasion in A.D. 441, was abandoned and has never been restored to its former glory. Aerial photography, as well as geo-radar and geomagnetic recordings carried out on the site of the former castrum, provide a true picture of the fortress with its ramparts, gates, turrets, the legion's headquarters and barracks lying beneath the fertile cultivated fields of Stig.

At the end of the 19th and at the beginning of the 20th century, excavation of the legionary fortress was initiated. During the eighties of the 20th century, small-scale sondage excavations in this area were also conducted (more about this research in Mrđić, N., 2009, 9–16).

Large-scale investigations were conducted in 2002 and 2003, while from 2016 onwards legionary fortress excavations have conituously been performed. Until 2018, they were of protective character. Due to modern installments and thick vegetation, the surface excavated in this period (parts of the northern rampart, from the north-western corner towards the northern gate) was not geo-physically recorded. From 2018, systematic excavation of the legionary fortress is being carried out. According to the result of geo-physical research, the investigation is focused on the western gate and the western legionary fortress rampart, towers along the fortification walls, as well as the defensive ditch in front of them (Nikolić, S. *et al.* 2019). At the same time, the northern wall's part to the west from the northern gate and the northern legionary fortress gate are being examined.

During the latest research,[10] the north-western fortress corner has been excavated, situated 45 m to the east from the eastern city gate and some 65 m to the south-east from the amphitheatre. In this part, the corner tower, the western rampart between the corner tower and the western gate, as well as the defensive ditch in front of the north-western corner and several canals for filthy waters were fully examined. Further excavation of the northern and the western gates (mostly already unearthed) is still ongoing, but also of the northern and the western rampart, towers between the corner tower and the northern and western gates and the defensive ditch.

According to the results gained so far, within the fortress, two basic building phases can be distinguished – an older one, dated into the last decades of the 1st century, and a younger one, and broadly dated into the 2nd century. Within the already excavated features, one can also notice later building phases, but they are not clearly defined, yet.

[10] The research is ongoing and the results have not been published, so this is the preview of these excavations.

Fig. 98

Fig. 99

Fig. 100

Fig. 101

Fig. 102

Fig. 103

Fig. 104

Fig. 105

Fig. 106

Fig. 107

Remains of the oldest phase, the one with fortress ramparts and towers being built of the material called ""crvenka" (which represents naturally baked sediment formed after the coal fires), were unearthed directly beneath the fertile soil layer. Foundations (their height measuring 0.50–0.95 m) were made of broken "crvenka" pieces, while the upper parts were made of composite, broken or precisely cut "crvenka" blocks of different dimensions (usually 25 x 15 x 10 cm) bound with lime mortar. Rampart width of the older fortress measure 0.75–0.80 m, while its preserved height in the upper part measures up to 1.80 m.

During the younger phase, the fortress was built of stone bound with lime mortar. Foundation zones, 0.70 m high and 1.20–1.30 m wide, were made of broken schist from Ram, while the upper parts were made of lime stone blocks of different dimensions. The younger phase rampart stretches along the northern, actually western wall made of red clay. As the younger rampart was erected, it incorporated the older one, resulting in the younger phase rampart width of about 2 m. Contrary to the ramparts, the later towers were more or less built on top of the old ones. Because of this and because of the large level of devastation, at this point it is not possible to determine dimensions of the older towers. The only exception is the north-western corner tower. Just like with the rampart, the walls of this tower were mostly constructed around the already existing old tower walls. It is similar with the towers to the south from the western gate – the later one was erected to the south from the older one.

Both during the earlier and later fortress phases, the towers were both in- and out-turned from the rampart surface. In the earlier phase, this difference measured 0.15–0.20 m and in the later one, it measured 0.40–0.50 m. Gate towers make exceptions, since the difference there measures 0.90–1.10 m.

In parts in which the rampart and the towers were preserved in negative, beneath the foundation zone of the earlier phase, there are rows of smaller pits (with circular, oval or square ground-plans) with "V"-shaped bottoms. They represent pits for wooden poles, used to strengthen the soil base, actually for increasing soil density.



**Fig. 108**

**The north-western corner tower**

The north-western corner tower has a trapezial ground-plan, although its northern wall forms an arch. In the earlier phase, the length of this wall measured 4.20 m; the length of the southern one was 3.55 m, while the eastern and the western walls each had the length of 3 m. Width of the walls is 0.80 m. In the middle of the southern wall there is a 1.30 m wide tower entrance. Within the tower, its surface covering around 12 $m^2$, there is a plinth. On the same level, there is a floor made of crushed "crvenka". In the corners, there are rectangular holes for wooden poles.

In the later phase, 1.20 m wide tower walls were built around the older tower walls, thus making them 1.2 m larger compared to the walls from the older phase. During the later phase, the southern side was made 1.2 m wider, while the inside of the tower was leveled. Its surface was thus enlarged to some 25 $m^2$.

The northern and the western rampart run from the corner tower towards the east and west.

The northern fortress rampart is orientated west-east, with a smaller deviation of its eastern end towards the south. Its length between the north-western corner tower and the northern gate measures around 170 m.

Fig. 109

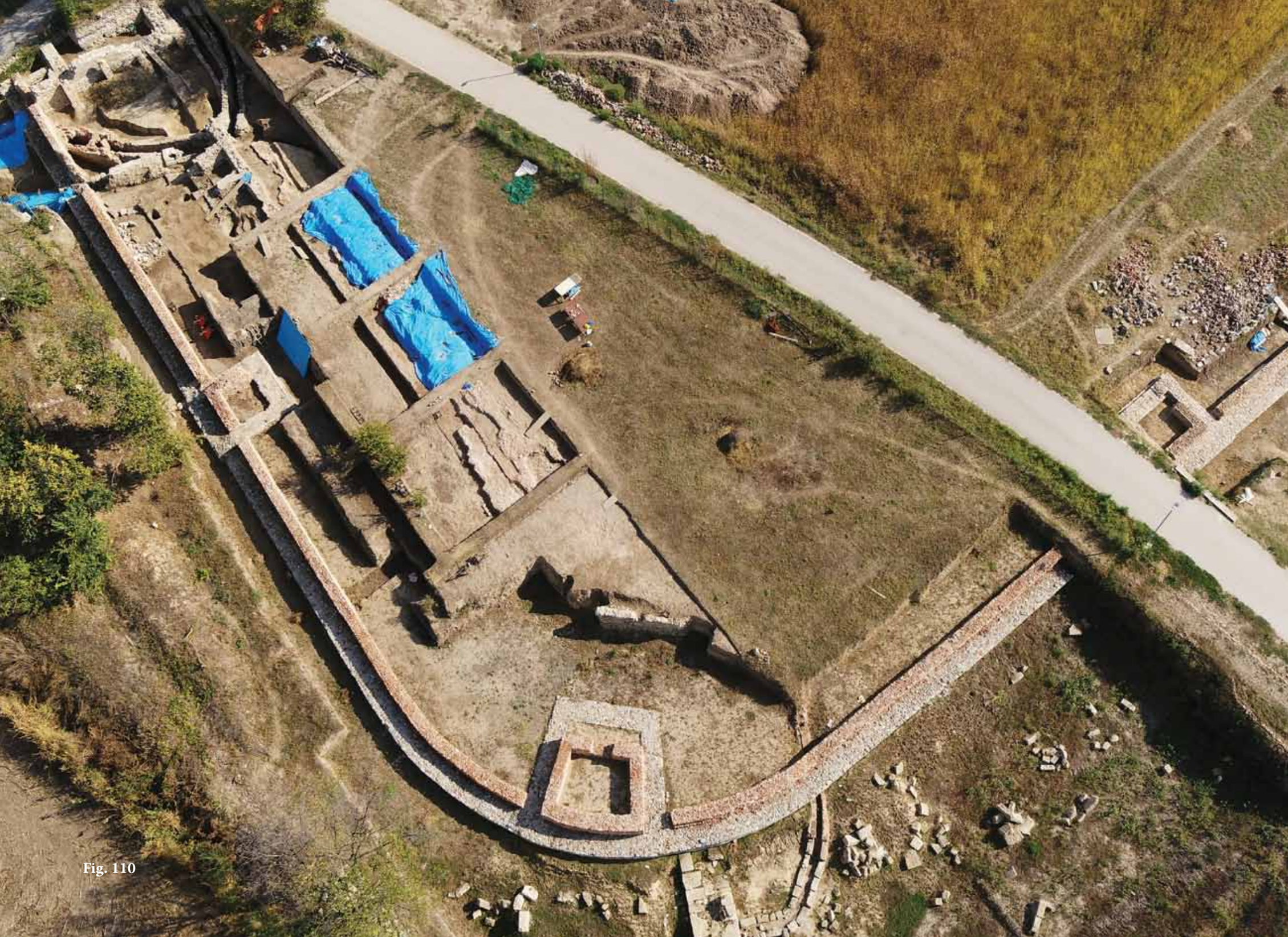


Fig. 110

Fig. 111

**The northern gate**

The northern gate is situated some 170 m to the east from the corner tower. According to the results gained so far, since the excavation still continues, dimensions of the gate in its younger phase are 28.30 (east-west) x 10.20 m (north-south). The eastern and western towers were mostly preserved in negative or parts of foundation zones. The towers have a rectangular ground-plan, measuring approximately 8.50 (east-west) x 10.20 m (north-south). Between the towers there is an 11.30 m wide entrance, consisting of two parallel paths paved with larger stone blocks, sewage canals placed between them. The main canal was built of schist and covered with stone blocks, while the bottom was paved with bricks. The towers made of "crvenka" were more or less damaged as the younger ones (made of schist) were built, thus making it impossible to determine their dimensions.



**Fig. 112**

Fig. 113

Fig. 114

Fig. 115

Fig. 116

Fig. 117

Fig. 118

Fig. 119

Fig. 120

Fig. 121

Fig. 122

**Tower between the corner tower and the northern gate**

On the northern rampart, between the corner tower and the northern gate, there is just a single tower, some 32.2 m to the east from the corner one. The older tower (built of "crvenka") was mostly destroyed while the younger one was built and it is therefore not possible to determine its size. Preserved walls are 0.75–0.80 m wide, while the height in its upper part measures up to 1.40 m. Within the tower, on the eastern wall, part of a plinth is preserved, at the same level with the floor made of crushed "crvenka" and with pole holes in the corners. Only foundation walls of the younger tower remained preserved, built of large pieces of schist bound with mortar. The outer tower dimensions are 5.80 x 5.80 m, while its inner surface measures around 12 $m^2$.

The western fortress rampart is north-south orientated, with a smaller deviation of the southern part towards the west. Starting from the north-western corner tower towards the south, it was examined in the length of 220 m.

Fig. 123

Fig. 124

Fig. 125

**Fig. 126**

**The western gate**

The western gate *porta principalis sinistra* is situated 115.20 m from the corner tower. Its outer dimensions in the younger phase measure 22.40 (north-south) x 10.00 m (east-west). The younger phase was built on top of the older one and this is why the older fortress gate is not visible. The gate consists of a northern and a southern tower and an entrance between them. Compared to the rampart face, both towers are positioned 0.90 m outwards. They have a rectangular ground-plan and measure 6.70 x 10.00 m, their inner surface being 26.60 $m^2$. Towers' foundation zones are 1.90 m high and their upper surfaces were covered with mortar. The wall width measures 1.35 to 1.55 m. According to the mortar imprints (mortar joints) one is able to understand that the upper parts were made of blocks measuring 1.10/1.20 x 0.80/0.85 m. Between the towers, there is a 9.30 m wide entrance, including the path (street), some 8 m wide, and a sewer, draining the water from the street. The street has a substructure made of crushed "crvenka" and stone pieces, its height being 0.95 m. Stone slabs were placed upon it. Only small pavement fragments remained preserved, with a stone with visible wheel-traces. On the southern street side there is a canal built of limestone blocks and broken schist pieces, its bottom paved with stamped tegulae with the inscription LEGVIICL. The outer canal width measures 1–1.10 m while the inner width measures 0.50 m. From the western gate, the path (street) and the canal take a turn towards the north-west, actually towards the city.

Fig. 127

**Towers on the western ramparts**

Along the examined western rampart part and apart from the western fortress gate, towers were also discovered. The first tower is situated 39.70 m to the south from the corner tower, while the second one is positioned about 38 m to the south from it and 37.50 m to the north from the western fortress gate (the younger phase). Research of these towers is still ongoing. Within both towers, there is an older and a younger phase, but their mutual relation and dimensions are still not determined.

To the south from the western gate there is the only case so far discovered with a younger tower not being built on top or close to the older one, but 3.20 m to the south from it.

The tower made of "crvenka" (older phase) is situated 43.20 m to the south from the western gate. Its outer dimensions are 4.80 x 4.40 m, while its inner surface includes 8.40 m$^2$. Wall width measures 0.80 m. The upper wall parts are preserved up to 0.95–1.10 m. On the eastern tower side there is a 1.00 m wide entrance. The younger tower is positioned 3.20 m to the south from the older one and it was built of broken schist bound with mortar. It is mostly preserved in negative or foundation parts. According to this, wall width of about 1.20 m was confirmed. Its outer dimensions measure 5.65 x 5.50 m and the inner surface includes 8.16 m$^2$.

Fig. 128

Fig. 129



**Defensive ditch**

In front of the north-western corner and the northern end of the western fortress rampart, a defensive ditch was examined. The eastern ditch edge is positioned about 1–1.20 m from the rampart and the towers; it is around 17 m wide and up to 5.20 m deep. Along its diagonal sides, there are numerous pits and shallower depressions of different shapes and dimensions. Upon the ditch, its bottom being "V"-shaped, a massive wall, a rampart and a bridge have been erected. The bridge runs in the northeastern-southwestern direction, it was 19 m long and 2.45 m wide and it leads from the northern end of the western fortress rampart towards the city. The rampart was built of larger limestone blocks. Their profiled edges, sockets and inscription parts give testimony to the fact that they were used as spoliae. Through its middle part and above the ditch bottom, there is a polygonal shaped canal, 1 m wide and 0.70 m high. On the northern and southern canal ends, in blocks that were used as a threshold, there were shallower holes in which metal bars were placed. On a wedge-shaped stone above the canal opening, parts of an inscription also remained preserved (...VET. LEGVII, VII being damaged). Research of the ditch part in front of the western rampart is still ongoing, but it was concluded that there was no ditch in front of the western gate, but only a road leading from the fortress towards the city. To the north and south from the road, actually the western gate, there is a double ditch, its total width also measuring around 17 m. The eastern ditch part is "V"-shaped, the sides are extremely steep and its depth measures around 4 m. The western part of the double ditch has been examined only to the south from the gate. At this spot, its depth is 4.35 m and its bottom is flat or slightly sunken.

After being filled in during Late Antiquity, to the north and the south from the road, in front of the western gate, upon the ditch, several structures of different shapes and dimensions have been erected. The structures have usually been built using dry-stone walling technique and the building material consisted of stones taken from the rampart and the towers (limestone blocks, bricks, etc.).

**Fig. 130**

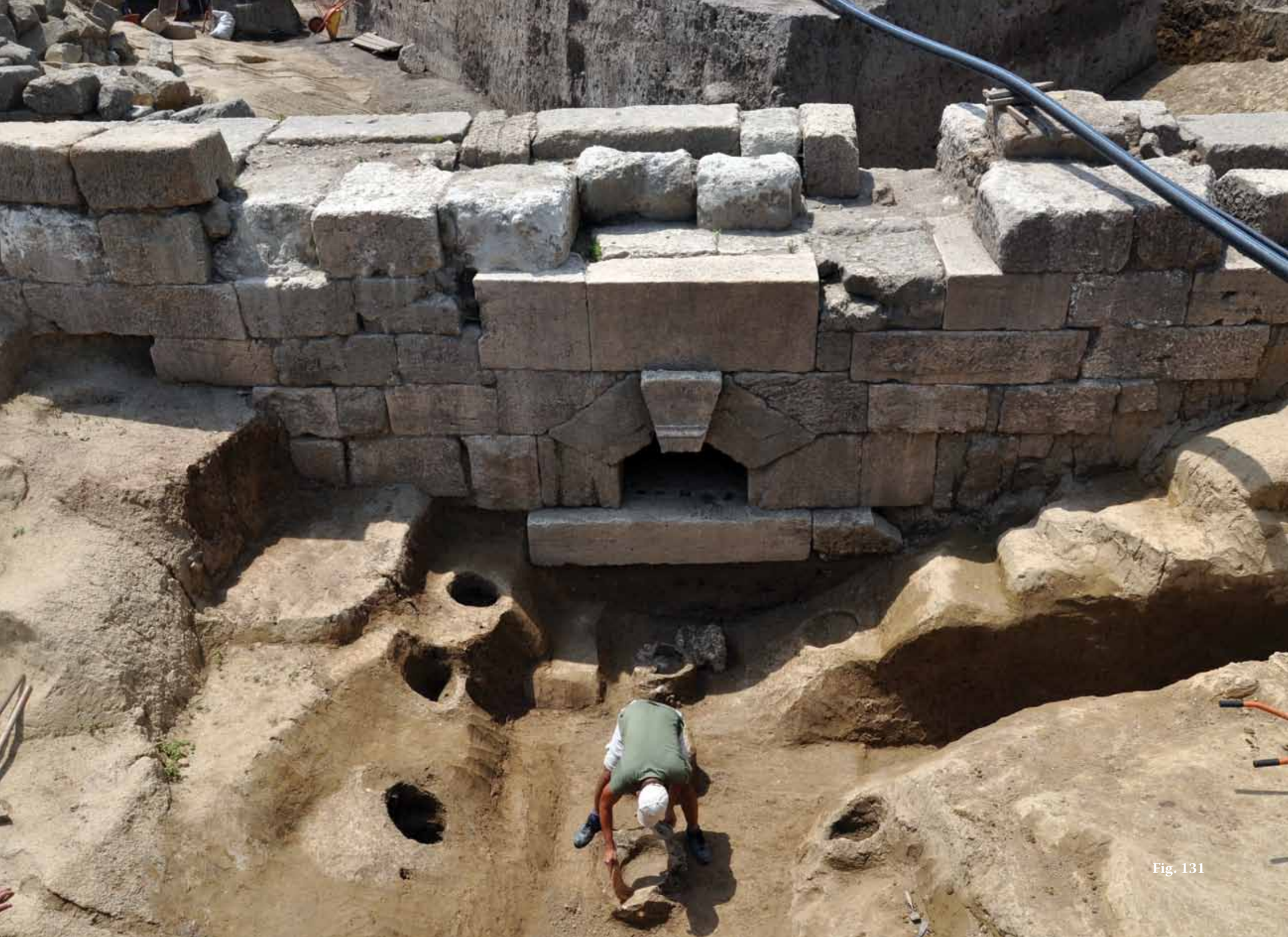


Fig. 131

Fig. 132

**Canals**

Apart from the canals situated within the entrance between the towers of the northern and western fortress gates, another three canals have been discovered. One of them belongs to the older fortress phase, while the remaining two belong to the younger phase.

On the northern rampart, some 50 m to the east from the corner tower, there are two sewage canals that run downwards from the south-west of the fortress towards the north-east. The canals were built of different materials and belonged to different building phases of the fortress. Within the fortress, in the southern part, both canals enter the trench profile. At this point, the distance between them measures only 0.15 m.

The older canal was built of "crvenka" and it has been examined in the length of about 11 m. From the southern trench profile (within the fortress), after the length of some 7.00 m, it runs beneath the rampart built of "crvenka". After the younger rampart was built, the canal has been closed. Its outer width measures 2.45 m and the inner one 0.90 m, its height being 1.20 m. In the southern part, next to the profile, it turns slightly towards the south. To the north from the rampart, the canal is about 1.20 m long and orientated in the same way like in the southern part within the fortress (southwest – northeast). After that, at an obtuse angle, it turns towards the north. After 3.50 m, it enters the northern trench profile. Between its turn towards the south, actually north, the canal is vaulted. Its walls are built of precisely placed stone blocks, while the vault is made of trapezium-shaped "crvenka" blocks. The outer surface is rendered and its bottom is covered with larger "crvenka" blocks. After the canal turns towards the south (within the fortress) and in the part to the north of the rampart it turns towards the north, the canal walls were made of broken "crvenka" pieces and not rendered. The bottom is paved with tegulae stamped with LEGIIIIFF. There is no indication that the canal was vaulted in this part.

After the older canal was walled up and after the younger rampart has been erected, another canal was built to the east from it. The younger canal had an upper construction of trapezium-shaped cross-section built of limestone blocks and large brick pieces put between them. Its outer side is rendered with a thin layer of lime mortar. The canal length of some 7 m has been examined. The upper construction remained preserved only in its southern part, inside the fortress. After the length of some 3.00 m it runs beneath the profile. The outer canal width measures 2.45 m, its inner width is 0.65 m and its height is 1.40 m. From the mentioned upper construction of the canal towards the north-east, only the canal edges remained preserved.

Another canal belongs to the earlier phase and it runs through the western fortress rampart. The excavated part runs in an arch, from the south-east (of the fortress) downwards towards the north-west to the ditch bottom, actually to the southern canal part in the wall (bridge) above the ditch. In the south-eastern part, where it runs through the rampart, the canal was built of bricks. Its inner width measures 0.30 m and its depth 0.35–0.40 m. From the part with the most highlighted curve and towards the north-west, canal walls have been built of limestone blocks. In this part, the canal width measures 0.40–0.45 m and its depth is 0.45–0.60 m. The canal bottom, falling in cascades and following the slope of the terrain, is paved with bricks. One of them is stamped with LEGVIICL.

Fig. 133

**The interior of the fortress**

The inside of the fortress is only partially examined, mostly along the examined rampart parts. Along the southern side of the northern rampart, remains of burned wooden planks have been discovered, positioned vertically to the rampart. The planks are 0.25–0.30 m wide and 1.45–1.50 m long, in most cases framed with crushed "crvenka". Four levels of planks have been discovered and a 0.50 m thick clay layer between them. Therefore, the total height is about 2 m. In the upper zones, the planks remained preserved only in the form of small segments.

On the southern side of the northern rampart, to the east from the canal, walls of a larger structure have been unearthed, built of broken schist bound with lime mortar. The structure is orientated east–west and its walls, along with foundation zone, remained preserved at the maximal height of 2.85 m.

Fig. 134

Fig. 135

Fig. 136

Fig. 137

Fig. 138

Fig. 139

Fig. 140

Fig. 141

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Fig. 145

Fig. 146

Fig. 147

Fig. 148

Fig. 149

Fig. 150

Fig. 151

Fig. 152

## EASTERN CITY GATE

The eastern city gate is situated 27 m to the east from the eastern amphitheatre entrance. They are connected with a 2.40 m wide rampart (one needs to say that the amphitheatre wall was actually integrated into the eastern city rampart).

The gate includes two towers, described as the northern and the southern one. The northern tower is mostly preserved in negative, while the southern one has its foundations preserved. The towers were connected in their foundation zone. Foundations of the gate and of both of the towers and the walls in between them are made of schist bound with mortar. According to dislocated limestone blocks above the southern tower, it is possible to say that the upper tower part was made of larger limestone blocks. Outer dimensions of the northern tower are 6.70 x 3.70 m and the inner ones 3.20 x 1.10 m. Outer dimensions of the southern tower measure 6.90 x 4.40 m and the inner ones 4.00 x 1.70 m.

Within the foundation zone of the northern tower (the tower was dug into the layer), a bronze scabbard was discovered, large number of terracottas, a figurine of Venus, as well as several dozens of oil-lamps.

**Fig. 153**

Fig. 154

Fig. 155

Fig. 156

Fig. 157

## VIMINACIUM STREET

The street stretches from the eastern city gate to the west (into the city), orientated east–west (with a deviation of $15^0$ of the eastern part towards the south). It has been unearthed in the length of 14.75 m, while its width between the edges measures 5.00 m. The street pavement was constructed of stone slabs (made of schist from Ram). The biggest pieces among them measure 2.80 x 1.20 m and 2.35 x 1.60 m. Along the northern and the southern side of the pavement there were edges constructed of vertically positioned stone slabs. The pavement slabs were placed upon the 0.90 m thick substructure. The substructure was levelled with brick fragments and pieces of "crvenka" and schist placed upon a layer of intensively burned clay. Over the levelling, there is a layer of small mortar pieces and broken limestone, covered with a 0.30 m thick layer of stumped large-grained sand. The upper substructure part (upon which stone slabs were placed) is 0.40 m thick and it consists of pebbles, brick fragments and "crvenka" and schist pieces.

**Fig. 158**

Fig. 159

Fig. 160

## THE RIVERBED WITH SHIPS

In March 2020, one ship and two monoxyles were discovered at Viminacium. The ship was discovered at a depth between seven and eight metres below the level of the modern ground. The profile clearly shows the riverbed where it was submerged. It was lying on sand, apparently river sediment, and was partly buried in sand and partly in clay, which was most likely sediment formed after the change of the river flow when this area became a marsh. The layer above the ship is mixed and was formed by the combination of aeolian and fluvial deposits. The wind brought the loess, and the river, occasionally, during floods, brought the mud. The ship is located east of the mouth of the old Mlava River in the Danube, and 500 m east of this site a monoxyl was found in the same riverbed. It is a larger bed that was once the main stream of the Danube or a large sleeve thereof.

A year earlier, an iron anchor was found at the same site, which disappeared the same night when the excavator of the "Drmno" strip mine lifted it. The ship was also discovered during the operation of a giant excavator in the mine, when the remains of planks, at the already mentioned depth, were encountered during its operation. Bearing in mind the rich history of the area, the machine operator correctly concluded that it was a remnant of a bygone era and informed the archaeological team engaged in the exploration of ancient Viminacium, who then visited the site under spotlights and immediately began excavations. Some of the stern and rudder fragments were spotted among the dislocated wooden parts, so it was immediately clear that the remains of a vessel had been found, preserved due to the very specific anaerobic conditions and high humidity.

**Fig. 161**

Fig. 162

It is an extremely well preserved flat bottom river vessel, with a location for the auxiliary sail mast. The preserved part of the ship has a length of 9.50 m, and it can be assumed that it was up to 15 m long, while its maximum width was 2.70 m. The ship type has elements that have not changed significantly over the millennia, but the ceramic material found in the ship, as well as below it, can be dated to the second and third centuries of the new era. Part of the ship was damaged by the excavator's work, but the fragments were found on the level of the mine below it, so it would be possible to reconstruct the entire ship. The bow of the ship resembles a Roman rostrum, indicating that it is a smaller warship. A square hole for one stern oar was discovered in the stern. The flat bottom of the ship indicates that it was designed for operation in shallow river waters. The ship fits into the mine profile at almost a right angle and is perfectly preserved in its surviving part. The planks on the sides are joined to the skeleton by long pegs and mutually by cramp irons. The space between the planks is filled with oak soaked in an oily mixture that will need to be identified with a chemical analysis. There are traces of crack repairs at the bottom of the ship which may have been caused by some earlier grounding.

The ship and two monoxyles were lifted using specially constructed steel structures and with the help of cranes, and moved to a suitable space with adequate conditions for their gradual drying, so that they could be preserved and then presented to the public. Regardless of whether analyses will show analyses show that it is a Roman, Byzantine or mediaeval ship, it is already clear that this discovery will occupy a special place in the already exceptional content of the Viminacium Archaeological Park, as a unique find in Serbia and beyond.

**Fig. 163**

Fig. 164

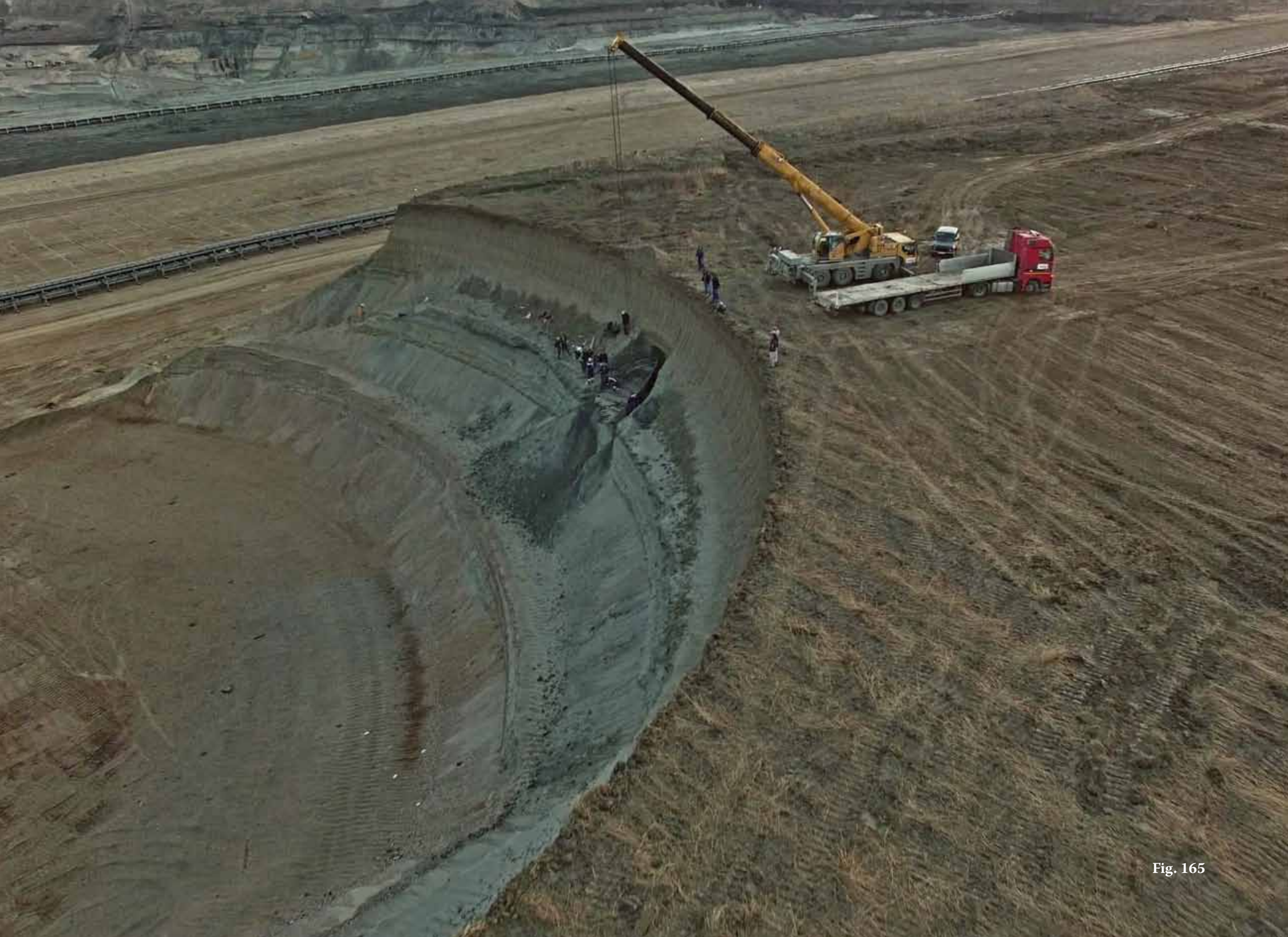

Fig. 165

Fig. 166

Fig. 167

Fig. 168

Fig. 169

Fig. 170

Fig. 171

**Fig. 172**

## AMPHITHEATRE

Amphitheatres and spectacles held in them represent one of the symbols of ancient civilisation. As a new type of public building, an amphitheatre was established as spectacles were invented and developed, including gladiator fights (*munus gladiatorum*) and other competitions. The function of this structure, in which spectacles were held, required monumental dimensions and a specific ellipse or oval ground plan, with an arena in the middle and spectator seats that rose around it.

Initially, in Republican times, amphitheatres were built in Italy, but with time, they were erected in urban centres throughout the state, but also in the vicinity of military forts. These typical Roman structures were also made as a sign of Romanisation, built in newly conquered territories either by the state or by important individuals wishing to enlarge their personal gain or their social status (Bomgardner, D. L., 2002, 192). Depending on the audience that builds and uses them, amphitheatres are divided into civilian and military ones. In terms of their construction, there are amphitheatres that are built by taking advantage of natural terrain (natural slopes or mounds) and those erected upon built substructures (Golvin, J-C., 1988).

So far in the territory of Serbia, the Viminacium amphitheatre is the only actual confirmation that there were structures made for gladiator fights (Nikolić, S., Bogdanović, I., 2015). In historical sources there is almost no data about gladiator fights in the territory of modern Serbia. Direct, epigraphic sources are also missing that would indicate the existence of public buildings for spectacles, spectacle organisers, but also funerals of gladiators or other spectacle participants (Вујовић, М., 2011, 244). Based on a variety of different parameters, the existence of an amphitheatre was suspected in Sirmium (Милошевић, Г., 2001, 154–155; Вујовић, М., 2011, 266–267), Singidunum (Вујовић, М., 2011, 267) and in Naissus (Вујовић, М., 2011, 267). On the other hand, finds of different utensils with depicted details of spectacles held in amphitheatres (Rnjak, D., 1979; Вујовић, М., 2011; Bogdanović, I., Vujović, M., 2015), indicate the great popularity of the games themselves and the acceptance of the Roman way of life and Roman tradition within the provinces in the territory of modern Serbia.

At the end of 2007, the Viminacium amphitheatre was discovered and the systematic archaeological research begun. During the 19th century, F. Kaniz (2007, 180) and M. Valtrović (1884, 11–12, 100–103) attested the existence of a larger ellipsoid depression at this location, describing it as a pit. In 1882, M. Valtrović conducted the first archaeological research in the amphitheatre area (Валтровић, М., 1884, 11–12; 100–103). However, the

examined surfaces did not reveal enough information to comprehend the area fully. Before the systematic archaeological excavation, geo-physical research was conducted by the Centre for New Technology from Belgrade (Mrđić, N., 2009, 115–116; Nikolić, S., Bogdanović, I., 2015, 547). During this research, contours of a larger structure were revealed, with an oval ground plan indicating an amphitheatre. To the north-west and south-east of the structure, there were city walls, to the west and south there are other structures (Nikolić, S., Bogdanović, I., 2015, 547). Up until the end of 2016, an uninterrupted archaeological excavation was conducted by the Institute of Archaeology from Belgrade and it revealed most of the structure. It was confirmed that the amphitheatre is embedded into the north-eastern corner of the area described as the settlement erected next to the legionary fortress, on the right Mlava bank, some 50 m from the north-western fortress corner. According to the results of archaeological investigation, it was concluded that the amphitheatre was built at the beginning of the 2$^{nd}$ century and it was used until the first half of the 4$^{th}$ century. Although the research is still being conducted, according to the architectural remains and preliminary analyses of small archaeological finds, it is possible to distinguish two basic building phases of the Viminacium amphitheatre. The first one refers to the erection of a wooden structure and later an amphitheatre made of stone and wood, superimposed upon the wooden structure (Nikolić, S., Bogdanović, I., 2012; Nikolić, S. *et al.* 2014a; Nikolić, S. *et al.* 2014b; Nikolić, S., Bogdanović, I., 2015; Bogdanović, I., Nikolić, S., *in print*).

**Wooden amphitheatre**

In different parts of the examined surface, traces of the original Viminacium amphitheatre were discovered. The structure itself was defined according to the remains of wooden posts and beams, the cross section of which measure up to 30 x 25 cm. The amphitheatre length measures 81.80 m, its width about 70 m. The arena measured about 60 x 50 m. The main axis of the amphitheatre was orientated east–west, with a deviation of 20$^{0}$ of the western part towards the north. This meets the orientation of the legionary fortress at a right angle (Nikolić, S., Bogdanović, I., 2015, 548–551; Bogdanović, I., Nikolić, S., *in print*).

The arena was damaged during construction of the later structure made of stone and wood, but also by activities during Late Roman times. Similar to other Roman amphitheatres, it can be presumed that the arena was covered with pebbles and river sand. In the arena itself, part of a larger ditch was unearthed, its excavated length measuring 16.90 m and its width varying from 2.40 to 2.75 m. Its position, shape and dimensions indicate that it represented part of a drainage system or a subterranean room, somehow connected to the events taking place in the arena above (Bogdanović, I., Nikolić, S., *in print*, 88).

The arena was surrounded with a palisade, its traces being revealed as a row of wooden posts (Nikolić, S., Bogdanović, I., 2015, 548; Bogdanović, I., Nikolić, S., *in print*, 88). The amphitheatre entrances were defined according to the remains of wooden constructions at the western and eastern endings of the main amphitheatre axis. The length of both of the entrances was 10.90 m. The eastern entrance was partly damaged, its width measuring up to 4.30 m. The width of the western entrance was slightly smaller and it measured between 3.35 and 3.95 m (Nikolić, S., Bogdanović, I., 2015, 548–549; Bogdanović, I., Nikolić, S., *in print*, 88).

The remains of the spectator stands (*cavea*) were noticed only in several places since, in the later period, the entire structure was destroyed with the erection of the stone and wooden amphitheatre. The stands' width was up to 10.90 m. Remains of the wooden structure include pillars placed in pits dug in rows, which follow the shape of the arena. In the north-eastern part of the structure, traces of wooden beams were found in two rows and parallel to the arena palisade. The distance between these rows is 7.50 m and they were connected with radially placed beams, each positioned at 3 m intervals (Nikolić, S., Bogdanović, I., 2015: 549–550; Bogdanović, I., Nikolić, S., *in print*, 88).

In the area of the spectator stands, close to the eastern amphitheatre entrance, three smaller structures were discovered, surrounded with an earth-wooden construction measuring 6.50 x 4.00 m (Bogdanović, I., Vujović, M., 2015, 321). These structures, measuring about 1.30 x 0.90 m, were made of stone and bricks in their lower zones, while in their upper zones they were made of wood and wattle. On their walls, remains of decorative mortar were discovered, while the position of constructions and oil-lamp finds indicate that this area was used as a cultic place (Bogdanović, Vujović 2015: 321). This is not surprising, since it is known that in the area of Roman amphitheatres there were small chapels and sanctuaries (Golvin, J-C., 1988, 337–340; Pastor, S., 2011; Wittenberg, T., 2014).

Fig. 173

Fig. 174

Fig. 175

Fig. 176

Fig. 177

Fig. 178

The wooden structure remains indicate that the amphitheatre was erected on the slope of a fluvial terrace and that it was partially dug into the terrain (Bogdanović, I., Nikolić, S., *in print*). Its southern part was supported by the slope itself, while the northern one was erected on the surface slightly descending towards the Danube. The spectator stands height measured over 7 m. According to the surface of the *cavea* and calculations of the amphitheatre's size (Golvin, J-C., 1988, 381; Bomgardner, D. L., 1993, 386), it can be concluded that the wooden amphitheatre was able to accommodate around 6,000 spectators (Bogdanović, I., Nikolić, S., *in print,* 92). Access to the spectator stands was via staircases that were most likely positioned beneath the stands in the northern part of the structure, similar to the one in Chester (Thompson *et al*. 1976, 228, Figs. 48–49), or via a staircase along the spectator stands in the southern part of the structure, similar to the one in London (Bateman *et al*. 2008, 109, Fig. 110) or in Silchester (Sunter, N., 1989, 164–167, Fig. 67).

The wooden amphitheatre was built at the beginning of the 2nd century in an area which does not show previous traces of usage. In other words, the remains are positioned directly upon virgin soil. It was constructed after the Dacian wars, most likely between 106 and 114 (Bogdanović, Nikolić *in print*: 89–90). The amphitheatre was built next to the legionary fortress and it belongs to a group of military amphitheatres, built in the provinces by Roman soldiers and used for performing spectacles (Golvin, J-C., 1988, 154–156; Le Roux, P., 1990; Sommer, C. S., 2009).

According to the typology of Roman amphitheatres suggested by Golvin, based upon the appearance of the structures, the original Viminacium amphitheatre belonged to his type I (Golvin, J-C., 1988, 98–101, pl. II, a), including structures completely made of wood, with compact spectator stand substructions. During the 1st and the beginning of the 2nd century in Roman provinces, wooden amphitheatres were usually built next to military forts (Golvin, J-C., 1988, 98–101; Sommer, C S., 2009; Welch, K. E., 2009, 65–70; Bajusz, I., 2011: 62–64). Among others, such amphitheatres were discovered on Castra Vetera (Golvin, J-C., 1988, 80), Vindonissa (Golvin, J-C., 1988, 79–80), Carnuntum (Klima, L., Vetters, H., 1953; Golvin, J-C., 1988, 85), Porolissum (Alicu, D., Opreanu, C., 2000, 60–62; Bajusz, I., 2011), Silchester (Fulford, M., 1989) and in London (Bateman *et al*. 2008).

Wooden amphitheatres represent original buildings, later replaced with solid, stone structures. The wooden Viminacium amphitheatre was used for a short period of time and most likely during Hadrian's reign, it was replaced with a stone construction (Nikolić, S., Bogdanović, I., 2015, 551; Bogdanović, I., Nikolić, S., *in print,* 90). During the 2nd century, as with the Viminacium amphitheatre, many other spectacle structures were re-built or torn down, in order to be replaced by stone amphitheatres (Golvin, J-C., 1988; Welch, K. E., 2009; Wilmott, T., 2010; Bajusz, I., 2011).

**Masonry amphitheatre**

In the area of the original wooden amphitheatre, a structure of wood and stone was erected. Its architectural remains include an arena wall, the entrances to the amphitheatre and rooms positioned along the arena wall. Apart from the walls of stone and mortar, these remains also include the remains of wooden spectator stands. After the excavation, dividing walls were discovered, mostly in the area of the spectator stands. At the end of the 2nd century, at the same time as the erection of this structure, the city walls were built. The walls were built next to the amphitheatre, and were, thus, included into the city area, developed on the western side of the legionary fortress (Nikolić, S., Bogdanović, I., 2015, 551–554).

This amphitheatre measures approximately 84 x 74 m, while the arena measures about 55 x 45 m (Nikolić, S., Bogdanović, I., 2015, 551–554). The orientation of this structure corresponds to the orientation of the original wooden one. The arena was defined according to the surrounding wall and the main amphitheatre entrances and it was positioned on the arena of the older structure (Nikolić, S., Bogdanović, I., 2015, 551). During the late Roman period, the arena level was completely destroyed. It was defined according to the thresholds and pavements of the main entrances, as well as the doorsteps of the openings leading to the rooms behind the arena walls. The content of the arena layer was most likely the same, or similar to, the wooden one, meaning that it was covered with pebbles or river sand. In the arena, a water collector was unearthed (Nikolić *et al.* 2014b), which, along with the canal in the northern part of the structure, represented a drainage system (Nikolić, S., Bogdanović, I., 2015, 553).

The arena was surrounded with a wall between 0.80 and 1.15 m wide, preserved to a height of 4.2 m. The parts of the wall above the ground rise to 3.40 m high (Nikolić, S., Bogdanović, I., 2015, 551–552). The arena wall was decorated with wall paintings, with motifs of stretched exotic animal skins, painted within framed fields (Rogić, D., Bogdanović, I., 2012; Рогић, Д., 2014, 148–154).

The main entrances were constructed at the eastern and the western sides of the structure. Next to the entrances, within the arena walls, there were five doors, representing passages to the rooms directly beneath the arena walls (Nikolić, S., Bogdanović, I., 2015, 552). Each of the main entrances consisted of two radially positioned walls, therefore giving the entrances a trapezium-shaped plan. On their inner sides, the walls were fortified with pillars ending with a "T"-shaped widening, indicating that they were vaulted. The eastern entrance is 14.80 m long and the western one 14.35 m. The width of the eastern entrance measures from 4.00/4.15 m to 6.20 m, while the width of the western one varies from 4.15 to 7.10 m. The entrances were paved. At both entrances there were doorsteps towards the arena, both of them with double doors. At the eastern entrance, there was also a doorstep towards the outer space (Nikolić, S., Bogdanović, I., 2012; Nikolić *et al.* 2014a: 60; Nikolić, S., Bogdanović, I., 2015, 552).

On both sides of the main entrances to the arena, there were smaller rooms (*carceres*). The inner dimensions of the rooms next to the eastern entrance measure 3.85 x 1.60 m and 3.30 x 1.60 m, while the inner dimensions of the rooms next to the western entrance measure 4.30 x 1.80 m and 4.20 x 2.35 m. These rooms, most likely used for keeping animals, had openings 1.20 to 1.30 m wide and were connected to the arena and the main entrances (Nikolić, S., Bogdanović, I., 2015, 552).

Rooms along the arena walls were also discovered along the shorter side of the amphitheatre. The ground plans of these rooms are trapezium-shaped and they were connected to the arena by openings. In the southern part of the structure, two rooms were defined, their inner dimensions being 3.55/4.05 x 2.60 m and 6.25 x 3.85 m. The western room was connected to the outer space by a corridor that was later walled-up. The eastern room was connected to the spectator stands by a staircase. The room in the northern amphitheatre part was rather damaged, its inner dimensions being 6.70/8.10 x 385 m. Under this room there were the remains of the walls of an older room that was later divided. Along its northern wall, there was an altar dedicated to the Nymphs and a large amount of pottery oil-lamps and terracottas. The purpose of the room placed next to the shorter side of the amphitheatre was connected to the events taking place in the arena, but it could have also represented a sanctuary (Nikolić, S., Bogdanović, I., 2015, 552).

The spectator stands of the stone structure were made of wood, while the construction itself partly relied upon the arena walls, the walls of the main entrances and the walls of the rooms along the arena walls (Nikolić, S., Bogdanović, I., 2015, 552–554). Remains of the wooden structure included wooden posts, their thickness measuring up to 40 x 30 cm. These posts were positioned in postholes, arranged in four parallel rows that ran along the oval arena shape. Based on the arrangement of the complexes, it can be concluded that, in the southern part of the structure, a causeway was built in which posts were positioned. In the southern part, the causeway height reached up to 5.70 m above the arena level. In the northern part, the construction was dug into the older layers, and in this part the causeway was missing. According to the wooden posts' arrangement, it was concluded that the spectator stands' width measured 14.35 m, its height reaching 10.50 m above the arena level. Apart from the spectator stands positioned on a gradient, above the rooms and above the shorter arena axis, the stands also included boxes for very important members of the community. According to the stands width it was calculated that the capacity of this structure was between 6,500 and 7,300 spectators. The spectator stands were accessed via staircases, either positioned next to the structure or beneath the spectator stands (Nikolić, S., Bogdanović, I., 2015, 552–554).

At the end of the 2$^{nd}$ century, next to the amphitheatre, city walls were erected, while the structure itself was included into the city area, partially accommodating the city walls. The outer amphitheatre wall was built parallel to the city walls and connected the eastern amphitheatre entrance with the northern city wall. The outer wall followed the shape of the amphitheatre, its length measuring 23.20 m and its width 1.20 m. This wall was connected to the city wall with a tower, measuring 7.20 x 5.00 m. From the eastern amphitheatre entrance toward the south, there was the eastern city wall with a defensive ditch along it. At a distance of 28.70 m from the amphitheatre entrance, a city gate was discovered, with rectangular towers on each of its sides. There was also a street leading from the gate to-

Fig. 179

Fig. 180

Fig. 181

Fig. 182

Fig. 183

Fig. 184



wards the west and running parallel with the structure (previously described in the text about the eastern city gate and Viminacium street) (Nikolić *et al.* 2014a; Nikolić *et al*. 2014b; Nikolić, S., Bogdanović, I., 2015, 552–553).

The stone structure was made during Hadrian's reign and ran along the legionary fortress (Nikolić, S., Bogdanović, I., 2015, 553–554). The position of an amphitheatre next to a legionary fortress is common for bordering provinces and represents a typical example of military amphitheatres built next to military forts throughout the Empire. It was depicted on Trajan's column, within scene XCIX–C. By building city fortifications and including amphitheatres into the space defended with walls, this structure was turned into a building used by civilians (Nikolić, S., Bogdanović, I., 2015, 554). The position of the amphitheatre in the corner of the city area was also noticed in Pompeii (Golvin, J-C., 1988, 33–37; Bomgardner, D. L., 2002, 39–53; Welch, K. E., 2009, 74–79, 192–198), Salona (Dyggve, E., 1933; Jeličić-Radonić, J., 2008) and in Xanten (Hönle, A., Henze, A., 1984, 156–157; Golvin, J-C., 1988, 195).

The stone and wooden structure belongs to Type I, 1 (Golvin, J-C., 1988, 76–108, pl. II, a–b), describing structures with compact spectator stand substructures. According to the position of the excavated complexes, it was attested that the southern structure part lay on a causeway, while the northern part was built on a rather flat surface (Nikolić, S., Bogdanović, I., 2015, 551–554). The excavated remains of the Viminacium amphitheatre, as well as its appearance, correspond to other simple structures discovered in London (Bateman *et al.* 2008, 39–87; Wilmott, T., 2010, 95–97), Silchester (Fulford, M., 1989, 37–56; Wilmott, T., 2010, 101–103), Chester (Wilmott, T., Garner, D., 2009: 66; Wilmott, T., 2010, 137–139), Sarmizegetusa (Alicu, D., Opreanu, C., 2000, 81–88) and in Micia (Alicu, D., Opreanu, C., 2000, 42–57).

With certain changes, the structure was used until the first half of the 4$^{th}$ century, which corresponds to the chronology of amphitheatres in bordering provinces (Hajnóczi, G., 1974; Golvin, J-C., 1988; Вагалински, Л. Ф., 2009; Wilmott, T., 2010; Bajusz, I., 2011). In the middle of the 4$^{th}$ century, the Viminacium amphitheatre was damaged and the whole area was abandoned. At the end of the 4$^{th}$ century, this area was used as a cemetery (Vuković, S., Bogdanović, I., 2013, 254–255; Nikolić, S., Bogdanović, I., 2015, 554).

**Fig. 185**

## BASILICA THE SOUTH-EAST FROM THE AMPHITHEATRE

In the area to the south-east from the amphitheatre and to the east from the ditch along the city wall, two basilicas were discovered. They are both orientated in the same way (south-west – north-east) and they possess similar ground plans, with apses on the south-western side. Since the western basilica parts were built on instable soil (upon a hole that is some 16 meters long, 5.50 m wide and up to 4.00 m deep), they were mostly devastated (Nikolić, S. *et al.* 2017).

*The older basilica* is 18 m long and 8.5 m wide. It was made of broken stone pieces bound with mortar, partly also of bricks. It was placed upon virgin soil, since the terrain forms a natural slope from the south-east to the north-west. This is why the foundation zone height varies between 0.60 and 0.80 m. The apsis is placed in the southern basilica side and it measures 4.5 x 25 m. The preserved height of basilica walls is 1.20 m. On the inner apsis wall, five layers of painted mortar with floral motifs remained preserved. The northern basilica part forms a rectangular room with its wall preserved up to the height of 0.35 to 0.50 m. The basilica walls were plastered with mortar several times and also renewed. At least five layers of mortar give testimony to this. The room was most likely divided into three areas - the central nave being 4 m wide, and two aisles, each 2 m wide. According to the preserved remains, dividing walls were made of clay in their lower parts and covered with mortar on both sides.

*The younger basilica* was erected around the older one, at the distance of 0.30 to 0.50 m, thus leaving the older basilica within the younger one. It was made of broken stone (schist and limestone) and bricks bound with mortar. The north-eastern wall makes an exception, since it was built of large stone blocks. The basilica is 20 m long, while its width in its central part measures 10 m. The walls remained preserved up to the height between 0.30 to 1.25 m. Dimensions of the apsis are 6 x 5 m. The basilica's rectangular central space measures 15.5 x 9 m. In the north-eastern corner of this rectangular space there is another room with a square ground-plan of 9 x 9 m. Next to the room with the square ground-plan there is a smaller rectangular room that measures 1 x 1.5 m. On the north-western wall of the bigger room there is a 3 m wide opening, most likely representing an entrance to the basilica. In the north-western basilica part, along the outer side of the western wall, there is a side apsis and two rectangular rooms, each placed on its northern and southern side. Between the northern room and the north-eastern basilica part there was a 2 m wide opening. On the north-eastern basilica side, along the outer side of the eastern wall and opposite to the side apsis and the rooms on the western side, wall remains were unearthed (running beneath the modern road). According to their position and dimensions, one can presume that, just like in the western part, they were forming an apsis and a room to the north from it. Just like in the western part, there was a 2 m wide opening. On several occasions, basilica's interior was plastered with mortar. Three layers of mortar give testimony to this. The basilica possessed a gable-roof. A thick layer of roof debris, consisting of broken *tegulae* and *imbreces*, was preserved on both the outer and the inner side of the structure.

Above the walls built of broken stones and bricks bound with mortar, there was a dry stone wall that represents the youngest renewal phase of the structure. Besides bricks and stone, parts of architectural decoration, sculptures and marble icons were used as *spoliae*. Most of them were connected to Roman deities.

To the south-east from the basilica, six graves with constructions of brick and stone were excavated.

The basilicas were built and used in different periods. The older one can broadly be dated into the 2$^{nd}$ century, while the younger one belongs to the third quarter of the 3$^{rd}$ century. Similarities in their ground-plans and dimensions lead to a presumption that they played an identical role.

Research results, most of all of small finds (censers, figurines and pottery oil-lamps) indicate that the area to the east of the amphitheatre possessed a sacral character. Position of the amphitheatre and the basilicas, the distance between them, as well as their dating, indicate that rituals that took place within the basilicas were connected with the events in the amphitheatre itself.

However, it is certain that the youngest structure, used during the second half of the 4$^{th}$ century, did not stand in connection to the amphitheatre. Besides the fact that the amphitheatre was no longer used for spectacles, a different function of the renewed structure is also indicated by a different building technique. The area explored to the south-east of the basilica and only six graves are not enough to draw certain conclusions about its purpose in its latest phase.

Fig. 186

## THE BASILICA – THE SITE OF "STIG"

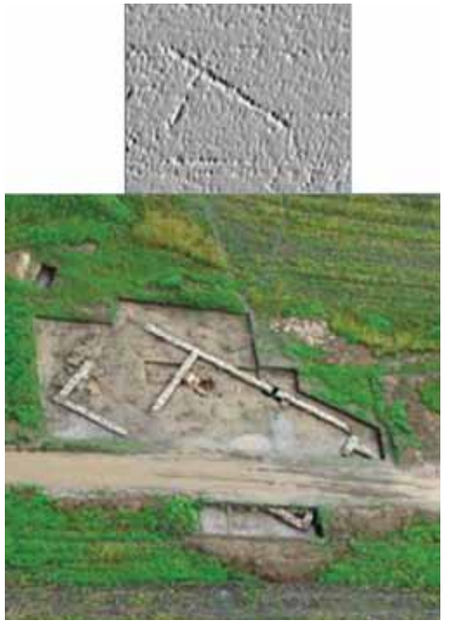

**Fig. 187**

An area covered with rubble (brick, stone), measuring 30 x 40 m, was discovered during a survey of the terrain in the vicinity of the aqueducts. It lies about 2.5 kilometres southeast of the fortress of Viminacium, and 250 metres east of the aqueduct.

After the preliminary survey, geo-radar survey of this area were made. The horizontal cross-section of the geo-radar image clearly showed two walls joined at a right angle and part of an apse at a depth of 0.30 metres. These results were archaeologically tested and it was found that the use of geo-radar sensing was fully justified, for the situation on the spot largely corresponded to the one indicated on the geo-radar image (Redžić, S., Raičković, A., Miletić, V., 2006, 47-49).

The archaeological explorations revealed a structure with three rooms and an apse on the south side. The foundation course of the walls appeared at a depth of 0.2 metres. The walls were built of broken schist and occasional fragments of bricks, bound with lime mortar. The width of the walls is 0.6 metres, and the greatest height of the remains is 0.45 metres. A large quantity of fragmented *tegulae* and *imbreces* from the collapsed roof has been found both within and outside the walls of the building (Благојевић, М., Стојковић-Павелка, Б., 2004, 62–65; Redžić, S., Raičković, A., Miletić, V., 2006, 47–49).

The external length of the building is about 28 metres (the uncovering of the building has not been completed yet because part of the apse lies under a local road, which is still in use), and its width is 12.80 metres. The orientation of the building is north–south, with a western deviation of $6^0$ of the north part.

In the north-eastern corner of the central room, there is a pit filled with limestone, ashes and numerouns fragments of *imbreces* and *tegulae*. This pit could not be thoroughly explored because the excavation was suspended. A number of flat glass fragments were found along the east wall of the same room, which seems to indicate that there was a window in that part of the wall (Redžić, S., Raičković, A., Miletić, V., 2006, 47-49).

Numerous objects, made mostly of metal, and pottery shards were found on the floor of compacted earth after the clearing of the debris of the roof. Metal finds mostly included large iron nails, which certainly belonged to the roof structure. The other metal finds included a key and two knives. Bronze finds were also quite numerous, particularly coins (21 pieces). A cruciform fibula and part of a bracelet ending in a stylised animal head were also found. Another find was a fibula made of wire, with a circular cross-section, and slightly flattened at the end which supports the pin. Apart from the already mentioned flat window glass shards, the only glass finds include rim and belly parts of a beaker, made of thick pale green glass. Stone finds included a fragment of a round quern and a whetstone of irregular shape. Earthenware vessels were mostly made of sandy clay and fired grey or brown-grey. Red fired pottery or glazed vessels were only sporadic finds. The shards were parts of plates, bowls, pots and lids, and the surface of most of the vessels bore burning traces (Redžić, S., Raičković, A., Miletić, V., 2006, 47-49).

The analysis of the discovered objects, particularly numismatic finds, has made it possible to date the origin and period of use of this building into the second quarter of the $4^{th}$ century. Since there are no coins later that the seventh decade of the $4^{th}$ century, it can be assumed that the building lost its importance and was abandoned after that date. Its function, however, must remain an open question at present. The longitudinal arrangement of its rooms and its dimensions indicate that it may have been a basilica. This hypothesis is, however, undermined by the fact that there are no finds typical for this kind of buildings, as well as by its distance from the urban centre of Viminacium. The assumption that it was a *villa rustica* does not seem likely either because it has no heating system. However, it could have been a building used during the summers, whose owner resided in Viminacium. It should be pointed out that the area east of the building has not been archaeologically explored yet, so a definitive explanation of the function of this monument should be postponed (Redžić, S., Raičković, A., Miletić, V., 2006, 47-49).

Fig. 188

## AQUEDUCTS

During 2003, two Roman aqueducts were discovered, excavated and partially dislocated (their lengths measuring 1,025 m and 1,040 m). An aqueduct was originally discovered during the operations of the "Drmno" strip mine, and it was damaged with machinery. As the basic facts and elements about the function and purpose of the damaged structure were missing, a geo-physical research of the area was conducted. Direction of the aqueduct was examined using two methods: the remote detection method with a stereoscopic analysis of an aerial image and with georadar. After that, archaeological excavation was conducted (Благојевић, М., Стојковић-Павелка, Б ., 2004; Mrđić, N., 2007; Korać, M., Mrdjić, N., Mikić, M., 2006).

The aqueduct was built of stone bound with lime mortar. It was superimposed upon a special structure made of smaller and larger pieces of schist bound with lime mortar. The aqueduct walls were rendered with lime mortar and also a layer of waterproof mortar made with the addition of brick (*opus signinum*). The aqueduct bottom was made of bricks bearing stamps of the legions that constructed it. The aqueduct was closed and covered with massive floor tiles. Its entire length was placed underground. Only in specific places there were openings (*lumina*), used to perform interventions when needed. Its slope, the so-called *libramentum*, was only 1 to 2 % with an average value of 1.2 %. The aqueduct canal depth measures 0.33 m, its height is 0.50 m. The total aqueduct width is 1.10 m, while the canal walls measure 0.28 m in width. Dimensions of the bricks used to build it were 0.59 x 0.44 m, actually 2 x 1.5 Roman feet.

The aqueduct originates from the 1st century and it was built by two legions: the *Legio IIII Flavia Felix* and the *Legio VII Claudia Pia Fidelis*. Numerous brick stamps discovered also confirm this (LEGIIIIFF LEGVIICL). The aqueduct was torn down during the first half of the 5th century, during the Hunic invasion. Bronze coins were discovered within it, indicating its long period of usage. Also of exceptional importance are the residue and calcification found at the bottom of the aqueduct and on its sides. Upon examining of this, one can determine not only the water chemical components and the concentration of bacteria, but also the flow speed of the water and duration of usage of the aqueduct. The aqueduct was used to bring fresh, spring water to the city and legionary fortress (*castrum*) of Viminacium from a distance of several kilometres.

In Viminacium, two aqueducts were discovered (described as the eastern and the western one), basically parallel to one another. Regarding terrain configuration, the distance between the two aqueducts varies from 7 to 40 m. The average distance from one aqueduct to the other is about 20 m.

The spring (*caput aquae*) that supplied Viminacium with fresh water is positioned in the modern villages of Majilovac and Kasidol, at a distance of approximately 10 km. It is also possible that a smaller amount reached Viminacium from the locations of Sodo and Izbljan. Even today, there are powerful springs (*fons)*

**Fig. 189**

Fig. 190

Fig. 191

Fig. 192

Fig. 193



of drinking water in these locations and, obviously, the Romans were well acquainted with them.[11] Regarding all of this, in this area, one could count with the existence of a structure called a *castellum fontis*, representing one of the first water reservoirs.

A small altitude difference between the spring on one side and the city and the legionary fortress on the other side required the aqueduct structure. It was easier for the constructors not to be forced to build arches and structures to bridge the distances. During construction works, the small altitude difference required exceptional skills, preciseness and the usage of special devices. The Viminacium aqueduct was made as a canal, a so-called *specus* or *rivus*. It took advantage of the natural slope, the so-called *libramentum*, and brought water from the spring to the city.[12] Unless it bridged spaces like river valleys, it was usually dug into the soil, just like the Viminacium aqueduct.

Along the aqueduct, there were specific spots used to check its cleanness. As it was previouly written in the text, they were called *lumina* and were openings used to check water, but there were also the *piscinae limariae*, special reservoirs used for the accumulation of mud and impurities. In the upper zones of the Viminacium aqueduct, at specific distances, there were carvings in fresh mortar indicating spots in which *lumina* or *piscinae limariae* were placed.

Between 30 and 104, in his work *De Aquis Urbis Romae*, the Roman author Frontinus (*Sextus Iulius Frontinus*), bearing also the title of a *curator aquarum* in Rome in 97, writes that cities were supplied with water with several aqueducts. Vitruvius mentions that each city should possess three aqueducts and three castellum gathering points. One would supply public

[11] Frontinus, *De Aquaeductus Urbis Romae*, LCL, Translated by R. H. Rodgers. Four ancient sources mention supplying ancient cities with water. It is certainly mostly Frontinus, but partially also Vitruvius, Vegetius and the encyclopedist Pliny the Elder. A description by Pliny the Elder in his book XXXI is interesting, where he mentions the construction of an aqueduct named *Aquae Marciae*; Pliny, XXXVI, 15. Vegetius, well-known for his book about martial arts *Epitoma Rei Militaris*, mentions only once in chapter IV of his book the strategic interest of rightful water supplying.

[12] Vitruvius mentions that for a natural slope, at a distance of 100 feet, a 1/4 feet slope is sufficient, Vitruvius, VIII, 6.

**Fig. 194**

fountains and temples (*lacus et salientes*), the second one baths (*thermae*) and the necessary workshops (*officinae et opera publica*), while the third one was for private usage.

The construction of aqueducts was expensive and care was taken that all of the financial means were spent correctly. Apart from huge financial means, the building of an aqueduct required a specific labour division according to specialties, but also the usage of specific devices in order to acquire precise dimensions and direction. For measuring territories and determining aqueduct directions, *agrimensores*, *gromatici* and *libratores* were used. One of the specialists (an engineer, described in modern terms), who determined the direction of the aqueduct, was called a *librator.* Such a person was highly valued and respected, since while constructing an aqueduct, he had to take care of the aqueduct slopes, required to bring fresh water to the city with great efficiency. A *librator* certainly used at least three devices made of wood and metal, with necessary reinforcement:

The groma is a device used to determine and set specific angles.

The dioptra is a precise device used for determining directions and measuring angles. It was used to determine the aqueduct axes within distances of up to 40 m.

The horobates is a device with levels and a specific kind of ruler, used to precisely set the aqueduct slopes. Its dimensions were over 3 m.

Another important person in supplying cities with water was a curator (*curator aquarum*), belonging to a special service called *cura aquarium.* He was in charge of technical services (*procurator, adiutores, aquarii*). His importance and the role of a curator are clearly indicated with the fact that this duty could only be undertaken by a Roman citizen bearing the rank of a senator.

As a rule, the state supported water supply and it was strictly regulated by law. The Roman state took care not only of water supply resources, but also of methods of usage, pollution prevention and unplanned, illegal connections. During Republican times, as a rule, aqueduct water was used to supply public buildings only (public fountains, baths, and temples). Only exceptionally and after the issue of special imperial laws, the *nomine Caesaris*, people of high importance to the Roman state were allowed to count on a *beneficiaria Caesaris* and use spring water in their private homes. During Imperial times, this law became less strict, but even then and only after the imperial law, *ex libetitate Caesaris*, was it possible to obtain a water supply to private properties. Even with imperial grace, a user who wished to connect to the water supply system had to pay high taxes. The amount of water used was controlled by a special service, while the measuring unit was in qurinaries (*quinaria*).[13]

**Fig. 195**

Visitors who get to see the Viminacium aqueduct are very much impressed not only with its exceptional preserved length, but also with the Roman builders' skills and their engineering knowledge. Archaeologists have an exceptional opportunity to observe the aqueduct and all of its building elements in an integral form, rarely seen to date. After this discovery, not only the importance of the city was confirmed, but indirectly, it was also possible to determine the number of its inhabitants and, therefore, also its size. Based on this, it was estimated that the number of Viminacium inhabitants was between 25,000 and 30,000.[14]

[13] Quinaria – 0, 48 l/s.

[14] I owe my gratitude for the useful suggestions offered by Professor Jovanović, Ph.D., from the Faculty of Civil Engineering, Belgrade University.

## VILLA RUSTICA AT THE SITE "NAD KLEPEČKOM"

Villa along the limes road to *Lederata* was the example of the documenting building that was utterly destroyed during expansion of the coal mine. During rescue excavations at the site Nad Klepečkom in the year 2013 villa rustica was explored covering an area of 2.500 $m^{2,}$ unfortunately not entirely because part of it had already been destroyed by the mining of a coal.

It consisted of 24 rooms. Based on the researched can be restored to the minimum dimensions of the villa at 85 x 31.5 m. The entire complex after the research could be divided into eastern and south-eastern part of the villa, which was the residential character and the western part of the villa, which was most likely accounted for the economic purpose, and the central courtyard which was in the middle. The eastern part of the villa is completely while the western part is only partially explored. East and south of the central courtyard a large number of rooms of various dimensions were investigated. In some of them were found the remains of plaster flooring, heating system as a hypocaust and parts of the walls of the tubules. Southwest of the central courtyard, in one of the rooms, were discovered the remains of nine pillars (the schedule can assume the existence of one more, the base of tenth) who have done the peristyle. This whole branch, because of better way of building, heating and the peristyle is concluded to be the residential part of the villa. Rooms west of the central courtyard were built in a worse way, and upon that, and small artefacts found in them have been classified as economically part of the villa.

The architectural remains are preserved pretty bad. Most of the walls of the villa has been preserved only in the negative, a height of 0.70 to 1.20 m (maximum 1.40 m) and a width of 0.50 to 0.70 m. Positives of the walls were found only in some places. According to the few surviving parts of the walls, it was noted that the base zone consists of a staggered diagonally pieces of green shale above which the rows are horizontal rows of dressed stone pieces of the same species bounded with lime mortar.

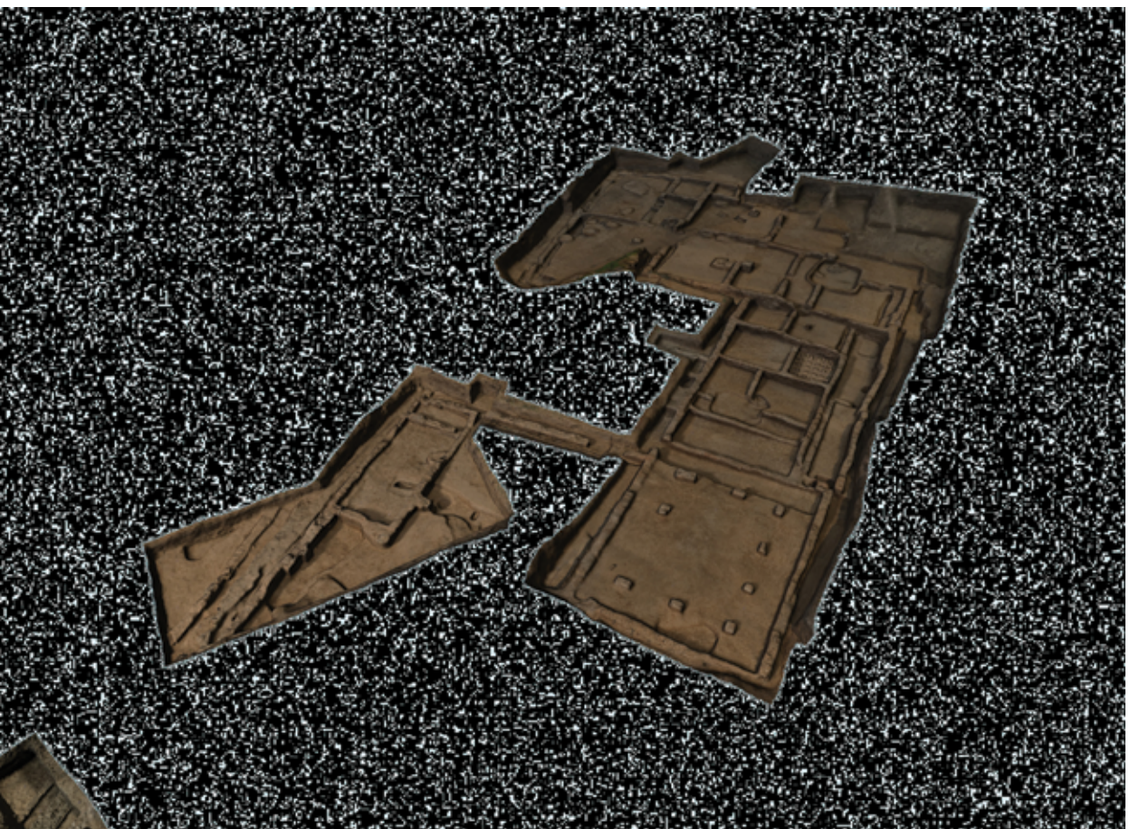

**Fig. 196**

In the rooms of the villa were found a large number of artefacts. They are characterized by typical for everyday life of the inhabitants of the villa, such as pottery vessels, brooches, lamps, phalerae, medical instruments, knives, and a small amount of bronze coins that are dated into the period of the second century. In areas west of the central courtyard were found artefacts characteristic for economic activities - pickaxe, saw, chisel, drill, grindstone, horse bits.

It was certainly the villa, which was the center of a large farm. The owner of the villa could have a higher social rank, taking into account the size of the building and the walls of the villa decorated with frescoes, and rooms heated by the system of hypocaust and wall heating. Rooms east and south of the central courtyard were rooms for the accommodation of the owner of the villa and his family, and the room west of the courtyard were designed to accommodate and support staff for economic activities (as evidenced by the poor way of building and numerous farm tools).

The villa, according to the preliminary analysis of the artefacts can be dated into the II century AD (Jovičić, M., Redžić, S., 2014, 54–59). Reconstruction of the villa has been made in several phases with the inner courtyard.

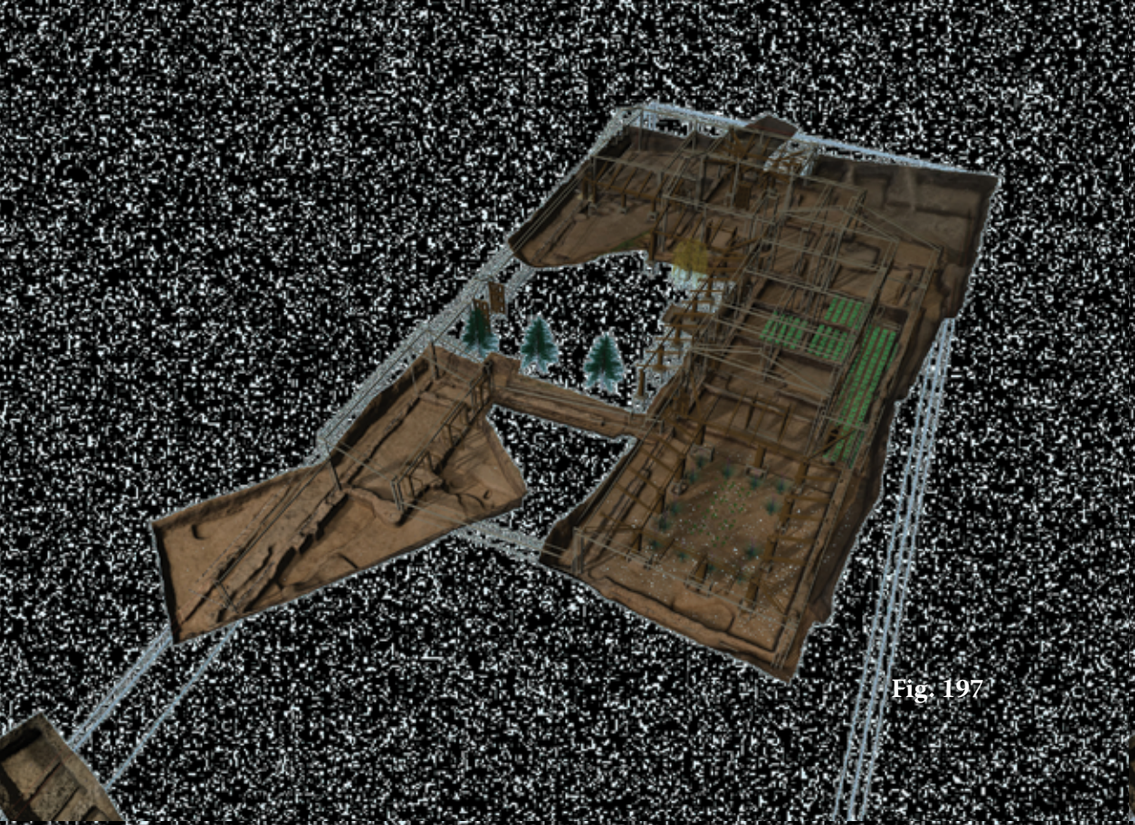

Fig. 197

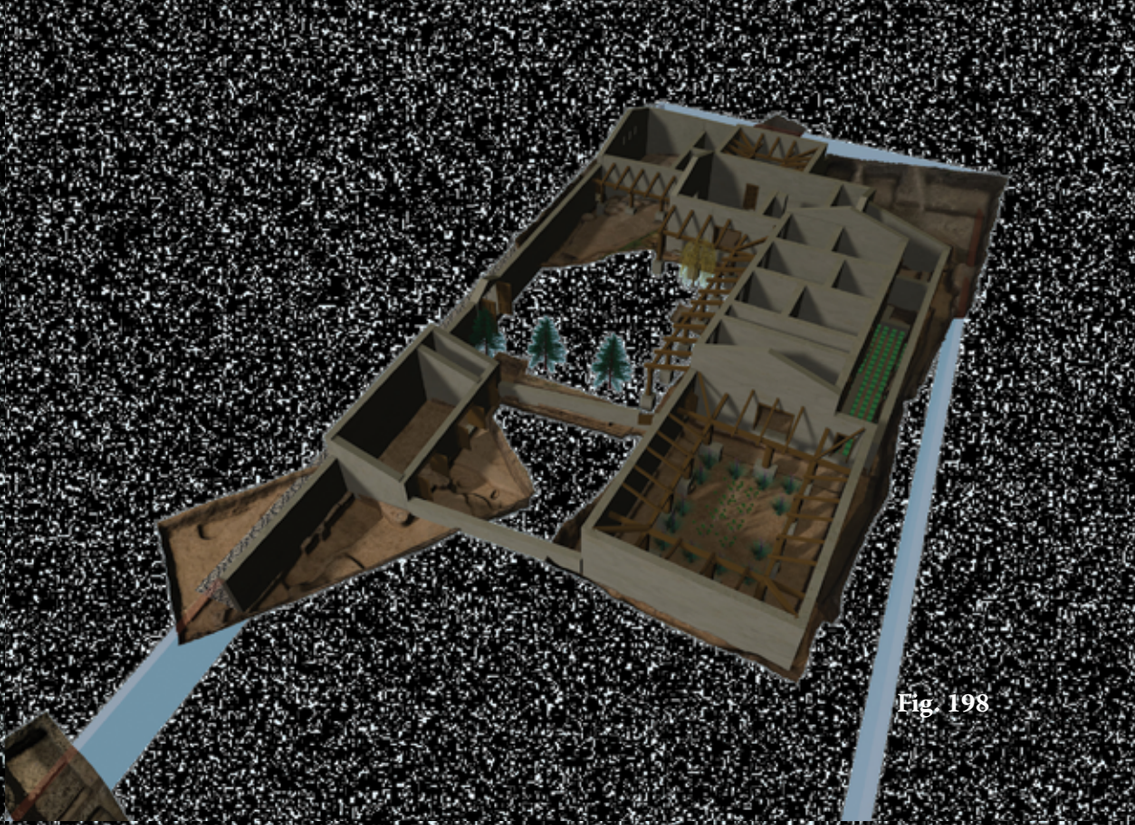

Fig. 198

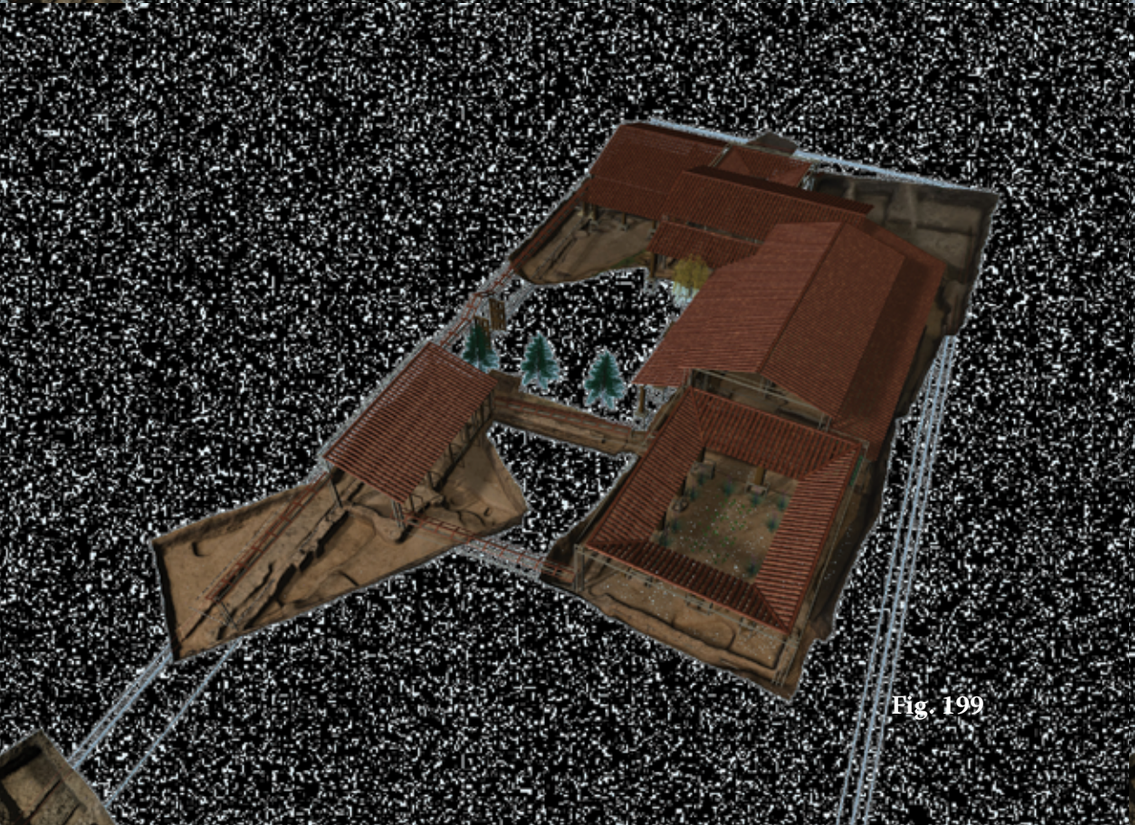

Fig. 199

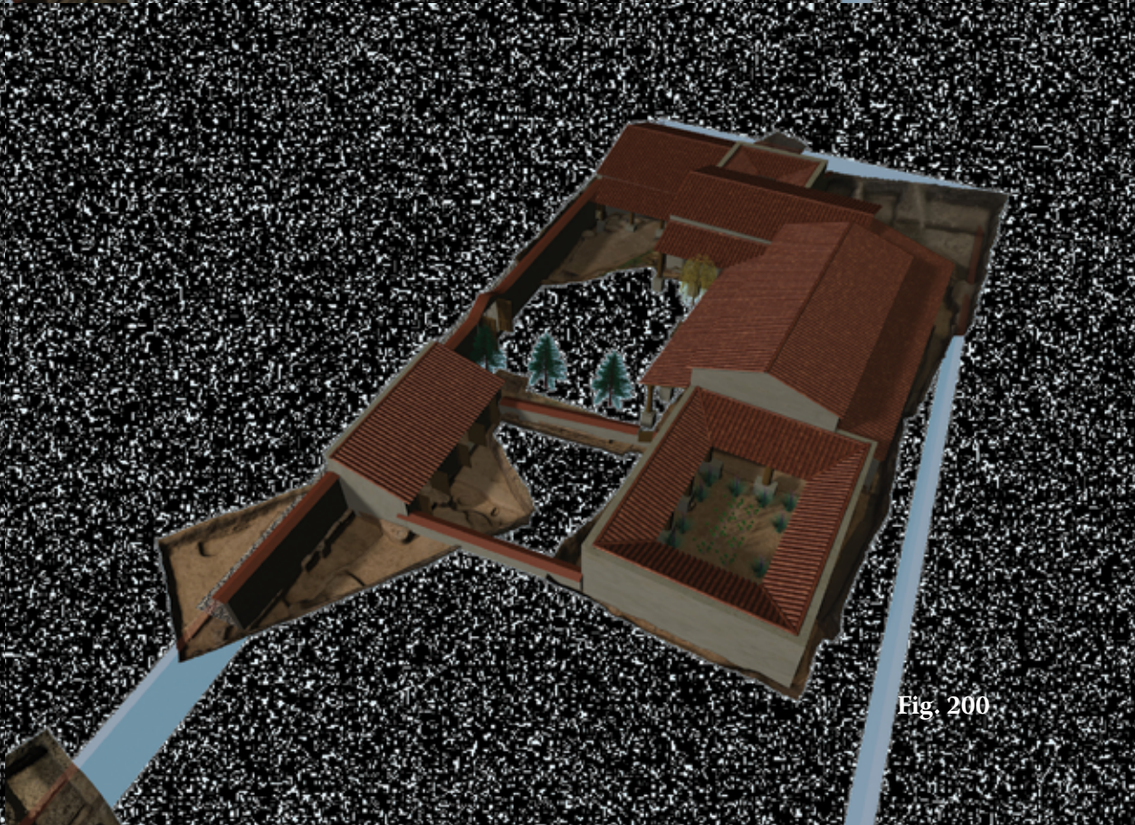

Fig. 200

Fig. 201

Fig. 202


Fig. 203

## VILLAE RUSTICAE AT THE SITE OF "RIT"

At the end of 2004, at the site "Rit", situated to the northeast from the legionary fortress and the city of Viminacium, the first salvage archaeological research was undertaken. Again from 2012 and with short interruptions, research has been conducted until now (Danković, I., Petaković, S., 2014; Redžić, S., Jovičić, M., Danković, I., 2014; Milovanović, B., Redžić, S., Jovičić, M., 2017; Milovanović, B., Kosanović, I., Mrđić, N., 2018). During these excavations, the mentioned area revealed two dwelling phases. The first one is related to the period of the late 1st and the 2nd century. During this time span, outside the city walls, this natural depression was endangered with frequent flooding of the rivers Mlava and Dunavac and because of this, it was cut with sewer canals that kept this region dry. Early enough, high-quality clay layers from this flooded area were recorded and exploited by digging up pits of irregular shapes. After they were abandoned, they were filled in with rubbish materials dated into the 2nd and 3rd century. During the 2nd century and at the same spot, a cemetery was established with both cremations and inhumation burials. According to the results so far, the cemetery stretched to the south of the road leading from Viminacium to Lederata, in the west-east direction in width of about 20 m. On several spots, it was intruded with clay pits and sewer canals. Among the cremated grave types, there are two basic types: burials in rectangular grave-pits and burned walls (Mala Kopašnica – Sase type I, 22 graves) and burials in rectangular pits of the etage-type (with two levels), also with burned sides (Mala Kopašnica – Sase type II, 53 graves). Cremation itself took place on a stake in a separated necropolis part, while the remains of more

**Fig. 204**

**Fig. 205**

or less burned bones were deposited into graves. Among the described grave types, a dominant place is taken by graves with etages (levels). Their lower levels were usually plastered with horizontally placed bricks or tegulae. Besides coffins, in several cases they simply form a grave-cyst. Cremated grave G1-75 deserves special mention, since instead of the lower etage, it contained a smaller stone sarcophagus with a gable roof and semi-circular acroteriae in its corners. Within the sarcophagus, there were cremated remains of an adult. This kind of burial is known neither in Viminacium nor in the neighboring regions. According to the chronologically relevant archaeological finds (coins, pottery vessels), graves with plastered lower etage belong to the younger cemetery phase, actually to the first half of the 3rd century. This is possibly a reason why they can be connected to the users of villas discovered in this area.

During research of the site "Rit", a larger number of rural villas, *villae rusticae* from the Roman period were unearthed. They were intended for dwelling and positioned close to the Roman city of Viminacium. Just in one single case, an auxiliary structure was excavated, indicating that on this property there was also an economic activity taking place. The excavated villas are grouped to the north and east of the legionary fortress, positioned along the roads that led from the northern gate of the legionary fortress (*castrum*) towards the east, most likely towards the village of Ram, actually ancient Lederata.

The first group with three villas was discovered some 500 m to the north from the legionary fortress. This wider area was examined with geo-physical methods. Their results revealed that to the north of the legionary fortress gate, most likely along the road, there were groups of structures. After the initial 450 m, the road takes a turn and it runs towards the east. In 2012, 2013 and 2017, exactly in the area after the road turn, three ancient villas were discovered, positioned in a row, as well as remains of a cemetery, indicating that there was also a road connecting them. However, this road was not discovered so far. In 2012, the first of the three villas, positioned further to the east from the legionary fortress, was excavated (Redžić, S., Jovičić, M., Danković , I., 2014). It has a rectangular plan, measuring 18 x 13 m, and consists of six rooms and an entering paved yard in the north. From the yard, one could enter the three northern rooms, separated with a wall from the three rooms in the southern structure part. The second villa was built some 50 m to the west from the first one and it was excavated in 2013 (Danković, I., Petaković, S., 2014). The villa measures 28 x 26 m and consists of a paved central yard. On its northern and eastern side, it was framed with an "L"-shaped room, while on its southern side, there was a corridor. The corridor revealed entrances to five rooms in the southern structure part. In 2017, the third villa, positioned further in the west, was excavated. It was positioned 75 m to the west from the villa in the middle. It also shows a rectangular plan, measuring 27.5 x 21 m. The main entrance to the structure was on its northern side and there is a preserved path covered with pebbles. In the middle there is a yard with eight rooms around it. Villa walls were mostly preserved in their foundations levels, built of stone and mortar or of stone and bricks in a dry stone wall technique. Upper levels, those above the


**Fig. 206**

ground, were rarely preserved, but their remains give testimony that the walls were made of bricks, stone and mortar. Dividing walls within the rooms had shallower foundations and were most likely designed to carry lighter constructions made of wood and daub. Roof remains indicate that the structures were covered with *tegulae* and *imbreces*. Partial floor remains show that they were paved with hexagonal tiles or rectangular bricks. Fragmented remains of marble slabs and fragments of decorative stucco moulding with remains of wall paintings indicate that the structures were richly decorated. Within villa rooms, large numbers of small finds were discovered and it was therefore possible to date the villas into the first half and the middle of the 3rd century.

The second group of villas spreads to the east of the legionary fortress. The two excavated villas situated next to the road leading from the northern legionary fortress gate directly towards the east were also archaeologically confirmed. The area of the road and its surrounding were geo-physically examined and the results indicate the existence of a larger number of structures positioned along it. The first villa is situated at the distance of 300 m from the north-eastern

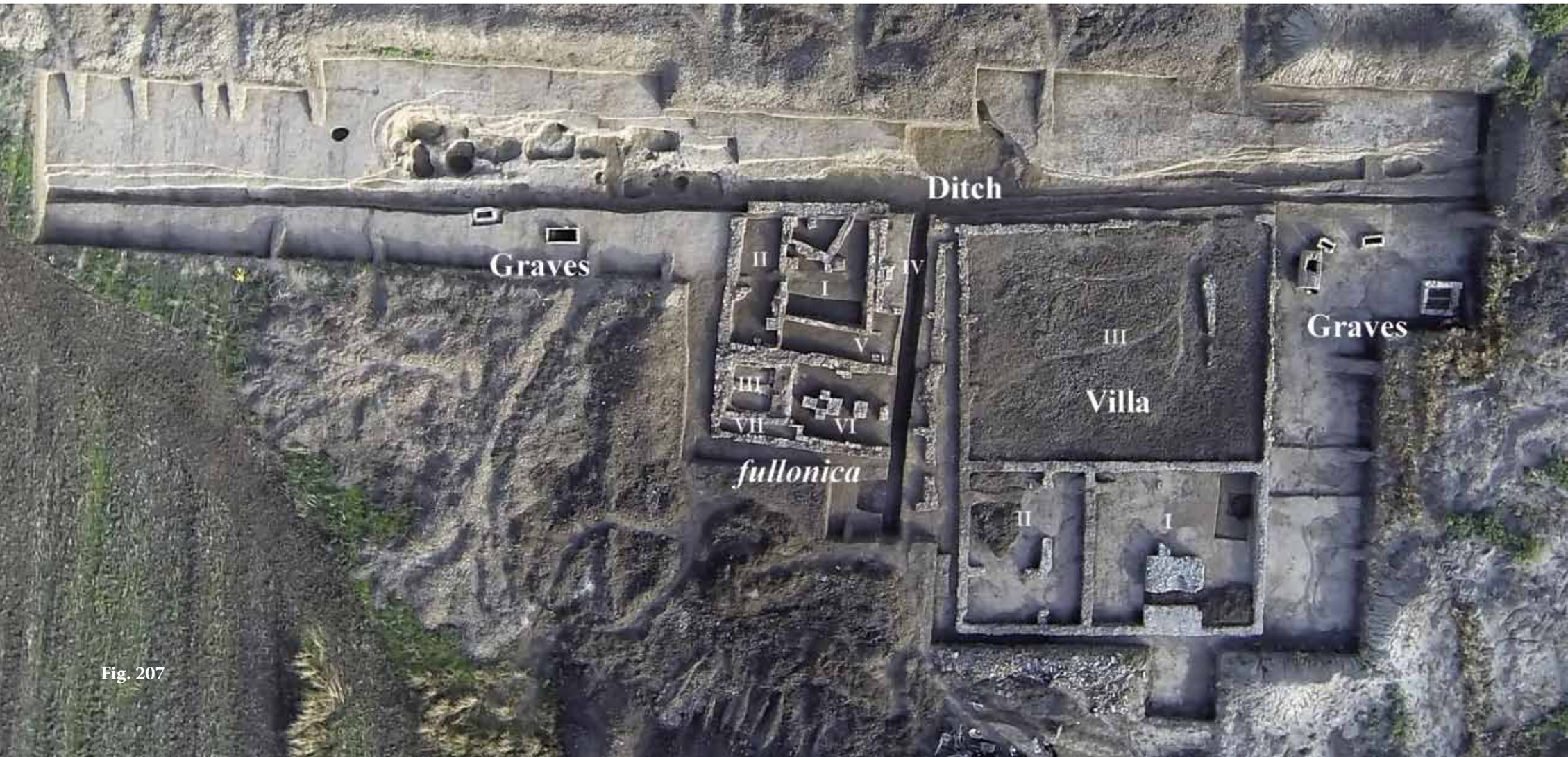


Fig. 207

legionary fortress corner and it was excavated on two occasions. The first excavation was undertaken in 2004/2005 and the second one in 2014. During the first campaign, remains of a floor made of bricks were unearthed, further on remains of hypocaust and several walls, but it was suspected that there were several structures (Mikić, M., Stojanović, V., Mrđić, N., 2006; Jovičić, M., 2011, 51–60). During the second campaign, a larger area was examined and it was discovered that the villa consisted of at least seven rooms. One of them was heated. The villa was positioned next to the ancient road. The central peristylium had two colonnades and there were entrances to the rooms positioned to the east and the north from it. The examined structure area measures 20.5 x 16.5 m, but this is not the final surface area. The road width in front of the villa was 6 m and it was excavated in the length of 13 m. The road was covered with sand and paved with schist. The second villa, actually a group of structures to the east from the legionary fortress, was excavated in 2014 (Redžić, S., Jovičić, M., Danković , I., 2017). It was situated 700 m to the east from the legionary fortress, actually 400 m to the east from the previously described villa. The villa had a rectangular plan, measuring 28.35 x 21.5 m and it was divided into three rooms. Two rooms in the southern part were used for dwelling while the larger one in the northern part was interpreted as a yard. To the west from the villa there was an auxiliary structure for economic activities, also with a rectangular ground-plan and measuring 16.30 x 13.45 m. The structure is divided into seven rooms. Interesting features discovered in one of the rooms are two tubs, both excavated in the same room. They possessed bottoms made of waterproof mortar and measured 1.60 x 1.00 m. Within the structure, a water canal was unearthed and several loom weighs, mill stones and remains of blue pigment, indicating that within this structure, textile processing and dying (*fullonica*) took place. To the north from these complexes, a huge ditch was examined in the total length of 97 m. In the 2nd century, the ditch was most likely used as a sewer for filthy waters from this area, but it was filled in even while the villa was still in use. The villa walls were made of schist, bricks and mortar. According to small finds, both villas were dated into the 3rd century, just like the ones to the north from the legionary fortress.

The villas excavated at the site "Rit" have rectangular ground-plans and their surfaces vary between 230 and 730 m². Their orientation is north–south and they usually consist of a central yard and rooms for dwelling situated around it. Their building technique is of lower quality, although traces of floors, heating and wall decoration give testimony that some of them were somewhat more luxurious. Only in one case there was an indication of handicraft within the property. Small finds from villa rooms indicate that they were built during the early decades of the 3rd century and were in usage until the seventies of the same century. Villas discovered in the wider Viminacium area were dated either into the 2nd century, like the three villas excavated to the east from the city, at the site "Nad Klepečkom" (Jovičić, M., 2011: 44–51; Redžić, S., Jovičić, M., Danković , I., 2014; Jovičić, M., Redžić, S., 2014) or into the 4th century, like a larger number of villas unearthed to

**Fig. 208**

the east, south and west of the city, at the sites "Stig", "Na kamenju", "Livade kod ćuprije", "Burdelj" and "Rudine" (Jovičić, M., Redžić, S., 2012, 370–371). The villas at the site "Rit" fill in this chronological gap and give testimony to the fact that in the 3rd century, the fertile flatland to the north of the city and the legionary fortress of the legion *VII Claudia* was intensively inhabited.

The younger cemetery horizon at the site "Rit" is dated into the first and the beginning of the second half of the 3rd century. It is brought in connection with the inhabitants of rural villas, discovered in the vicinity of the cemetery. Ever since 2013 until now, area around the villas has been examined, revealing four further smaller cemeteries.

Approximately 50 m away from the eastern-most villa of the first group, a platform was discovered, built of pieces of schist from Ram bound with lime mortar. The construction measures 4.50 x 3.45 m and its utmost height measures 1.20 m. Just next to the platform there were two graves with construction made of bricks. Within them, remains of skeletal burials have been unearthed. Since all of the three complexes possess the same orientation and that they were buried into the same stratigraphic layer, the platform was also described as belonging to the sepulchral context, as a foundation zone of a chapel or a pedestal to a sarcophagus or a monument. Coins minted in the Bithynian city of Nicaea are used to date one of the graves into the second fourth of the 3rd century, corresponding to the inhabiting time in the nearby villa (Danković, I., Petaković, S., 2014, 63).

Research of the area between the eastern-most villa and the one built in the middle of the first group is ongoing and therefore it is not possible to overview the entire situation. Until now, three funerary complexes have been discovered. Apart from the already mentioned grave of the Mala Kopašnica – Sase type II, with a miniature sarcophagus placed on the lower level and the free burial of an infant, another sarcophagus was also unearthed. It was made of limestone and it belongs to a type from Asia Minor, actually to sarcophagi with a lid in the shape of a gable roof with acroteriae in its corners. Within the sarcophagus, remains of two persons have been discovered. The burial type, luxury and wealth of grave-goods, as well as the fact that it was found only 8 m away from the villa excavated in 2013, indicate that within this sarcophagus, members of the family were buried who owned the villa.

**Fig. 209**

Since the distance between the villa in the middle of the first group and the western-most one measures 75 m, this space was filled with the biggest cemetery that can be connected to the population living and working in these buildings. On this cemetery, the most monumental sepulchral complex in this part of Viminacium was discovered.[15] It is an encircled space intended for burials of one single family. Structures of this kind were previously known from the eastern Viminacium cemeteries. The encircling walls surround the inner space measuring 11.30 x 12.60 m. They were built of schist blocks from Ram and of lime mortar, but they were mostly preserved in negative.

[15] Later referred as Mausoleum of the northern necropolis.

Within the encircled space, in its south-western part, there was a platform with a roughly square ground-plan (6.15 x 6.10 m). It was multi-layered, its layers consisting of schist from Ram, spaces between them filled with river sand. After every 40 cm, the platform surface was polished with a layer of lime mortar with admixture of crushed bricks. The top layer was made of schist from Ram and of lime mortar. The platform height measures 1.80 m. It was most likely a foundation of a structure, parts of which are visible in the south-western part. One can presume that the deceased was buried in a coffin placed within this structure, since on the platform surface and around it, processed lime pieces were discovered.

Around the platform, along the inner sides of encircling walls, nine graves were unearthed, all of them with brick constructions. Two further graves belong to freely buried individuals. The graves do not overlap and therefore it can be presumed that they have been visibly marked. The absence of graves along the northern encircling wall indicates that there was an entrance to the area. This is plausible, since the ancient road is positioned exactly in this part. Hard work and building costs of the funerary complex described above, being monumental and much larger than any other discovered at the site "Rit", lead to the conclusion that it represented the last residence of the villa owner and members of his family.

Besides this funerary complex, on the cemetery between the two villas, further 45 graves were excavated. In two cases, there were stone sarcophagi remains, much damaged during grave looting. One of the sarcophagi was placed upon a platform made of bricks. Three lead sarcophagi were also discovered, two of them deposited within constructions made of bricks. Apart from these two constructions, 33 further ones of different types and shapes were found. Seven individuals were freely buried, while two of them were buried in wooden coffins. Chronologically sensitive grave-goods indicate that graves were contemporary with the villas. The oldest coins discovered within graves were minted during the reign of Macrinus, while the youngest one carried the images of Herenia Etruscilla.

Next to the complex mentioned above, consisting of a villa and an auxiliary structure, another cemetery was established with fifteen skeletal graves. In seven cases they were free burials, two of them with simple coverings consisting of bricks placed along the grave-pit edges. Seven graves belong to the type with brick constructions, but there were also six simple coffins and a vaulted construction. There is also one double grave. Finally, a sarcophagus made of limestone was unearthed, its lid being destroyed during looting. Small archaeological finds, especially coins, were used to date the necropolis into the period during which the nearby structures were used (Redžić, S., Jovičić, M., Danković , I., 2017, 83–84).

**Fig. 210**

Fig. 211

## VILLAE RUSTICAE AT THE SITE OF "PIRIVOJ"

The site of Pirivoj is located east of the legionary fortress of the *Legio VII Claudia*. During 2019, one of the largest and most representative villas found at Viminacium identified as a *villa rustica*, has been explored at the site. The villa is located 450 m east of the legionary fortress and 150 m south of the ancient Mausoleum from the 3rd century (Korać, M., Golubović, S., Mrđić, N., 2009, 91–95), and from the cemetery part with both cremations and skeletal burials, dating from the end of the 1st to the 4th century (Golubović, S., 2008; Redžić, S., 2008; Golubović *et al*. 2009; Danković *et al*. 2018). Graves excavated at the site "Pirivoj", including the most prominent one with fresco paintings (Korać 2007: 261, G 160), as well as those form the sites "Kod Koraba" and "Nad Klepečkom", belong to the eastern necropolis of Viminacium, formed around the communication leading from the city to *Pincum* (Golubović, S., Korać, M., 2015). In addition to the graves, a brick kiln from the 3rd century was found at the site of Pirivoj, testifying that there was also some craft activity near the necropolis (Jovičić, M., Milovanović, B., 2017).

The wider area of the site where the villa was found in 2019 was previously recorded using geomagnetic prospection method. These studies indicated the existence of a high magnetic value anomaly, which led to the decision to investigate it archeologically. It should be noted that in the immediate vicinity of the villa archaeological investigations were carried out in 2007, revealing a large area with burnt soil and numerous small finds dating from the 2nd to 4th centuries, assumed to be waste from the sacrificial surface at the necropolis (Raičković, Milovanović 2010; Vuković 2010). Discovery of the nearby villa has caused doubt regarding this interpretation, since it is more likely that the finds have belonged to ist inhabitants.

During the archaeological excavations of the villa, complex of buildings that formed a larger functional unit was explored. The villa was probably the centre of a large estate belonging to a prominent member of the community at Viminacium. In architectural terms, it is a villa with a central corridor. The complex consists of three buildings, one in the north, another in the south and a third in the eastern part of the complex. The dimensions of the investigated complex are 46 x 38 m. The residential building to the north may be designated as a residential building (Building 1). It is a rectangular object with two extensions on the facade in the form of an apse. Its dimensions are 28 x 24.5 m and it consists of thirteen rooms. Four rooms in the north-western part of the villa were heated by a system of hypocaust and wall *tubuli*. The furnace through which these rooms were heated is located to the north of the rooms. The heated rooms served to accommodate the owners of the villa. The two rectangular rooms had apses in the west, so one of them could represent remains of a *triclinium*. The apse rooms are separated with a rectangular-shaped room, which was also heated. In the central part of the villa, a chamber that could be defined as a bathroom or as an *impluvium* was found. Its construction was made using lime mortar with the addition of brick. From this room a drainage channel, investigated to a length of 24 m, led to the east. The channel is made of brick and mortar and, despite being heavily damaged, some fully preserved segments with a lid *in situ* were found. During a subsequent intervention on the channel, its easternmost 2.35 m long section was discovered covered by a barrel vault.

The walls of the villa are made of a solid construction material. The architectural remains are preserved mainly in the foundation zone, up to 80 cm in height and most often in the form of negatives, since the building was used as a source of construction material for the inhabitants of nearby villages. However, the preserved over ground parts of the walls indicate that they were built using: Ram schist bound with lime mortar, faced using the *opus incertum* technique; brick and lime mortar using the *opus testaceum* technique; probably also with a combination of bricks, schist and lime mortar, faced using the *opus incertum mixtum* technique. The wall filling was a rubble core. Four rooms in the north-western part of the villa had a floor of thick lime mortar with the addition of bricks, onto which the pillars of the hypocaust were laid. The structural elements in the form of iron pegs, as well as intense roof debris, testify that the building had a roof covering made of *tegulae* and *imbrices*. A few fragments of wall paintings (red and white), remnants of marble slabs and stucco decoration were found in the premises, indicating that the interior was luxuriously decorated. A large number of butterfly-shaped and hexagonal floor tiles found during the excavation indicate that the rooms' floors were carefully tiled.

At a distance of 7.5 m south of the residential building, there was another building (Building 2). This building possessed a rectangular ground-plan with a portico on the north facade. The remains of the portico are visible in the form of five bases used as column bases. They are located 2.4 m from the facade of the building, and from each other. The dimensions of the building are 26.5 x 14 m and it is divided into eight rooms. Other architectural remains are also preserved only in the foundation zone made up of massive pieces of schist and lime mortar. Inside the premises, in the western part of the building, a massive layer of baked earth was found, indicating that the building had been destroyed by fire. The remains of the wicker and chaff in the earth suggest that the above-ground parts of the walls were wooden structures and that the interspace was filled with wattle and mud mortar. The massive layer of roof debris found within the building premises indicates that it was also covered with a roof made of *tegulae* and *imbrices*. Despite the simpler construction method compared to the one applied on the building in the northern part of the complex, fragments of wall paintings of red, white and yellow, but also small remnants of stucco decoration and marble slabs were found, testifying that the rooms in the southern building were also decorated. The more modest method of masonry and the lack of a heating system make this building a utility facility, that is, an accommodation where auxiliary household members (support staff, slaves) could have been housed. Certain rooms could have had an economic character, that is, they could have been used to store tools that were necessary for the functioning of an agricultural estate or a production centre.

At a distance of 4 m east of the northern building, there was the third building of the complex (Building 3). It has a rectangular plan measuring 12 x 8 m. It consisted of a central T-shaped room that had paving of brick fragments, and four rooms west, north and east of it. The remains of a floor were found in the room north of the central room. The purpose of this building cannot be completely reconstructed.

Remains of foundation walls discovered, as well as the remains of numerous waste pits, which are located below the villa walls, testify that an older building that preceded it was located in the area of this building. However, the dimensions and shape of the older building could not be defined. Also, the residential building (Building 1) was reconstructed, and it was found that the easternmost room was added at a later date to the original construction, which indicates that the villa was occupied over a long period. To the north of the villa a cremation of the type Mala Kopašnica – Sase II was found, and can be dated to the 2nd century. There were no graves to the south of that find, indicating that the mansion was erected at the very southern edge of the necropolis.



**Fig. 212**

South of the villa complex, an area was found with small fragments of bricks and schist that could represent remnants of the substructure of a communication passing the villa, or the path that surrounded the villa. The remains of a ceramic pipeline have been discovered between this substructure and the villa. The pipeline was investigated to a length of 11.80 m, since it falls into a profile of the probe and could be a continuation of one of the Viminacium aqueducts; however, this claim has not been archaeologically confirmed. Parts of ceramic pipes were also found in the westernmost room of the southern building of the complex (Building 2), indicating that a single pipe line was laid to the villa so that it could have access to running water.

The small archaeological finds discovered during the exploration of the villa date from the 3rd century. It consists of functional or decorative parts of clothing, jewellery, tools for economic activities, parts of furniture and household items.

The largest group of small finds consists of pottery shards. They are most often characterised by fragments of tableware (cups, jugs, plates, bowls and pots), among which fragments of imported Gaelic *Terra Sigillata* occur, and a large number of amphora fragments.

After pottery, the largest group of finds is made of bronze. Parts of a belt set (belt buckles, strap ends and mounts), fibulae, bullas, a vessel fragment, a part of horse equipment, a bell, sewing needles, medical instruments/probes, a spoon, styli, a seal capsule, a key ring and a bead are represented. During the research, a large number of bronze coins were found, while silver coins were represented by only a few pieces. The coins can be dated to the 3rd century, with specimens of the emperors Caracalla, Philip the Arab, Gallien, Aurelian, Probus and Diocletian. A large number of specimens were minted at the local mint at *Viminacium*, and the abundance of coins found in the *Nicaea* mint stands out.

A number of finds include items made of bone. The most common are hairpins, and less often, sewing needles. A distaff, two chips, an amulet, and handles, as well as a fitting of a sword scabbard were also found.

Artefacts made of iron include styli, iron pegs, a belt buckle, a sickle and knives. Glass findings are characterised by fragments of glass vessels as well as necklace beads. Among the jewellery, a gemstone from a ring with one facet having zoomorphic motifs carved into it stands out. Objects made of stone consist of two fragments of limestone millstones, as well as a mortarium fragment made of coloured marble and a stone pallet for medical or cosmetic purposes. In terms of lead finds, the find of a weight with zoomorphic motifs is characteristic.

In the surrounding of ancient Viminacium, a large number of villas have been explored thus far (Jovičić, M., 2011; Jovičić, M., Redžić, S., 2012; Korać, M., Golubović, S., Mrđić, N., 2018, 62–63, map. 3). They date from the 2nd to 4th centuries and are located at a distance of a few hundred meters from the city and the fortress, and up to several kilometres away, in the vast Stig valley. The villa found at the Pirivoj site can be dated to the 3rd century. Two villas explored at the necropolis site of Više grobalja (Redžić, S., Mrđić, N., Milovanović, B., 2017), as well as five villas from the Rit site (Redžić, S., Jovičić, M., Danković, I., 2014; 2017; Mikić, M., Stojanović, V., Mrđić, N., 2006; Danković, I., Petaković, S., 2014), belong to this period. According to the current research, it can be concluded that the villas from the 3rd century occur exclusively in the immediate vicinity of the city and the fortress (at a distance of about 500 m), while those from the 2nd and 4th centuries were found at distances of several kilometres.

Regarding its architectural plan, the villa belongs to buildings with a central corridor, which are commonly found both in Viminacium and in the Roman Empire (Vasić, M., 1967, 42–47; Biró, M., 1974: 40; Smith, J. T., 1997). With its size of 1,748 m², it is the second largest villa to date found in Viminacium. In addition to the villa from the site of Nad Klepečkom, researched in 2013, measuring 2,900 m² (Jovičić, M., Redžić, S., 2014), the other villas explored are of a more modest size, ranging from 230 m² to 730 m² (Korać, M., Golubović, S., Mrđić, N., 2018: 63). The shape and manner of construction of the investigated premises in the villa, as well as the small number of traces of agricultural or craft tools, indicate that this was a residential facility for the accommodation of the owners and servants, and, respectively, the centre of a large property where agricultural and craft activities took place, with economic buildings in its vicinity. The owner was probably a prominent member of the urban community, who, in the immediate vicinity of the city of Viminacium, could have enjoyed the benefits of city life, which is reflected in the remains of the decorative elements. As such, the building can be classified as a *villa suburbana*.


Fig. 213

Fig. 214



## PUBLIC BATHS - THERMAE

Thermae *(thermae)* are typical Roman buildings. As public facilities, they appear at the time of the Empire, both in Rome and in the provinces. It is known that thermae are not only body care facilities, but also places for rest and for various social activities. Architecturally, they were facilities which varied from one city to another. Hence, Viminacium's thermae may also be singled out not only because of their luxury, but because of their specific architecture (Nikolić, E., Milovanović, B., Raičković Savić, A., 2017, 39–58; Nikolić, E., Rogić, D., Milovanović, B., 2015, 71–92). The long period of their usage (1st – 4th century A.D.) makes it possible to clearly distinguish between individual stages in their construction. The thermae were already in use in the '80s A.D. and during the excavations of the site, archaeologists found fragments of an amphora with a preserved seal IMP DOMITIANI, which unequivocally points to the younger Vespasian's son, emperor Domitian (81–96 A.D.). During the years 85, 86 and 88, he was engaged in wars that took part in this area, since the neighbouring Dacians plundered the Moesian region. Taking into account the fact that the area of Viminacium is most ideally placed for troop regroupings at the entrance of the Iron Gates section, it is possible that it was Viminacium where Domitian stationed his legions. It is known that Domitian also subdivided administratively the province of Moesia into Upper, which he referred to as *Moesia Superior*, and Lower, *Moesia Inferior*. Archaeological excavations registered a total of 5 conchae of which 4 served as tepidaria (warm water pools), whereas the fifth was a frigidarium (cold water pool) (Миловановић, Б., 2008, 51–54). The thermae were preserved at the hypocaust level, which reflects several stages of construction. Remnants of wall painting and marble tiling indicate that the thermae were luxuriously decorated (Rogić, D., Despotović, D., Milovanović, B., 2007, 75–82). The flooring at the old thermae, which was placed on the small brick pillars were covered with mosaics. A large number of discovered candles testify to the fact that the thermae were certainly used at night.

**Fig. 215**

Fig. 216

Fig. 217

Fig. 218

Fig. 219

Fig. 220

Fig. 221

Fig. 222

## THE CEMETERIES

The first known record of the cemeteries of Viminacium dates from as early as 1882, when M. Valtrović noted that a large Roman cemetery lay south of the "town" and that it extended as far as the right bank of the Mlava river. Minor exploratory excavations were made in the area at that time, and topographic investigations showed that there were a northern and a southern cemetery (Valtrović, M., 1884, 3–14; 49–63; 89–105; 121–142.) Further explorations, initiated in 1973, revealed the existence of Roman cemeteries east of the legionary fortress and north and south of the camp and the settlement formed next to the fortress. Since 1977 extensive explorative and protective works have been carried out in the territory of the southern cemeteries. The construction of the "Kostolac" thermoelectric power plant in this area and the strip mining of coal in the vicinity of the fortress and the urban settlement have made it necessary to continue protective archaeological works, which are at present mainly being carried out east of the legionary fortress and the settlement. So far, over 14,000 graves dating from the period from the 4th century B.C. to the 6th century A.D. have been uncovered.

The earliest of the southern cemeteries at Viminacium belonged to the Celtic population that lived there in the late 4th century and early 3rd century B.C. (Jovanović, B., 1984; Jovanović, B., 1985, 13–18).

Several of the cemeteries that have been explored so far – Više Grobalja, Pećine, Kod Bresta, Drmske Carine and Velika Kapija – belong to the period of the Roman rule.

Cremation burials appear in the greatest variety of forms. The most common type consists of simple pits or graves à étage with the sides fired red and sometimes grey. There are several variants of this grave form: simple rectangular burial pits, graves covered with bricks laid flat or in the form of a roof, graves with a plank or the longitudinal half of an amphora as a cover, and graves à étage which sometimes have an inner étage made of masonry. Urn burial was less frequently practiced, and graves in the form of wells are the least common variant.

Inhumation burials were commonly made in simple burial pits, with the body wrapped in a linen shroud only. The second most common form was burial in wooden coffins. Brick-built graves of various forms were also numerous. Burial pits with the bottom covered with planks were the least common form.

Over the course of more than twenty-five years of investigation, over 30,000 small finds have been found in graves of various orientations, containing cremation and inhumation burials. Seven hundred of these objects are made of gold, and many are unique. Several dozen monumental tombs, built either above ground or of the *hypogeum* type, family tombs designed for the burial of more than one person, are concentrated in the northern part of the explored cemeteries, i.e. closer the civilian settlement. Some of the tombs were decorated with exceptionally fine frescoes which show that a very important painting school was active in Viminacium in the 4th century.

**Fig. 223**

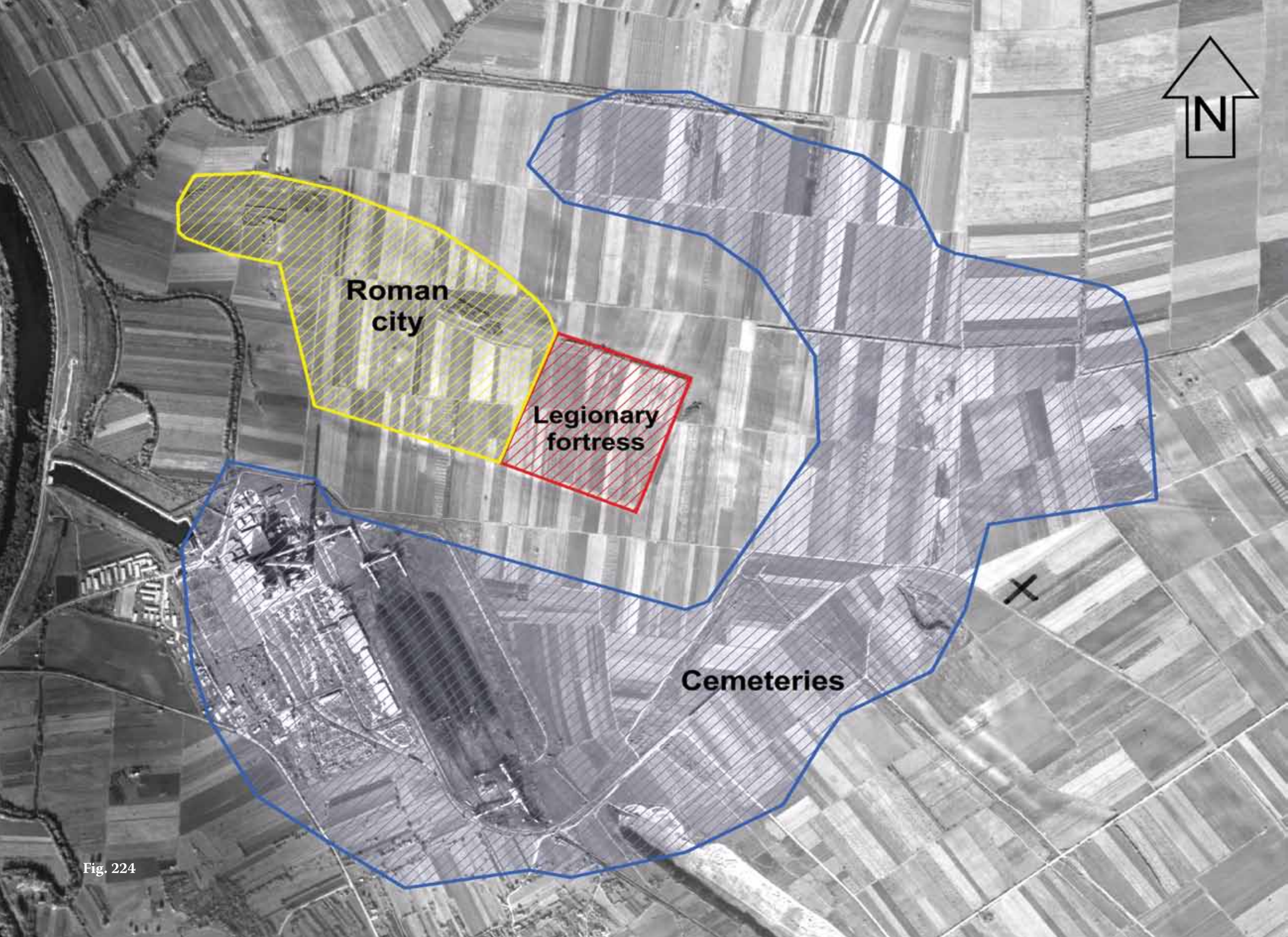


Fig. 224

Fig. 225

Fig. 226

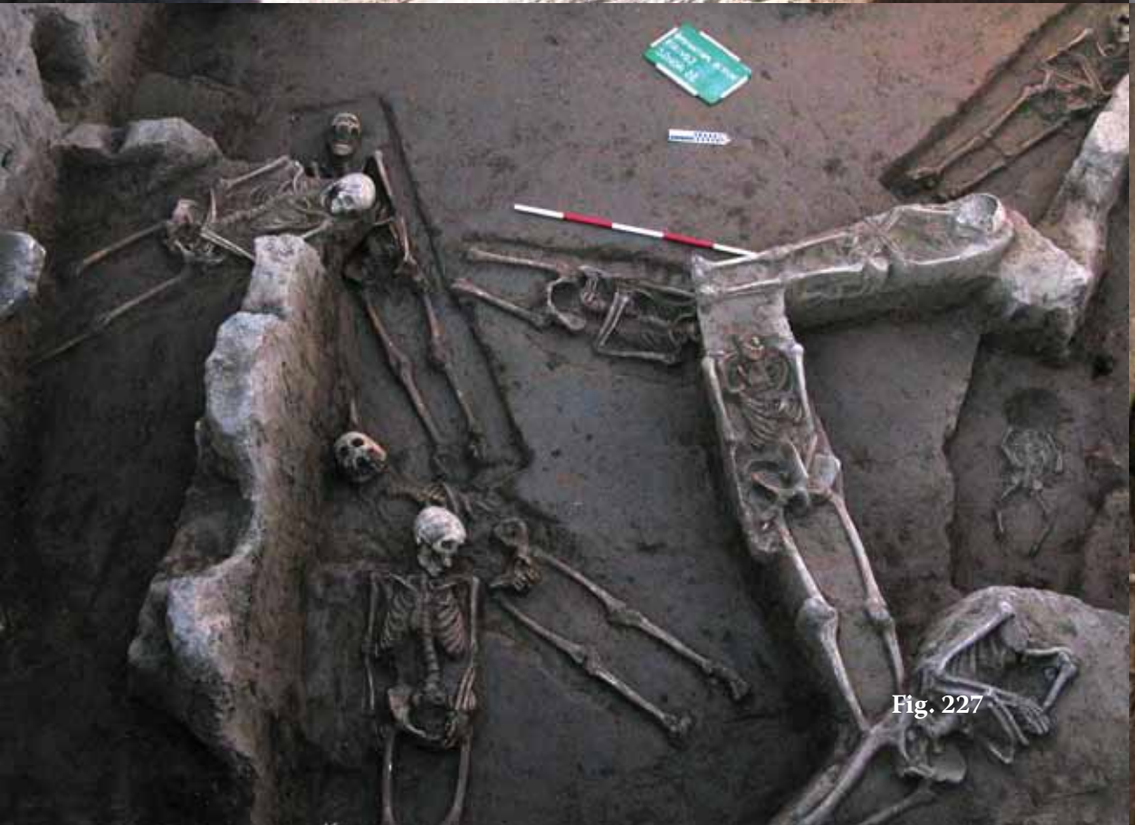

Fig. 227

Fig. 228

Fig. 229


Fig. 230


Fig. 231


Fig. 232

## ANTHROPOLOGICAL STRUCTURE OF THE POPULATION OF VIMINACIUM FROM THE 1st TO THE 4th CENTURY

So far, over 20,000 skeletons have been found during research of the Viminacium archaeological site originating from about 14,000 graves. Approximately one third were cremations, while the remainder were skeletal burials.

Structural study of the skeletons in physical anthropology in general, and during the 50 years of Viminacium research, went through several stages. The oldest one is certainly morphometric, which has its roots in the 19th century. Then, during the second half of the 20th century, morphometry was supplemented with new anthropostatistic methods (Penrose distance, factor analysis). Before the end of the 20th century, analyses of chemical and biological traces in human skeletons began, which greatly accelerated the determination of human origins, migration routes, etc.

Research on the anthropological structure of the population of Viminacium has gone through all three phases. In 1979, when 216 skeletons were archaeologically excavated at the "Pećine" necropolis, and 62 skeletons at the "Više Grobalja" necropolis, significant anthropological heterogeneity was observed. In 1980, Živko Mikić published the first article on the great variability of Viminacium residents, and the results of his research will be presented in detail further in this text. Even then, at least seven anthropological types could reliably be recognized from less than 300 skulls available for analysis at that time. Further studies established the existence of at least two further anthropological types, to make a total of nine different types of people who inhabited Viminacium during the Roman period from the 1st to the 4th century. From overall research, it could be concluded that the population of Viminacium at the time was predominantly of Euro-Asian origin. The nine anthropological types can be listed as follows (Mikić, Ž., 1980, 117–122):

1. The Oriental (Anatolian) anthropological type (Fig. 225), is best expressed in the skeletal structure, especially the skull, from grave No. 105 of the necropolis of "Više Grobalja". This skeleton belonged to a man between the ages of 40 and 45. The structure of the postcranial skeleton, relative to the robustness particularly present in the facial bone modelling, is significantly lighter and even approaches gracile forms. Body height is medium (about 170 cm).

2. The Mediterranean anthropological type (Fig. 226) is another type that could be described. It is noted by the presence of its several very typical representatives and is best represented with the skull and postcranial skeleton from grave No. 93 of the necropolis of "Više Grobalja". It belonged to a woman between the ages of 30 and 35. The postcranial skeleton as a whole is characterised by a particularly robust structure. Its relatively good preservation has made it possible to measure almost all the long bones. The calculated body height is about 168–170 cm.

3. The Dinaric anthropological type (Fig. 227) is the third recognised type and is very easy to determine by the expressed planoccipital. In the ancient necropolises of Viminacium it is also represented, and the number of representatives found so far also allows determination of a subtype. Typical forms of the Dinaric type are best illustrated by the skull from grave No. 101 from the necropolis of "Više Grobalja". It was attributed to a man between 35 and 40. During excavation, the postcranial skeleton with this skull was found in a dislocated position and in a very fragmented state. According to the data found, only pronounced robustness can be stated.

4. The Dinaric anthropological type (low specialised form) is the following ascertained type. It is clearly manifested among several representatives, for example on the skull of grave No. 270 of the "Pećine" necropolis, of a man between the ages of 40 and 45. Unlike the type described above, this skull is, overall, much more robust. The post-cranial skeleton is rather well preserved and was, therefore, anthropologically measured. Despite its robustness, the calculated body height is relatively small (about 163 cm).

5. The long-headed Mediterranean type (Fig. 228) is the fifth ascertained type. It is of low growth and, in addition to the short-headed, includes the largest number of individuals excavated and anthropologically determined so far in the ancient necropolises of Viminacium. The skeleton from grave No. 987 and the necropolis of "Više Grobalja" is one of its best-preserved representatives. It was attributed to a man between 35 and 40 years of age. The long bones of the postcranial skeleton are characterised by a pronounced robustness. Body height was calculated to be around 160 cm.

Fig. 233

Fig. 234

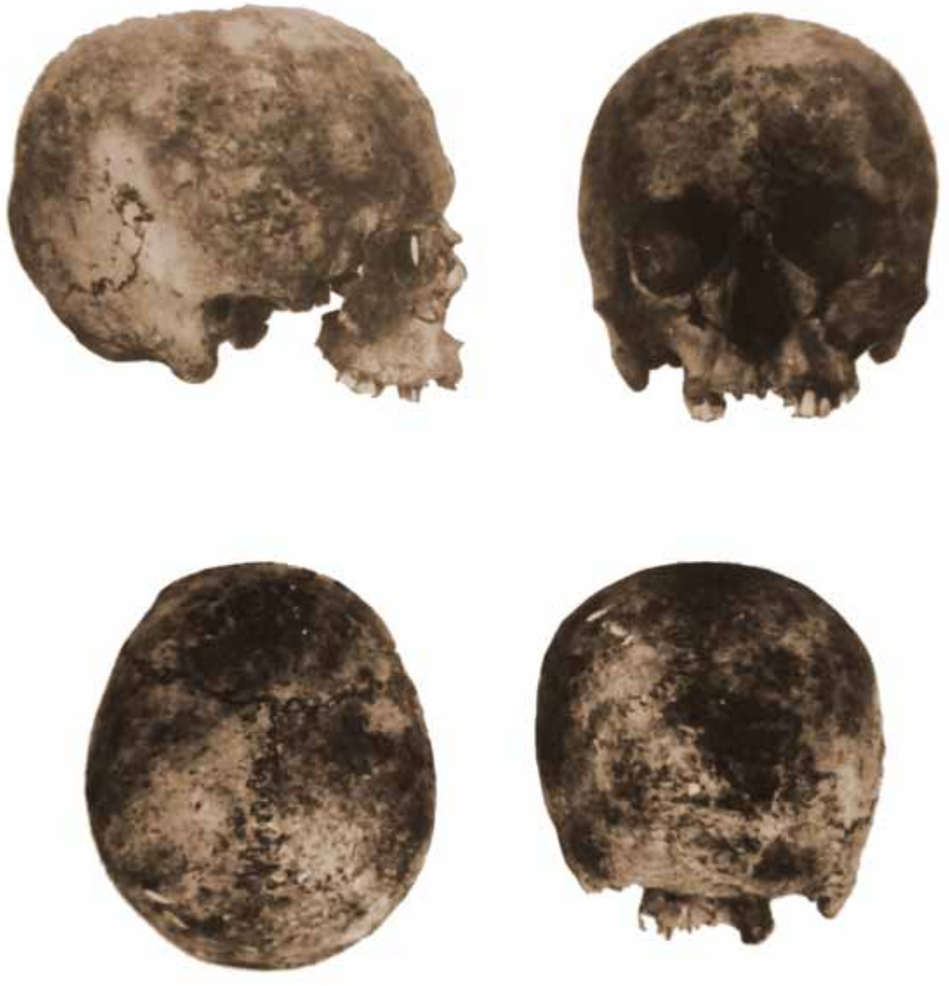

Fig. 235

Fig. 236

Fig. 237

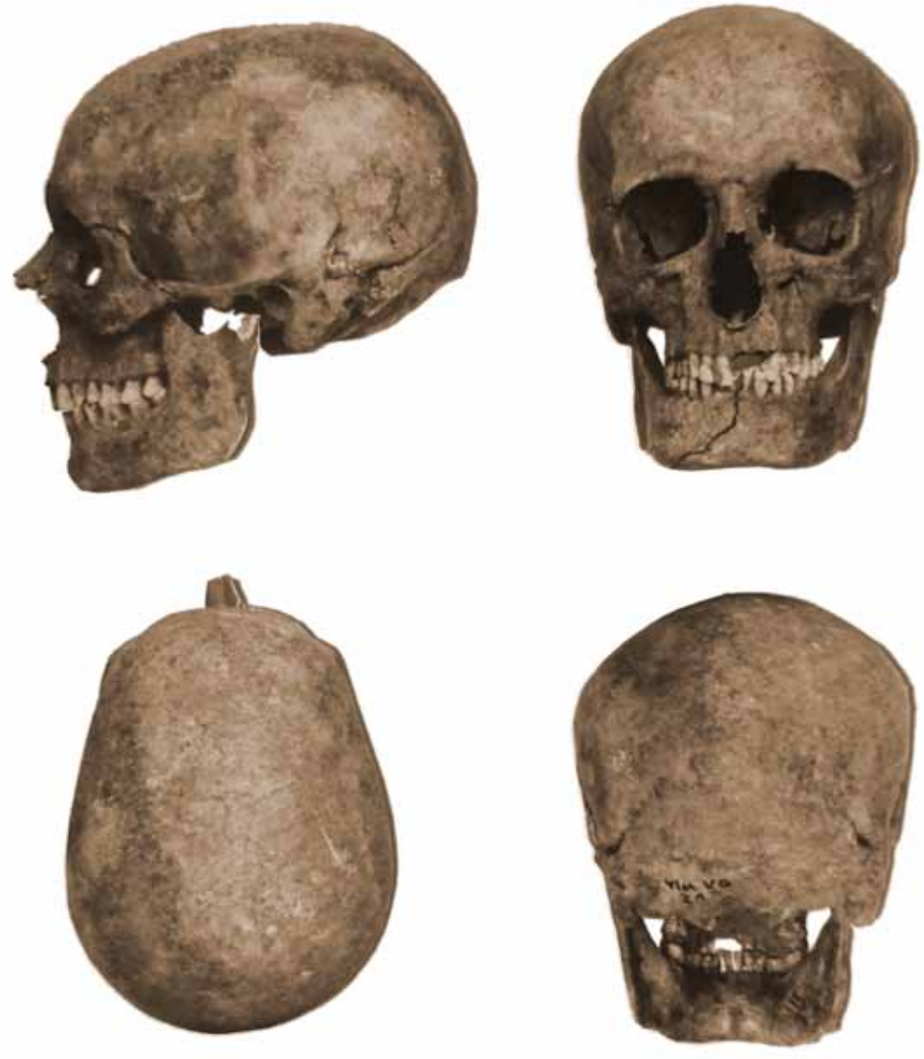

Fig. 238

Fig. 239

Fig. 240

6. The short-headed Mediterranean type (Fig. 229), of low growth, is best depicted by skeleton No. 89 from the necropolis of "Više Grobalja". It was identified as a man of about 25 years of age. Although it has a cranial index of a brachycral value, its skull, together with its postcranial skeleton, has a very gracile structure. Based on long bone lengths, a body growth of about 154 cm was calculated.

7. The unidentified anthropological type (Fig. 230) is the seventh type to be found at Viminacium. In fact, during excavations of ancient necropolises at Viminacium, very often individual fragments were found, either of the skull or postcranial skeleton, in a dislocated secondary position, but never in the graves. In addition to these site conditions, such human bone remains are characterised by a dark grey patina, a high degree of mineralisation, and a completely different anthropomorphological structure. Due to regular fragmentary state of preservation, no anthropological measurements could be taken. The morphological analysis provided elements that gave the possibility of a general descriptive reconstruction. Briefly interpreted, this reconstruction would be: long skulls with an accentuated occiput of very strong relief; small mastoids projecting above the cranial base; very rough face structure and modelling; robust mandible; low maxilla with a low, raised nasal cavity; a postcranial skeleton which varies between robust and gracile forms. These descriptions outline an archaic morphostructure. Since the burials of these skeletal remains were performed at the same time as the cremations, in the period from the late 1$^{st}$ to the first decades of the 3$^{rd}$ century, without further research and with a reliance on analogous material, it is not possible to define this, to some extent, isolated anthropological type. A good representative of this type is skull No. 213.

8. The Nordic anthropological type (Fig. 231) is represented at Viminacium by a skull belonging to skeleton No. 1948 from the necropolis of "Više Grobalja". It belonged to a man of up to 50 years old. This skull is characterised by a very pronounced robustness as well as dolichokrania. The preserved part of the postcranial skeleton is also markedly large and robust.

9. The Negroid anthropological type (Blumenfeld 1999) (Fig. 232) is represented by skull no. 595 from the necropolis of "Više Grobalja". It belonged to a man over 45 years of age. Only one specimen of this type is known at Viminacium to date.

The great heterogeneity of the Viminacium population was also confirmed by research conducted at the Institute of Anthropology of the University of Johannes Gutenberg, in Mainz, which was reduced to programmatic analyses of the measured results obtained. This was also the second phase of a survey of the population living at Viminacium. The third phase, according to the adopted observation criteria, is related to natural science laboratories and involves experts of different profiles. When it comes to isotopic analyses in historical periods, they were first carried out in our region at Viminacium. This was an analysis of strontium from the teeth of 27 skulls from the anthropological collection of "Pećine" and "Više Grobalja" (representing the southern necropolises of Viminacium). In a pilot study conducted by the Anthropological Institute of the University of Munich and supervised by the project partner Prof. Dr Gisela Gruppe, the tooth enamel of 25 first molars and two animal bones (rabbit and red deer) were analysed to determine the $^{87}Sr/^{86}Sr$ isotope ratio. Dental enamel in the first molar collects certain substances that are formed in early childhood (this deposition begins as early as during intrauterine development and ends in the first year of life) and, thus, forms a ratio of stable isotopes of strontium $^{87}Sr/^{86}Sr$, which gives a geological picture of the region in which the person who underwent this study spent their earliest childhood. The significant difference in strontium values between the dental enamel and the bones of local animals indicates that these individuals with a non-overlapping strontium ratio migrated to Viminacium. It can be stated that a statistically significant lower value in relation to "locals" was recorded in individuals buried at the "Pirivoj" site. On the other hand, a higher value of strontium was indicated from the site of "Više Grobalja".

Based on the processing of human osteological material that has undergone the aforementioned three phases of research, the results in each of these studies show and support the fact that there was a great heterogeneity of the population in Viminacium.

Fig. 241

Fig. 242

Fig. 243

Fig. 244

## MAUSOLEUM

The mausoleum at the site of "Pirivoj" was explored in two campaigns, in 1997 and 2002, and was fully unearthed (Golubović, S., Korać, M., 2013; Благојевић, M., 2005). It was built using large stone blocks, with semicylindrical stone elements scattered around the ruins and with a massive boundary wall. The mausoleum dates back to the mid-3rd century A.D., which provided a basis for its further identification. The construction itself, made up of two segments containing an underground crypt and a temple above ground, shows that it was a mausoleum used as a burial of a very important high-ranking person. The fact that part of the mausoleum has the shape of a temple indicates that the person in question was related to the gods and that the site served the purpose of deification.

Historical events show that these territories were extremely troubled in the middle of the 3rd century and that they were the location of battles in which Roman emperors themselves took part. It is possible that the mausoleum belonged to the Roman emperor Hostilian, who spent some time in Viminacium in A.D. 251 (Jovanović, A., 2006, 39; Korać, M., Golubović, S., Mrđić, N., 2009, 98–99). Hostilian acceded to the throne after the tragic deaths of his father, Trajanus Decius and his brother, Herennius Etruscus, who were both killed in an ambush on the Danube battlefield near the ancient city of Abritus, in present-day Bulgaria. The unprecedented event of a Roman emperor slain in battle shocked Rome, because it was the first time in almost a thousand years of Roman history that an emperor had died in that way. In 251, over several months, Hostilian carried out the strategic deployment of Roman legions in territory from Germania all the way to where the Danube mouths into the Black Sea, which was prompted by the danger coming from the Gothic onslaught, as recounted by Zosimus, an author from the second half of the 5th century and a senior state official under emperor Theodosius. Zosimus, who used older sources such as the Greek historians Dexipos from the 2nd century and Eunapius from the second half of the 4th century, wrote that Caius Valens Hostilianus stayed there for almost a whole year with his mother Herennia Etruscilla. Even other sources like Aurelius Victor, Pseudo-Aurelius Victor and Eutropius, who all lived in the 4th century, wrote that Hostilian deployed Roman troops on a wide expanse from the central to the lower Danube River basin. Unfortunately, in November 251 A.D., Hostilian died of plague. The place of his death is not explicitly mentioned but, judging by all indications, it was Viminacium, because it is not known that Hostilian left the territory of Viminacium, especially bearing in mind the danger of large gatherings of troops and possible attacks by barbarians on the frontier (limes) of the Roman Empire. It is possible that the site of the mausoleum was used to bury or cremate his body, with full honours. Amid the burnt remains, fragments of a glass bowl have been found in an extremely bad condition, burnt and melted, as well as fragments of a fibula and bronze decorative nails which reinforced and secured a wood coffin. Immediately next to the burning site, on the grounds of the mausoleum, two dozen gold artefacts and a gold fibula or buckle were found. Besides the vaulted grave, a stone sarcophagus chronologically also belongs to this period. In all likelihood, the central grave containing the cremated body of the deceased, the vaulted grave and the stone sarcophagus are all parts of a unique mausoleum compound.

The mausoleum is situated 450 m from the east gate of the legion's camp in Viminacium, on the section of the road leading to Ram (*Lederata*). Being ransacked probably after 313 A.D., following the Milan Edict, it served as a special cult place where Christians used to bury their dead. Its quadrae were secondarily used to build Christian graves in the 4th century. Of particular interest is the grave with a structure where a Christian woman was buried with two rings, an iron one containing a Christian symbol, X-P, and a silver one having a gem depicting an agnostic image. The burnt remains of the deceased, along with the remains of the dead from the other graves, were sent for DNA tests to the Australian Institute for Molecular Genetics. The DNA test results should provide data not only regarding the gender and age of the deceased, but should also provide an answer to the question as to whether or not the deceased had perhaps suffered from bubonic plague. They will be compared with the remains of an interred female individual, which were found in the mausoleum in a vaulted grave.

Fig. 245

Fig. 246

Fig. 247

Fig. 248

Fig. 249

Fig. 250

Fig. 251

Fig. 252

Fig. 253

Fig. 254

**Fig. 255**

## HOSTILIANUS' ENTIRE REIGN IN VIMINACIUM

Trajanus Decius (*Imperator Caesar Caius Messius Quintus Trajanus Decius Pius Felix Invictus Augustus*) and his sons – Herennius Etruscus (*Imperator Caesar Quintus Herennius Etruscus Messius Decius Augustus*) and Hostilian have been almost completely ignored by most ancient annals. Sight should not be lost of the fact that Trajanus Decius was born to a respectable family of consuls, who lived in Sirmium. We know that Herennius Etruscus was born in Pannonia, sometime between A.D. 220 and 230, but we have no information regarding the exact location, except that it was most probably Sirmium. Herennius Etruscus, as the elder son and, apparently, the more capable, was included early in the organisation of the governing system. Together with his father, Herennius worked his way up the ladder through the military ranks. As for the younger son, Hostilian, we know very little about him. However, his portraits on coins indicate that he was much younger than his brother. He was born around A.D. 235, most probably in Sirmium, taking into account that as early as A.D. 232, Trajanus Decius administered the province of Moesia. When his father and elder brother went to war on the Danube limes, Hostilian remained behind in Rome with his mother Herennia Etruscilla (*Herennia Cupressenia Etruscilla*). Thus, though an underage person, he participated in the activities of the Senate. Young Hostilian obviously lived in the shadow of his father and brother. It is known that Trajanus Decius promoted both his sons to the rank of Caesares. The title *princeps iuventutis* was conferred on the elder son very early, while Hostilian received the same title probably as late as the end of 250 A.D. The title of *Augustus* was held only by the elder son, whilst Hostilian was to inherit it only after his father and brother had died. Hostilian, as an emperor, held the title of *Imperator Caesar Caius Valens Hostilianus Messius Quintus Augustus*, and his brother Herennius Etruscus – *Imperator Caesar Quintus Herennius Etruscus Messius Decius Augustus*. Zosimus gave scarce information about the relationship between Hostilian and Trebonian Gallus (*Historia Nova*). In early 251 A.D., after his father and brother had been killed, Hostilian came to Viminacium and deployed Roman troops on the wide area from the central to the lower Danube river basin. As we learn from the mentioned historical sources, in late 251 A.D., more precisely in November of that year, Hostilian died of plague. Although the sources do not explicitly say anything about the place of his death, it was most probably Viminacium.

Fig. 256

Fig. 257

Fig. 258



## MAUSOLEUM OF THE NORTHERN NECROPOLIS

The mausoleum is positioned 830 m to the north of the mausoleum discovered in 1997 at the eastern Viminacium necropolis and 570 m to the north-east of the *porta praetoria* of the legionary fortress. Additionally, it is positioned 700 m to the north-east of the eastern Viminacium city gate. The necropolis to which this mausoleum belongs was formed along the road that led from Viminacium to ancient Lederata (modern Ram). To date, in this area, positioned between two *villae rusticae* dated to the 3rd century, more than eighty graves have been unearthed, dated to the 2nd and 3rd century.[16] The grave inventory of many of them included luxurious items. This necropolis, although seemingly separate, represents part of the northern cemeteries, comprising larger grave groups, which were already examined in previous years.

Archaeological excavations, the burying ritual and the discovered grave inventory showed that the mausoleum represented the eternal home of a high-ranking individual. Based on the grave inventory, the mausoleum has been dated to the 3rd century.

Generally, the image of the entire area of the northern cemeteries and the structures to the north of the castrum examined so far indicate that it was functionally abandoned before the rule of Diocletian.

The mausoleum measures 6 x 6 m (4 x 4 Roman paces) and was made in a hole paved with large pieces of broken crystalline schist from Ram with four drainage layers of hydraulic mortar, 5 to 10 cm thick. The examined part of the mausoleum was placed beneath the ground level in Roman times i.e. it was dug into the surface by at least 1 m. The preserved mausoleum height varies between 1.80 and 2.25 m. Metric analyses have shown that at least 70 cubic meters of stone were used for this structure. The structure itself seems simple, but extremely large. The preserved parts do not appear very decorative, since all of the limestone architectural elements, as well as the *stellae* and the sarcophagi within this funerary complex underwent systematic destruction, more severe than that caused during the war or by later exploitation of building materials.

[16] More on this in the previous section about the villa at the site of Rit.

The mausoleum was built on a layer of sand and not on virgin soil. The same layer is confirmed both in the central part of the mausoleum and outside the structure.

Within the mausoleum itself, only a small number of finds were discovered. The coins discovered within debris do not offer enough clear data for a precise dating and have no clear context. There are finds from both the 3rd and 4th century. Based on the grave contexts within the enclosed complex, the mausoleum can be connected with the 3rd century. It was destroyed at the end of the 3rd or at the beginning of the 4th century.

The mausoleum was devastated on two separate occasions. The first took place during Antiquity, when funerary monuments, limestone *stellae*, sarcophagi, marble sculptures and reliefs were systematically destroyed. There are indications that such a thorough destruction was the result of an act known as *damnatio memoriae*, or erasure from memory, when all mention of names and events are destroyed, thus condemning the individual or individuals to oblivion. The second destruction phase happened decades or even centuries later and was caused by the secondary usage of stone parts as building material. During this phase, a surrounding wall was devastated to a much greater degree than the memorial structure.

The entire funerary complex comprised a space of about 12 x 14.5 m and was separated from the rest of the necropolis with a 0.80 m thick stone wall (8 x 10 Roman paces). The main structure was positioned in the zone towards the south-western corner rather than in the centre, as would possibly have been ex-

**Fig. 259**

**Fig. 260**

pected, as with the mausoleum at the site of "Pirivoj", which is placed exactly in the middle of the enclosed area (Рељић, С., 2008, 59–61). On three sides, it was surrounded with eleven graves. One was a cremation in a two-levelled grave pit, two were burials in wooden coffins, one grave was made of bricks with a vault, while the remaining graves had a simple brick construction. Next to the structure itself and parallel to its sides, five graves made of bricks were placed. On the northern side there were no graves and it could be assumed that there was an entrance to this separate complex. Most of the graves were looted during previous periods. The complex does not possess a square ground-plan and this all indicates an alternative concept. Burials of "less important individuals" most likely took place here, since all of the burials are chronologically in accordance with the mausoleum structure.

Within the surrounding wall, in the north-eastern corner and leaning against the wall, there is a vaulted grave (a similar grave was discovered at the mausoleum of the site of "Pirivoj").

The cremation grave on the northern side of the mausoleum most likely belongs to the older horizon of the cemetery and it cannot be connected to this complex. Inhumations surround the structure on three sides and they can be connected to the complex. Anthropological and DNA analyses of the excavated material should connect the deceased and make it possible to determine whether the enclosed area possibly represents a family tomb.

Among the stone monuments there are smaller parts of several marble sculptures and reliefs. The most important ones include: a fragmented back of the head of an imperial sculpture with locks of hair visible and parts of a laurel wreath made of limestone, a fragment of a sculpture or a relief with a hand holding a sword pommel, a fragment of a sculpture or a relief with a hand holding a scroll, an eagle's wing made of marble, as well as a young man's head. Architectural decoration includes several fragments with floral and other motifs typical of the Roman imperial period.

Fig. 261

## THE *MEMORIA* G-4816

Three *memoriae* in two locations are open to the public at the site. Two of them are in the covered part. The *memoria* marked G4816 is one of the most representative structures of its kind in the southern cemetery of Viminacium (Milošević-Jevtić, G., 2014). It is cruciform in plan and contains eleven graves. It is oriented north–south with a 35$^0$ deviation to the west on its north side. The entrance is on the south side. It was built of brick bonded with lime mortar and it was approached through an entranceway 5 metres long, 3.70 metres of which consisted of a stairway. These very steep steps led down to the floor of the structure, which lay at a depth of about 3 metres. The first step was probably on the level with the crown of the cross vault surmounting the central area. The entrance is 0.95 metres wide. Only the two lowest steps have been preserved. The central area is square in plan. The walls were coated with lime mortar containing an admixture of pounded brick. The plaster was painted. Traces of green colour are extant in places. The edges of the partitions between the graves were painted red. The floor was covered with a layer of mortar, with inlayed butterfly-shaped tiles. These tiles have been preserved in the central part only. The bricks on the stairs and the floor tiles are rather worn out on the edges – indicating frequent visits to the deceased family members over a considerable period.

The tomb plan is in a shape of a cross. The vaulted burial places are found in the arms of the cross. The north, east and west arms contains three burial places, while two places were found in the south arm. All the graves were plundered and destroyed.

At a distance of 1.5 metres from the south-eastern corner of this *memoria* is another family tomb. It is marked G4815 and it contains nine burial places. The tomb is oriented N-S with a 36$^0$ deviation to the west on its north side. The structure was greatly damaged by plunderers and by locals who used it as a quarry for building materials. It is built of brick bonded with lime mortar. The walls are plastered within and bear traces of red, green and blue colour. No remains of the buried bodies, apart from a few scattered bones, have been found.

The *memoriae* are conserved and open to the public on the premises of the "Drmno" thermo-electric power plant.

**Fig. 262**

## THE *MEMORIA* WITH SARCOPHAGI

During the excavations carried out in 1985 a *memoria* (family tomb) with sarcophagi marked G-3971 was discovered. The *memoria* is rectangular in plan, oriented west–east, with the entrance on the west side. It was built of bricks bound with lime mortar. All the walls, apart from the western one, were demolished by plunderers. The tomb was covered with a barrel vault and painted. The colours used were red, black, blue, green, ochre and white. The motifs represented were geometric and floral designs.

The *memoria* contained five burials. Three bodies were laid in stone sarcophagi, one was in a lead sarcophagus, and one was a simple burial. The sarcophagi have relief decoration and possess considerable artistic value. All the graves were plundered, and the sarcophagi were considerably damaged as a result.

It has been possible to establish the order of burials and the phases of construction of the *memoria* based on the relationship between the graves. The burial in the lead sarcophagus was the earliest. The two burials in stone sarcophagi came next. After that, the tomb was built and the floor was made. This was followed by another burial in a stone sarcophagus, and the last burial was made in a simple pit dug into the ground.

**Fig. 263**

## THE *MEMORIA* (G-5868) AT THE SITE „PEĆINE“

From the middle of the 3rd century, new religions were spread throughout the Roman Empire, most of all Mithraism and Christianity. Both of them highlighted immortal souls, while graves no longer represent eternal homes of the deceased. In connection with this stands the belief of all of the deceased being equal in the afterlife, which can be observed in choices made for grave-goods. Their number is now limited and includes only very personal belongings, especially parts of clothes made of metal (Милошевић, Г., 2000, 219). Although on the cemeteries of ancient Viminacium in specific cases it is possible to recognize different social groups according to jewelry deposited with the deceased, a much more reliable indicator includes grave structures. Wealthy society members had a need to highlight their status by building monumental *mausolea* and memorial structures. During archaeological research in the 1980s on the southern Viminacium necropolis (site Pećine), thirteen structures of this kind were discovered. They are positioned in the northern cemetery part, the one closest to the civilian settlement and they were erected some 250 meters along the city wall. On the same cemetery, two structures with

**Fig. 264**

three apses each were unearthed, also described as luxurious structures. They were thought to be on a private property that belonged to the family of the *villa rustica* owner, discovered some 200 meters to the north-east from them (Milošević-Jevtić 2014, 324).

In 2016, within voluminous salvage excavations in the area foreseen for the construction of Kostolac B thermo-power plant, part of the southern Viminacium cemetery was examined, used in the period between the 2nd and the 4th century (Redžić, S. *et al*. 2018). On this occasion, a memorial structure of *hypogeum*

Fig. 265

type, actually a subterranean tomb, was discovered. The structure possesses a cross-shaped ground-plan, its outer dimensions being 9.10 x 9.10 m and consisting of a staircase, a central space and three rectangular apses with burials. The structure of this feature is almost identical to the *hypogeum* discovered in 1985 in the northern part of the cemetery (Milošević-Jevtić, G., 2014, 326, fig. 4b).

The tomb is orientated south-north, its entrance positioned on the southern side. Only three steps remained preserved, actually the ones closest to the central space. The staircase was made of bricks bound with mortar, their dimensions being 42 x 28 x 4 cm. The highest step was discovered at the depth of 2.85 m below the ground level. It measures 0.90 x 0.42 m. It is 22 cm high and made of three rows of bricks. Dimensions of the second step are 0.90 x 0.70 m, it is 50 cm high and made of seven rows of bricks. The third step measures 0.62 x 0.42 m, it is 0.20 m high and it is positioned within the central space. The lowest step is fully covered with a layer of lime mortar.

In the entrance area, just above the staircase, there was a dislocated part of a stone sarcophagus. It cannot be ascertained whether it comes from the structure, although it would not represent the first discovery of a sarcophagus within a memorial structure of the southern Viminacium cemetery. Another sarcophagus was unearthed beneath the floor of a semi cross-shaped tomb (Милошевић, Г., 1993, 179).

From the entering area, one would step into the central space (*cella memoriae*), used for funeral ceremonies as well as food and drink offerings during funeral feasts (Milošević-Jevtić, G., 2014, 327). Dimensions of this space are 3.55 x 3.50 m and within it, it was possible to distinguish two building phases. At the depth of 3.75 m, a flattened virgin soil layer was detected with two spots covered with crushed bricks. They most likely represent remains of a substructure belonging to the initial floor. According to the finds of building material from the debris that filled the structure, the floor could have been made of hexagonal or butterfly-shaped floor tiles.

During renovation of the memorial structure, the floor level of the central space was lifted for 40 cm. The original floor level was covered with a layer of earth with crushed bricks, *tegulae* and *imbreces*, fragments of lime mortar and mortar with the addition of brick, human bones, pottery and glass shards, as well as pieces of flat glass. Among small finds there were a bracelet made of glass,

**Fig. 266**

Fig. 267

an arm ring made of iron and pieces of pottery oil-lamps. In the covering layer, 13 bronze coins were discovered. The oldest one was minted during the reign of Galienus (253–268), eleven were minted during the 4th century (most of them belonging to the second half of this century), while the last piece was illegible. According to the numismatic finds, it can be expected that the structure was made in the second half of the 3rd century, while it is certain that it was reconstructed at the end of the 4th century.

It is necessary to point out to the find of a fragmented marble plate with an inscription, most likely representing a tombstone for one of the persons buried in one of the graves within the structure.

The earth layer spread over the initial floor was flattened with two layers of lime mortar and it represents a substructure to the floor of the younger structure phase, made of 11 x 9 rows of bricks, each measuring 44 x 28 x 4 cm. This floor is situated at the depth of 3.30 m from the ground level. It was damaged in its western part, while the northern-most part is missing. Before firing, on one of the bricks, a stylized human figure was finger-carved.

In the debris layer above the younger structure's floor, ten bronze coins were discovered. Most of them are dated at the end of the 4th and the beginning of the 5th century and that should correspond to the period from renovation to the ultimate destruction of the structure. A unique find at the territory of Viminacium includes a hoard of golden coins unearthed beneath one of the tiles of the younger floor. It includes the total of seven coins: three minted during Honorius' reign and four during the reign of Theodosius II. Six pieces are dated in the period between 408 and 420, while the youngest one fits into the time-frame from 430 to 440. Exactly the last piece represents the most indicative reason for depositing this hoard, since it was the time when Hunnic raids were a permanent threat to the Eastern Roman Empire. It is well-known that in 441 Viminacium was destroyed by the Huns and the owner of those golden coins did not have an opportunity to retrieve them. Abandoning of the memorial structure most likely corresponds to the devastation of the capital of the province Moesia Prima.

In each corner of the central space there were pillars formed to support crossing points between two walls of rectangular apses. Their dimensions are not equal: the north-western pillar is preserved in its maximal height of 1.60 m from the older floor level and it measures 0.70 x 0.65 m. Heights of the remaining three pillars vary between 1.00 and 1.55 m, whilst their dimensions measure 0.60 x 0.60 m to 0.90 x 0.70 m. Pillars' height reached over the upper apses' level and the most likely carried roof construction of the central space. It could have been in the shape of a barrel, a dome or a gable-roof. It is difficult to say which architectural solution was chosen, since there are not enough elements for reconstruction.

The interior of the central space was decorated with mural paintings preserved only in the corners, actually pillars, up to the height of 1.25 m. Among the colours, the most dominating one includes different nuances of red, ochre and green, used to imitate marble veneer. It is actually an imitation of different marble types with wavy „lines", placed horizontally, vertically and diagonally. After the memorial structure has been divided, part of the decoration beneath the new floor level was no longer visible, while the rest was covered with a 0.5 m thick layer of white lime mortar. Before plastering, incisions within the wall paintings were made with a sharp tool, aiming to better support the lime mortar.

On the western, northern and eastern side of the central space there are rectangular apses used for burials. All three of them were built following the same plan with smaller deviations in dimensions of different structural elements. The outer apses' dimensions are 3.50 x 2.80 m and within each of them, there are three grave niches, actually *loculi*. Their lengths vary between 1.85 and 2.00 m. Their cross-sections are trapezial and this is why their width at the bottom measures 0.60 m and 0.50 m at the top. The depth of graves is always the same and it measures 0.55 m. The dividing walls were 0.40 m wide and they were made of bricks bound with lime mortar. Their inner faces were covered with a layer of white mortar. Upper grave levels correspond to the older floor level. Within the *loculi* with preserved bottoms, it was possible to determine that they were made of bricks covered with a layer of lime mortar. The plastering was made in such a way that the part in which deceased's head was to be placed, a so-called „pillow" was formed. All of the *loculi* were looted, but according to the partly preserved covering of one of them it is possible to see that they were made of longitudinally placed *tegulae*.

Dividing walls between the graves reached high over the grave coverings and ended in barel vaults. The utmost preserved height of one of the walls measures 1.00 m and it was also possible to establish that the niche's height from the grave cover to the dome measured 0.85 m. The niches' interior was decorated with white paint and a red frame. After the burial came to an end, the openings were closed with bricks and covered with a layer of lime mortar, further covered with painting.

Besides the nine *loculi* placed within the rectangular apses, further two *loculi* were placed one each side of the staircase. In the grave to the east of the entrance, the only human remains were discovered that were not dislocated during the looting. They include three skeletons, also confirming that one *loculus* was not intended for a single deceased only but for more funerals. At the bottom of the *loculus* to the west of the staircase, four skulls were discovered, one of them belonging to a child. There was also head of a golden finger-ring with a glass inlay.

The question one needs to ask is whether after lifting the floor level in the central space it was still possible to bury human remains in grave niches or whether the entire structure was used for something else. Since in the area of Viminacium cemeteries no chapels were discovered, Ljubica Zotović was of the opinion that exactly memorial structures were from a certain point onwards used as funeral chapels not only by the families of the deceased, but also by a larger number of believers. In favor of this hypothesis stands the fact that floors were worn out and repaired, which would indicate a larger frequency than in regular private structures (Зотовић, Љ., 1986, 54).

The memorial structure from the southern Viminacium cemetery most likely continued to be used as a sacred place by its inhabitants in times that followed Hunnic devastation. A proof for this is the mediaeval necropolis that developed in the very vicinity of the structure almost four centuries after the structure collapsed.



**Fig. 268**

## THE TRICONCHAL CHURCH

A triconchal church is located at the cemetery. It was discovered during the clearing of the terrain with heavy machines, during which time it was partly destroyed (the greater part of the western conch). The extant length of the church with the porch is 15.50 metres (13.20 metres without the porch), and the width of its eastern part is 8.03 metres. The distance between the crowns of the north and south apse is 12.80 metres (external measurement). The conch walls are 1 metre thick. The church is built of green schist bonded with lime mortar. In numerous places bronze coins are set into the walls. The floor is made of lime mortar. There is architectural evidence of at least two building phases. The church is oriented west–east with a $22^0$ deviation to the south in its western part.

During the archaeological explorations several graves were found in the surrounding area. A number of graves, some of which belonged to children, were discovered within the church itself. Particularly noteworthy is a plundered grave (marked G2046), in the southern church conch. It is a masonry grave with a cover made of bricks. The body was buried in a lead sarcophagus. It belonged to a younger person whose remains have been largely destroyed. Of exceptional interest are the preserved traces of a cloth with golden thread and found leather shoes (Голубовић, С., 2000; Голубовић, С., 2001). A number of mediaeval graves have also been found in the surrounding area (Спасић, Д., 1990).

**Fig. 269**

**Fig. 270**

## SARCOPHAGUS WITHIN THE SACRAL COMPLEX

In the vicinity of the mausoleum of the northern necropolis and within the sacral complex, along the road that led towards the east and to the fortress of Lederata (modern Ram), a sarcophagus was discovered, an exceptional find, since it had not been plundered in previous periods. Throughout decades long research of the capital of the Roman province of Moesia Superior, this is only the second discovery of an undisturbed sarcophagus.

It was made of limestone, its outer side undecorated and without inscriptions, with a gable-roof shaped lid with *acroteriae* in each corner. After the lid was lifted, it was discovered that it included a double burial. The grave-goods discovered within the sarcophagus allowed archaeologists to reconstruct a particular moment in time.

Physical anthropologists' preliminary analysis showed that the double burial comprised an adult man and a woman in her early twenties. Further research will reveal more precise data about these individuals, while the material will undergo DNA and other different physical and chemical analyses for a better understanding of this archaeological complex.

**Fig. 271**

**Fig. 272**

Fig. 273

Fig. 274

Fig. 275

Fig. 276

Fig. 277

Fig. 278

Next to the deceased, three glass vessels were unearthed, two *balsamaria* and an *unguentarium*, as well as four bronze coins, one of which was minted in Viminacium during the 3rd century AD.

The man was buried without any personal belongings, but the items discovered next to the woman's body represent one of the most luxurious grave inventories discovered at the Viminacium cemeteries.

She was most likely dressed in clothes woven with golden threads with attached gold, pearl and glass beads, along with decoration in the shape of gold rings with inlayed precious stones. Further costume parts include a unique belt made of silver and a brooch (modern pin) made of the same material.

Her hair was held with four pins with ball-shaped heads, two made of bone and two made of jet. Jet is a kind of lignite formed under specific circumstances and very suitable for polishing and processing. In ancient times it was extremely rare and precious. It was mined near York, England, where workshops most likely also existed that processed this raw material. Ancient doctors considered jet a curative for womb problems. Besides that, it is extremely datable, since all of the known finds come from 3rd century graves.

Next to the deceased woman, a round silver mirror was unearthed, with its handle modelled in the shape of the knot of Hercules. Luxurious mirrors were used during wedding processions and the bride used to carry them into the house of her groom. This could possibly be one such item. This hypothesis is supported by the find of the knot of Hercules, since it is known that the bride's belt was tied exactly in this way during the previously mentioned processions.

Possibly the most interesting and certainly one of the rarest finds is that of a golden engagement ring with the letters SIMP engraved on its head. The letters most likely represent the initials or the abbreviated name of the fiancé.

Using a multidisciplinary approach, archaeologists will try to answer the question of whether the deceased represent a husband and a wife or a father and a daughter who was engaged but died before she got the chance to be married. It is expected that DNA analyses will reveal vital data.

**Fig. 279**

## A GEPIDIC GRAVE

For eleven months of each year, archaeological excavations take place in Viminacium, even though cold and humid weather does not exactly represent the best condition for fieldwork. However, the volume of protective archaeological research and the highly dynamic building activity of the new Kostolac B thermo power-plant demand that archaeologists be on site even during the coldest period of the year. The rule that has once more proved to be correct is that during Viminacium excavations, there is always a chance discovering exciting and important finds. A find from 2019 has added to our knowledge regarding life during the Great Migration period.

Although excavations are being conducted in the area of the late Roman necropolis, to the south from the ancient urban centre of the civilian settlement, in which Viminacium inhabitants were buried during the 4th century, an expert team, discovered the grave of an individual who lived during the period of the Great Migration. This period is marked with permanent movements of different tribal groups, battles and truces, co-operation and wars against the Eastern Roman Empire.

This is the grave of a man. He was buried lying on his back in a stretched position. The deceased was 1.78 m tall. What makes this burial extremely interesting are the grave-

**Fig. 280**

goods. There is a double-bladed iron sword with a bronze pommel. The sword is 92 cm long and on its blade there are still visible traces of a wooden scabbard. Behind the deceased's left shoulder there was a large bone comb in a bone case, some 30 cm long. In the pelvis area, pieces of an iron belt were unearthed.

After the skeleton was prepared for lifting and transport to the lab, two further items were discovered that were not previously visible. In the grave, above the deceased's right shoulder, there was a pottery vessel that belongs to the early Byzantine products of the second half of the 6th century. On the right side of the right foot there was a leaf-shaped iron spear-head.

By comparing this newly discovered burial with material already known from previous excavations, archaeologists have been able to conclude that the deceased was a member of the German tribe of the Gepids. Their presence was attested with finds of 106 graves, of which 31 individuals possessed artificially deformed skulls. This tradition was taken from the Huns by the Gepids, but also by some other Germanic tribes and was performed in order to highlight racial features. Finds from the aforementioned graves include five swords as well as a large number of bone combs.

The Gepid buried in the southern Viminacium necropolis most likely belonged to a part of the tribe that was forced to escape from the territory of Srem during the second half of the 6th century, after their defeat by the Avars. Following an agreement with the Byzantine state, they were allowed to settle in Viminacium and were obliged to defend the Danube border as allies (*foederati*). This cooperation is also attested by a Byzantine pot discovered in the grave.

**Fig. 281**

**Fig. 282**

Fig. 283

Fig. 284



# AN EXCEPTIONAL MULTITUDE OF FINDS

## FUNERARY WALL PAINTING[17]

Among the numerous finds from the site of Viminacium, a special place is taken by wall-painted tombs. They mostly belong to the late antique period (an exception is a tomb from the beginning of the 3rd century) and they were mostly excavated in the late Roman necropoles level, single standing or in the space within or near the *memoria*. At the necropoles of Viminacium, about ten memoriae have been discovered with rectangular, square or cross-like bases or with bases with three conches.

**Tomb construction**

All the tombs were built of bricks, in broad pits. They mostly possess a trapezial cross section (exceptions are four vaulted tombs), with a double or a flat roof placed in grooves in the tomb sides. The tomb coffin consists of 12 to 17 brick rows, placed horizontally up to a height of 1.20 m and bound with lime mortar. The mortar joints are 2 to 4 cm thick. Each brick row is placed 1 to 2 cm to the inside of the tomb, thus forming a trapezial cross section. In order to maintain vertical tomb walls on their outer sides, parts of the walls were constructed of smaller pieces of green stone or fragmented bricks bound with lime mortar. The connections between the bricks consisted of lime mortar containing a larger amount of ground brick.

The tomb floor was paved with several brick layers. The bricks were placed on a base made of lime mortar, which contained small amounts of fine sand. The base was 2 to 4 cm thick. The floor sub-

[17] The work is fully published in monography Korać, M., 2007, Paintings of Viminacium.

struction consisted of a layer of yellow sand, 1 to 2 cm thick. The bricks were placed longitudinally and latitudinally, latitudinally and diagonally in the western part, thus forming a pillow which was sometimes plastered with a thin lime mortar layer.

This tomb type, discovered in urban centres like Pecs (Fülep, F., 1984, 36–46; Fülep, F., Bachman, Z., Pintér, A., 1988, 56.), Viminacium (Vasić, M., 1907, 66–98; Korać, M., 1993, 107–122; Korać, M., 1994, 166–184.), Sirmium (Milošević, P., 1971, 3-13.) or near military camps along the Pannonian and Moesian limes, is typical for Pannonia and Moesia. The trapezial cross section, typical for Viminacium necropoles, was first discovered by Miloje Vasić, who described them as the "Viminacium" tomb type (Vasić, M., 1907, 66–98; Васић, М., 1895; Васић, М., 1902, 201–228; Vasić, M., 1903, 249–259; Vasić, M., 1905, 102–109.).

Tombs were used for multiple burials and the bones of different individuals were found within one tomb, mostly dislocated and fragmented. They were orientated in west–east or east–west directions, except burials within the loculi. Loculi are burial places with a rectangular base situated within the memoria. Sometimes, like in Viminacium and similar to the loculi in catacombs in Rome, they were placed on several levels.

Salvage archaeological excavations at the necropoles of the Roman city of Viminacium have given several exceptional findings and one of them is certainly the discovery of a late Roman tomb with frescoes named "The Pagan Tomb".

Painted tombs of the Roman Empire can mostly be connected to the Mediterranean and also to southern Russia (Rostovcev, M., 1914, 12; Rostovcev, M., 1915, 4–68.), and during the late antiquity mostly to the eastern Illyricum and to painted catacombs. Up to now, about one hundred painted tombs have been published from eastern Illyricum, to which Viminacium belongs. Some eighty tombs could be specified as Christian, some fifteen as pagan and several as Jewish.

**Fig. 285**

**Fig. 286**

So far, twenty-eight tombs with wall paintings have been uncovered at the cemeteries of Viminacium. However, they are in such a poor state of preservation that the religion of the persons buried in them could only be identified in two cases (one Christian and one pagan). The reason for this is tomb robberies, some of which took place in antiquity (which is better for the preservation of the tombs), while some of them took place in modern times, using suitable equipment.

Since the two most representative Viminacium tombs were robbed in antiquity, their paintings mostly remained preserved. Other tombs were robbed in modern times and, because of that, the paintings came into contact with air and pollution and mostly fell off the walls, turning into fragments, sometimes even dust. In such cases, the paintings only remained preserved mostly in the lower wall zones. The preserved painting pieces represent parts of unknown compositions, which mostly do not offer enough detail for their reconstruction.

One such example is tomb G-3869 (named and numbered in excavation documentation), in which a picture of a fence remained preserved. If diagonally depicted laths could be considered a garden, i.e. represent a *hortus conclusus* (closed garden), this tomb could be considered Christian.

The paintings from the tomb marked as G-5464 suffered the same fate.

At the western tomb side, two peacocks facing each other were depicted with a spherical amphora between them. The amphora is depicted only with dark brown lines. The whole composition is framed in red. The eastern wall was decorated with double spirals. They were painted dark blue and dark red. This picture was framed in black. On the lateral sides, geometrical and floral motifs were combined. Garlands were depicted in combination with a grapevine, heart shaped leaves and grapes. On the northern wall, the garlands were depicted only as red lines and on the southern wall as blue lines. The grapes were depicted in two rows and coloured blue, red and black.

**Fig. 287**

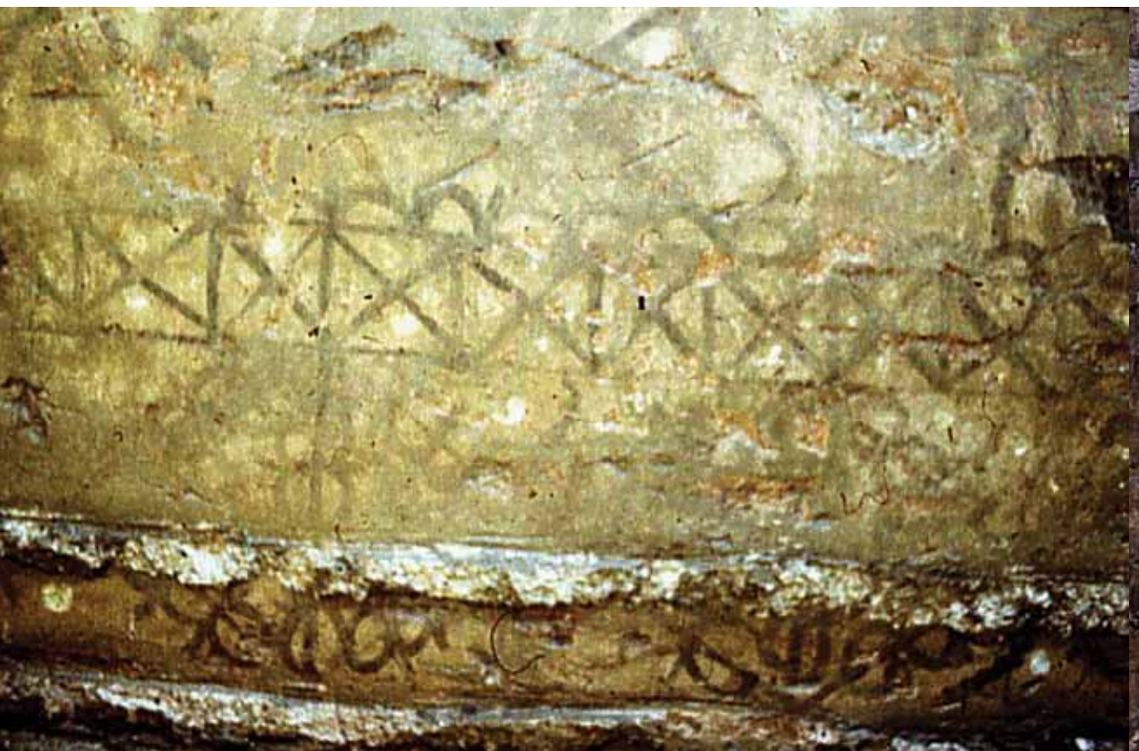

**Fig. 288**

The tomb number G-4734 was painted with red, black, ochre, dark blue and turquoise paint on a white background. On each lateral side, in a surrounding with floral motifs, a peacock was depicted. The peacock on the western wall is the best preserved example. The greatest part of the tail, parts of the wings and parts of the body with the legs are preserved. The whole composition is framed in red. The preserved parts of the frontal walls were decorated with five roses, painted black and red on a white background. According to the preserved remains, one can only speculate about the whole tomb decoration.

Tomb G-3130 was also decorated with paintings. On the western side, in framed fields, a geometrical motif was depicted, imitating a marble structure. On the southern wall, in a red framed field, only a detail of the depicted peacock's legs remained.

Tomb G-5313 was mostly destroyed in a robbery. On the eastern frontal side, within a trapezial frame, a bird, most likely a peacock, was painted. On the western frontal side, also within a red framed trapezoid field, two birds were depicted in light blue, red, ochre and light green.

On the southern lateral side, a rectangular frame was depicted in ochre, with a dark brown lining. The field was covered with floral motifs: it was divided with ten diagonally depicted black and green branches. Ochre and red painted braches were placed vertically on them. In this way, a net was produced of rhombuses measuring 15 x 15 cm. In each rhombus, a flower was depicted with four red heart-like petals and four green double leaves between them.

Tombs were depicted with elementary earth colours, the dominant of which being red, ochre blue and green. Geometrical and floral motifs are the most numerous. Among animals, the most frequent are pictures of peacocks.

The two mentioned tombs (the Christian and the pagan one) provide the most important evidence for the study of painting in Viminacium, which was a major art centre, at least as far as the funerary painting is concerned.

**Fig. 289**

**Fig. 290**

Fig. 291

**The Christian Tomb**

The tomb identified as Christian was discovered in one of the Viminacium necropoles at the site of "Pećine", the southern necropolis with several other typologically identical tombs. It was marked as G-5517.

The central motif on the western front side is a Christogram in a double floral garland. The garland is made of laurel leaves painted dark blue, turquoise and white. Contrary to the other three sides of the tomb, on which the pictures were divided into two different zones with 20 cm wide red bands, the Christogram takes up the whole western side, thus stressing the importance of the representation. The garland is formed out of laurel leaves, painted dark blue and turquoise, and sometimes white.

The garland is a common motif in tomb painting, representing triumph over death. It is a Christian motive taken from the pagan religion. The laurel wreath, with eternally green leaves, stresses the idea of eternity (*cf.* Rogić, D., Anđelković Grašar, J., Nikolić , E., 2012, 129–146).

The Christogram is painted white in a dark blue frame on a turquoise background. The hastae endings of the letter X are thickened and end with hooks, so that they closely resemble representations of a labarum. To the right and left of the Christogram are the apocalyptical letters "Alpha" and "Omega", painted white. They represent recurrent motifs in funerary painting – the key to the

world, the whole being, knowledge, time and space, but also the connection between two extremities. By taking this motif from the Hellenistic world, Christians take on the symbol of Christ (Johns Revelation, 21, 6.) as the first and the last (The Book of Isaiah, 41, 4.).

Above the border and below the Christogram is a dark red spiral band developing into a floral motif. During the period of early Christianity, a Christogram in a garland represents the basic motif of the composition of Christ's resurrection, which symbolically represents the hopes of the deceased for his/her personal resurrection. E. Stommel, in his work dealing with iconographical questions of Constantine times, presents strong arguments in favour of the hypothesis that a Christogram within a garland, as a symbol of Christ's Resurrection, represented a court model, which came to into being in Constantine times and was used as a model throughout the whole late antique period. *Via crucis*, as Christ's circular path, represents triumph and victory over death (Stommel, E., 1958). Christianity, as the official religion in the 4th century, takes on an iconographical scheme, which already existed during Antiquity and in which the cross represents an antique tropaion, in which victory is represented as resurrection and a floral wreath around the monogram represents a victory wreath on which the weapons of the defeated enemy were hung. On the coffin, which most likely comes from the Domitilla catacombs, Christ's circular path is literary represented as "*via crucis*".

Relying on legends and historical sources, this type of cross is named Constantine's cross. No matter which literary source (Lactantius or Eusebios) is used for interpreting the reasons for Constantine's acceptance of Christianity, it is certain that in his times, Christianity became the official religion. There are different testimonies of which sign Constantine saw above Rome, in Hispelum in Via Flaminia, and before the battle on the Milvian bridge, in which his opponent Maxentius was killed (Gage, J., 1951, 27). According to Lactantius, Constantine "was warned in his sleep to mark his shields (*signia*) with a heavenly sign and

**Fig. 292**

**Fig. 293**

he ordered his shields to be marked with Christ's name" (Lactantius, De mort. persec, CSEL 19 i 27, 1–2). While in his work Vita Constantini, Eusebios, in an episcope from Cesareia (Eusebius, Eccles. Hist., Vita Constantini, 28–29,), describes the whole scene differently:

*"During daytime, when the sun began to set, he saw it with his own eyes – Constantine himself confirmed it – the sign of a cross, which was shining brighter than the Sun, with this inscription – In hoc signo vinces = in this sign you shall win. When his soldiers who were following him saw this, their eyes gazed with surprise [. . .] Constantine was wondering what this vision could mean, while during the following night God Christ came to his sleep, with the same sign he showed him in the sky, ordering him to mark his military signs in the same way as the mark he saw, and to use them as victory weapons".* . . Apart from historical sources, numismatic finds also confirm that, during the reign of Constantine, Christianity became the official religion. Still, it is interesting to see that the first Christian symbols appear quite late on coins (only in 315), while the last polytheistic representations on coins disappear rather early, in 323.

The Christogram is a common motif in funerary painting (Dölger, F. J. D., 1910, 23; Wilpert, J. S., 1903, 70; Deckers, J. G., Mietke, G., Weiland, A., 1994). It is found in two tombs in Sofia, three tombs in Thessalonica and three tombs in Pécs, as well as in several tombs in Osenovo, Nicea and Naissus. The tomb in Viminacium is painted in very delicate colours and it can be compared with the finest Christograms from the Sofia tombs, and even with the Christogram in Galla Placcidia in Ravenna, which dates from a somewhat later period.

Under the Christogram, 0.62 m above the tomb floor, the middle brick was placed 8 cm to the inside of the tomb. Placing one or sometimes two bricks to the inside of the tomb is typical for tombs with a trapezial cross section (at Viminacium, bricks placed in such a manner were exclusively found in tombs with a trapezial cross section). They are always placed on the western tomb side. In pagan symbolism, the east–west direction (Kasirer, E., 1976, II, 27) symbolises light and dark, while in Christianity, according to Dionysios Areiopagites (Dionysios Areiopagites, 1–39; as well as in Heil. G., de Galdilac M., 1958), west represents the side of darkness and Satan.

An augur, when seeking omens, divides the sky in four: the line east–west, defined with the movements of Sun, was cut with the north–south line. *Decumanus* and *cardo*, as priests called them, form the basic coordinated scheme of religious thinking, which is transferred to other spheres of life. The structure of a Roman town, to which the structure of a military camp corresponds, was made according to the general plan and different world spheres. Kasirer, explaining the origin of the word *contemplari*, says that the word *templum*, temple, first of all describes a closed space in which the augur contemplates the sky (Kasirer, E., 1976). From the antique world, the original mythical space orientation, growing into an ideal cosmic orientation, was transferred into Christianity.

To date, around ten such tombs have been discovered at Viminacium. It is most likely that this construction had the role of a shelf and it is possible that a lamp was placed there. In Christian tradition, Jesus is the light of the world (John's Gospel, 6, 5; 8, 12):

*"Then spake Jesus again unto them, saying, I am the light of the world: he that followeth me shall not walk in darkness, but shall have the light of life..."*

**Fig. 294**

**Pax aeterna in paradiso – The Garden of Eden**

The eastern wall is decorated with a representation of the Garden of Eden, with peacocks, a fountain in the shape of a cantharus and the tree of life. The peacock on the left faces the cantharus, while the other looks in the opposite direction.

The peacocks are painted in dark blue and turquoise colours with a few dark red and white details. From the cantharus, which has the function of a fountain (Velmans, T., 1969, 29–43; de Palol, P., 1969, 45; van der Meer, F., Mohrmann, C., 1958, 81), Holy Water is pouring, which is painted white and turquoise, and a stylised dark and light blue Tree of Life is painted behind each peacock. Representations of peacocks standing next to a cantharus are common in Christian iconography. In Christian, but also in pagan religions, a peacock is a solar symbol and, just as the Sun itself, it represents immortality. The cantharus symbolises a dish containing a drink of immortality, but in Christian and Jewish tradition it also symbolises destiny.

Similar to the scenes on the lateral walls, here the artist also builds a symmetrical picture, two peacocks being presented symmetrically on each side of the cantharus, while the Tree of Life dominates the whole background. However, a tendency for symmetry might not be the only reason for such a composition. Pictures of peacocks with Trees of Life on each side can be found in the Middle East and symbolise the duality of man's psyche, while leaving out a tree could be understood as the outgrowing of the soul's duality in eternal life.

The artist, who was obviously well versed in the Christian doctrine, if not a Christian himself, painted the *pax aeterna in paradiso* using such concepts as the *aqua vitae* and *arbor vitae* in a carefully planned way.

The Tree of Life is often connected to the crucifixion, thus being the axis of the world, the connection of the sky

**Fig. 295**

and the earth, as well as the three levels of the universe: the Underworld, the Surface and the Light in the Sky. It connects death and resurrection and symbolises the redemption and the Kingdom of God. According to Christ, the Kingdom of God is (Luke's Gospel, 13, 19):

*"...like a grain of mustard seed, which a man took, and cast into his garden; and it grew, and waxed a great tree; and the fowls of the air lodged in the branches of it."*

The Tree of Life and the Water of Life are often made equal to the crucifixion and appear together in biblical tradition, as symbols of the eternal life and happiness of the believers. As a result, the one who follows the laws of God can be described as (David's Psalms, 1,3):

*"And he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season; his leaf also shall not wither; and whatsoever he doeth shall prosper."*

*"For he shall be as a tree planted by the waters, and that spreadeth out her roots by the river, and shall not see when heat cometh, but her leaf shall be green; and shall not be careful in the year of drought, neither shall cease from yielding fruit."* (The Book of Jeremiah, 17, 8)

The *Book of Ezekiel* speaks of blessed water, which flows from the temple (The Book of Ezekiel, 47, 1, 12):

*"...and, behold, waters issued out from under the threshold of the house eastward: for the forefront of the house stood toward the east, and the waters came down from under from the right side of the house, at the south side of the altar. (.....) And by the river upon the bank thereof, on this side and on that side, shall grow all trees for meat, whose leaf shall not fade, neither shall the fruit thereof be consumed: it shall bring forth new fruit according to his months, because their waters they issued out of the sanctuary: and the fruit thereof shall be for meat, and the leaf thereof for medicine."*

Representations of paradise are common in painted tombs, both pagan (Beška, Durostorum and Corinth) and Christian (Čalma, Naissus, Nicea and the Thessalonica tombs).

**Fig. 296**

**Fig. 297**

**The hunting scene (earthly)**

The central panel on the northern lateral side has a dark red border with blue ribbons and contains a picture of a riding man. The upper part of the horseman is depicted in an almost frontal position, while his legs are shown in profile. The horseman looks straight ahead. In his raised right hand he holds a spear aimed at the jaws of a jumping lion behind the horse. The horseman wears a white tunic and a purple pallium (Huston, M. G., 1931 (2003), 98), fastened with a fibula on the right shoulder.

The horseman's face is painted ochre and white, and the facial details are marked in dark blue and red. The hair is curly and black. The trousers end with ribbons that extend over the ankles and deep footwear. The fibula is dark blue, as opposed to the fibula of the horseman on the left side, which is white. The horse is depicted in vivid movement and its body is white, as opposed to the horse on the south side, which is dark blue.

Both horses are saddled; the saddle on the north side is red, and the one on the south side is pale blue. Behind the horseman there is a speared lion. The body of the lion is painted ochre with some white parts. The mane and the details of the head are dark blue, as with the so called Leontius's mosaics in Awza in Lebanon (Chehab, M., 1959, 55–91), in a villa near Antiochia (Morey, C. R., 1953, 155), in Piazza Armerini (Gentili, G. V., 1959, 61), at the entrance to the basilica in Heracleia Lynkestis (Dimitrova, E., 1995, 21), in the mosaics in the atrium of Basilica A of St. George, in Peyia (Daszewski, W. A., Michaelides, D., 1988, 112), Pecs (Fülep, F., 1984, 36–46; Fülep, F., Bachman, D., Pintér, A., 1988, 11) or in the reliefs on the sarcophagus in Matei Palace, in Rome (Bianchi-Bandinelli, R., 1980a, 45).

In the upper zones, in front of the horseman and behind him, there are dark blue spiral lines combined with a vegetable ornament. They may represent a stylised floral motif, but it is also possible that they are a part of a cursive inscription, like, for example, in Dura Europos (this applies particularly to the lines in front of the horseman), which the artist intended to be illegible (Pallas, D. I., 1975, 1–19; Diehl, B., 1930, 121; Geist, H., 1960, 33–41; Welles, C. B., 1967, 89–97). This hypothesis is based on a description from the New Testament, which describes a similar scene and which says (Revelation, 19, 11–16):

*"And I saw heaven opened, and behold a white horse; and he that sat upon him was called Faithful and True, and in righteousness he doth judge and make*

**Fig. 298**

Fig. 299

*war. His eyes were as a flame of fire, and on his head were many crowns; and he had a name written, that no man knew, but he himself. And he was clothed with a vesture dipped in blood: and his name is called The Word of God. (....) And out of his mouth goeth a sharp sword, that with it he should smite the nations...*"

In Jewish, as well as in biblical tradition, the name of God is made equal to the Word, i.e. to God himself (The Book of John, 1,1), thus, knowing his name, one gains great powers. That is why it is made a secret, known only to the chosen ones. The rider on the white horse from *John's Revelation* is the victory rider and believers recognise him as Christ, i.e. the triumph of the Word of God. A hypothesis that the picture of the rider on the northern side was inspired by the riders of the Apocalypse (indicated by the colours chosen – the purple pallium of the rider, a white horse) seems to be at odds with the idea that one is here dealing with a scene of earthly hunting. Still, the victory over the lower, non-believing nature represents a personal apocalyptic moment, which takes place in an earthly life and represents the awakening of a Christian person and the first step to eternal life.

Only at first sight was this scene opposed to the common symbolism of the lion, representing him as a synonym for strength and courage (Kitzinger, E., 1977, 126; Rodenwaldt, G., 1936, 17; Reinach, S., 1922, 321; Grabar, A., 1982, 41). According to this symbolism, a lion is connected to resurrection and symbolises Christ as the Lord of Life. The lion is one of the four beings described in *The Book of Ezekiel*.

However, the lion, just like the majority of symbols, has his dark side, and sometimes, although rarely, he is connected to dragons (Psalm 91, 13). Because of his cruelty and destructive power, he becomes a symbol of the Lord of Darkness, which is most likely the case here (Rowland, G. 1973, 211).

Tomb paintings showing horsemen are rare. Sometimes they are depicted as motifs from the Old Testament, like in the catacombs in Rome, in the Via Latina Street, in which a rider is depicted together with an oak (Kötzsche-Breitenbruch, L., 1976, T. 26). Sometimes, like in the "Comodilla" catacombs in the arcosolium "cubiculum Leonis", a coachman is depicted driving a cart with four horses (Deckers, J. G., Mietke, G., Weiland, A., 1994, T. 31). Pictures of horsemen are often found in mosaics (for example in Antiochia) (Lavin, I., 1967, 99–113) and on sarcophagi (like on the porphyry sarcophagus of Hellena in the Vatican Museum) (Lasssus, J., 1976, 241). Sometimes they are also shown in illuminations or on pottery (de Palol, P., 1969, 99).

Hunting scenes shown on papyri kept in the Vatican Museum are extremely interesting. For us, of the utmost importance is *gr. 333 folio 60r*. showing a hunting rider, with scenery that looks very much like that on the tomb wall of G-5517 (Kötzsche-Breitenbruch, L., 1976, T. 31).

The funerary stele of Sextus Valerius Genalius, from Cirencester, is also very interesting, showing a horseman with his spear pointed out to his victim (Goodenough, E. R., 1968, II, 227, III, fig. 1046; Walter, Ch., 1991, 33–42).

**Fig. 300**

**The hunting scene (heavenly)**

On the south lateral side there is another hunting scene, within a dark red border. The background is painted in different ochre and white colours. The central figure is a horseman in the act of throwing a spear with his right hand. His hair, cut in a straight line on the forehead, is painted dark and light blue. The head of the horseman is shown in the 4th century manner, as illustrated, for example, on coins (Carson R. A. G., Kent, J. P. C., 1965, Kent, J. P. C., Overbeck, B., Stylow, A., 1973, T. LVI) or mosaics (Carandini, A., 1964, 205; Rinaldi, M. L., 1965, 200–268; Pace, B., 1955, Fig. 23–25) from that period. He looks towards a jumping panther, who is in front him. The horseman is dressed in a pallium, fastened with a fibula on the right shoulder. He wears white trousers and blue solea (a kind of closed sandal, similar to present-day slippers, with one or two straps).

Fig. 301

Fig. 302

In front of the horseman there is a jumping panther with gaping jaws and raised hackles, painted turquoise with dark blue and white spots.

Pictures of panthers are numerous in mosaics. Sometimes a panther is depicted in compositions connected to the cult of Dionysus (Rizzo, A., 1915, 43), but most often in hunting scenes, like in Tunisia, Algeria or Pompeii (Pistolesi, E., 1847, 77), or in some tombs, like in Marissa (Marêshah) (Peters, J. P., Thiersch H., 1905, 11) or Nasone. Sometimes, a single panther is depicted, as in mosaic 71 kept in The Vatican.

Behind the horseman is a dog painted dark red. Like all the other figures and motifs, its contours are painted dark blue. The dog's collar is distinctly marked in dark red, and some white spots are visible on the dog's head, which is considerably damaged. The trees are painted in light and dark blue shades, as in the scene representing the Garden of Eden.

It is certain that this scene should not be considered a common hunting scene, like in mosaics in Tunisia, El Djem (Gauckler, P. Merlin, A., 1915, 231), or in Algeria (de Pachtere, F. G., 1911, 33). First of all, it possesses a symbolical meaning. The horseman is depicted between two symbols: in front of him there is a panther, which is an image of sin, cruelty and the Antichrist (Blankenburg, W. v., 1943, 101), and behind him there is a picture of a dog who represents justice, mercy, peace and truth. In Hellenistic tradition, the dog plays a role of a leader of souls through death and symbolises Hermes, whose other name is Psychopompos.

**Fig. 303**

**The circular narrating style**

Narrating one scene after another, the painter leads us to the primary source, the Christogram, which is represented on the west side. The sequence begins with the scene of the earthly hunt on the north side. The horseman is depicted as the vanquisher of the beasts of darkness, who progresses towards the Garden of Eden depicted on the east side. The painter used the same colour for the figure of the other horseman that he used for painting the Tree of Life on the east side. The horseman probably represents the other person buried in the tomb, and he is shown in the hunting scene in paradise as a purified being gazing at the most sacred Christian symbol, the Christogram, depicted on the west side. In this sense, the hunting scene on the north wall is symbolic in two ways. The artist seems to seek to reconcile two themes and two worlds. He consistently builds up this symmetrical pattern of elements and motifs, and shows an earthly and a heavenly hunting scene.

In early Christianity, south is the symbol of the Holy Spirit, while north symbolises turning away from God, light and faith. The representation of a victory rider – Christ himself, on the north side, as well as the picture of the Christogram on the west side, stresses the idea of the victory of light and faith over darkness and non-believing.

Even if we assumed a multiple symbolism in these scenes, according to which they might be taken to conceal certain ecclesiological elements cantered on the concepts of the ecclesia caelestis and ecclesia militans, we would come to similar conclusion. In this case, the earthly horseman shown on the north wall also indicates the liberation of man from this world and his acceptance into the ecclesia militans. The heavenly horseman, shown on the south wall, symbolises Man's final salvation in death and his inclusion into the ecclesia caelestis.

The scenes of an earthly and heavenly hunt are very successful expressions of an artistic idea, which unites Christianity and paganism. The painter speaks both to the Christians and the pagans: to both of them with a twofold aim. He shows to pagans that Christianity (of which they were surely afraid) could bring

**Fig. 304**

**Fig. 305**

them salvation in this world and in the afterlife, i.e. bring them eternal happiness. To Christians, who were often endangered by numerous pagan attacks, he wants to strengthen their beliefs and offer the happiness of salvation, which will come as the ultimate victory and perfect peace (Augustin Aur., 5, 13–14). The scene does not show only the aim, but also the path leading to it, which is one of the elements of early Christian meditation. It is, in fact, the meeting of Heaven and Earth, of the throne and the altar, of God and Man (Gerke, F., 1952, 115–137).

The mosaic on the triumphal arch in the naos of St Maria Maggiore in Rome, erected by Sixtus III after the Council in Ephesus, in 431, also includes a composition of the ecclesia militans and ecclesia caelestis.

The artist combines the variations of the horseman theme on the north and south walls and interweaves them into an integrated whole, as in a musical composition. This unity is emphasised not only with the colours (the prevailing hues are red, ochre and black on the north wall, and various shades of blue on the south wall), but also with the theme, since the scene of the earthly hunt is treated in a classical, pagan way. In conveying his message, the artist himself seems to be aware that the change from one faith to the other, from paganism to Christianity, is not a real act of conversion, of the desertion of one faith and adoption of a totally different one. Consequently, the idea of representing an earthly scene on the north side, and scenes from the afterlife on the other three sides must have seemed bold, attractive and, in a way, acceptable (Lavin, I., 1967, 99–113; Levi, D., 1974, 33).

A frieze with the grapevine is painted above the figural scenes on the front and lateral walls. The upper zones of the frieze have been damaged by plunderers. The grapevine and grapes are dark red and turquoise. The details of all the motifs are emphasised with white.

On the floor, the remains of at least four burials were found. The bones had been dislocated and fragmented by plunderers. Four skulls, one entire and three fragmented, were found, as well as a number of fragmented long bones. A coin of Constantine I, minted in 307, was found in the grave. However, some stylistic elements of the paintings indicate that the tomb should be dated to the end of the second or at beginning of the third decade of the 4$^{th}$ century.

**Fig. 306**

**Fig. 307**

**Fig. 308**

**The Pagan Tomb**

The paintings from the other, pagan, tomb, found at the site of "Pećine", the southern necropolis, are also very beautiful. On the inner frontal sides, figural motifs were depicted, while on the lateral sides there are combinations of floral and animal pictures. The tomb is marked as G-2624. Within the tomb, the dislocated and fragmented bones of two deceased individuals were found. According to Živko Mikić, one of them is a young woman, some 23 years of age, and the other is an elderly male, some 60 years old. The bones of the deceased woman show degenerative changes, which indicate a serious problem with her hips (Mikić, Ž., 2008, 37–45).

On each lateral side there is a peacock. Both of them are depicted in profile, facing west, i.e. facing the wall on which is depicted the person for whom the tomb was built. Both in imperial and in late antique times, peacocks were often depicted on tomb walls, most likely because of their decorative function. They are common both in Christian and in pagan art (Lother, E., 1929, 283; Anđelković, J., Rogić, D., Nikolić, E., 2011, 231–248). They possess multiple meanings: they are one of the symbols of the cult of Dionysus, but they are also connected to one of the most important Roman deities – Iuno (Forstner, D., 1967, 131), or the Greek Hera.

During imperial times, they represented the emblems of empresses and princesses. Since they are similar to starry skies (of which they are symbols, thus representing the apotheosis of heavenly beings), they are also connected to immortality, long life and love (Dunbabin, C., 1978, 166–169; Krahe, G., Zahlhaas, G., 1984, 55). They are often presented in pairs, on each side of a dish, especially in pagan tombs. They are represented in pagan tombs in Silistra (Dimitrov, D. P., 1961, 10–21; Dimitrov, D. P. 1962, 35–52; Димитров,

Д. П., Чичикова, М., 1986, 33; Frova, A. 1954, 25–40), but also in Christian tombs in Pécs (Gerke, F., 1952, 115–137; Fülep, F., 1984, 36–46; Fülep – Bachman- Pintér, 1988, 41), Nicaia (Firatly, N., 1974, 919–932), Beška (Đurić, S., 1985a; Đurić, S., 1985, 5–18; Marijanski-Manojlović, M., 1987, 17–31; Nikolajević, I., 1980, 304–305; Mano-Zisi, Đ., 1982, 147, Fig. 107), in several tombs in Sofia (Filov, B., 1913, 101; Valeva, J., 1981, 117–150; Valeva, J., 1981a, 39–46; Valeva, J., 1984, 22–28) and in Thessalonica (Pelekanidis, S., 1963, 8–12; Pelekanidis, S., 1965, 215–235; Nikonanov, N., 1969, 178–182).

The cantharus also represents a symbol of immortality, also being one of the favourite motifs in funerary painting (Elderkin, G., 1937, 41–45). It Roman art, it is often filled with water and wine and seldom with grapes. If it is filled with water, its inner side is painted blue, but if it is filled with wine, it is painted with dark colours, as in this case. When it is filled with water, its symbolism is twofold: it represents the source of life, but it also stresses the idea of immortality. In tombs from Illyricum, peacocks depicted with or without a cantharus are found in Beška, Nicaia, Pécs (Fülep, F., 1984, 36–46; Fülep, F., Bachman, Z. Pintér, A., 1988, 44), Thessalonica (four tombs), Sofia and Silistra (Димитров, Д. И., 1960, 95–100; Dimitrov, D. P., 1961, 10–21; Dimitrov, D. P., 1962, 35–52; Borda, M., 1958, 139–149; Hoddinott, R. F., 1975, 140–142; Schneider, L., 1983, 39–55). Apart from the Viminacium tomb, only the tomb from Silistra is pagan, while all the others are Christian.

Above the peacocks, there are garlands painted red. They represent devotion and honour. They are often used for separation during initiation. They symbolise a connection, in this case with a beloved person. In Roman sepulchral cults they represent life after death, possessing the same meaning as flowers (Turcan, R., 1979, 1–23; Đurić, S., 1985a; Đurić, S., 1985, 5–18).

One hanging wreath is painted above the peacock on the northern side, and two are painted above the peacock on the

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southern side. Their iconographic arrangement is more complex, since their composition is linked to birds, in this case peacocks, thus their function is not merely decorative.

Wreaths and birds are found together in tombs in Thrace, for example in Serdica (Miætev, K., 1925, 5–14), Reka Devnya (two tombs) (Димитров, Д. И., 1960, 95–100; Rostovcev, M., 1915, 4–68; Gerasimov, T., 1961, 53–55; Gerasimov, T., 1965, 222–225; Gerasimov, T., 1976, 51–57), Constance (Netzhammer, R., 1924, 24), Plovdiv (Mavrodinov, N., 1926, 21–49; Ovčarov, D., 1977, 22–30; Ovčarov, D., Vaklinova, M., 1978, 26–27), further on in Epirus, three tombs in Thessalonica (Pelekanidis, S., 1963, 8–12; Pelekanidis, S., 1965, 215–235; Παλεκανιδις, Σ., 1977, 75–96), Corinth (Παλλας, Δ., 1971, 121–134; Pallas, D. I., 1975, 1–19), and in Pannonia, in Pécs (Fülep, F., 1984, 36–46). Such characteristics are found in an already published tomb from Viminacium (Rostovcev, M., 1915, 4–68; Vasić, M., 1907, 66–98.). Somewhat more complex wreaths are found in painted tombs in Brestovik (Valtrović, M., Vasić, M., 1906, 128–140; Vasić, M., 1907, 66–98; Nikolić, E., Rogić, D., Anđelković Grašar, J., 2018, 195–268), Čalma (Milošević, P., 1973, 85–93) and Sirmium (Milošević, P., 1971, 3–13).

The most complex type of wreaths are those linked to the individuals to whom the tomb is dedicated. In this case the function of wreathing the deceased is to symbolise his/her victory over death. The two wreaths above the deceased's head in Viminacium are painted to emphasise the idea of immortality.

Such an iconographic arrangement is also seen on Roman tombstones, reliefs and sarcophagi, for example the sarcophagus from Sidon or the stele from Assisi. This triumphant characteristic of the wreath was conveyed in early Christianity, and is a frequent motif in tomb painting, such as in the catacombs in Rome, Naples and Sicily (Agnello, G., 1953, 122–124). Wreaths are a favourite motif in Roman art, particularly in tomb paintings. They appeared as a customary decorative element as early as the Hellenistic period (Rostovcev, M., 1914). They are often used as one of the motifs on sarcophagi, the "sarcophagus with wreaths" (Koch, G., Sichtermann, H., 1982, 23–56) and in the 2$^{nd}$ century they were also found on ceramic vessels used as urns (Strong, D., 1980, 169–170).

The Greeks call wreaths, while the Romans refer to them as *corona*, *coronare*. They were also used in cults and were beloved during family celebrations, very often during funerals and the rituals that accompanied them. They were also used as architectural decoration and were often placed on temples, such as at the temple in Tivoli known as the "Temple of Sibyl" (Brown, F. E., 1961, 43; Brown, P., 1971, 65).

In addition to wreaths, flowers with four petals are painted on the longer sides of the Pagan Tomb where the peacocks and cantharoi are. Because of their symbolical meaning and decorativeness, they are often used in tomb paintings of the Mediterranean (Đurić, S., 1985a). When they are used merely for decoration, they are painted as the sole and basic motif. Examples of such representations are found in the published and in some unpublished tombs from Viminacium (Rostovcev, M., 1915, 4–68), several tombs from Serdica (Filov, B., 1913, 101; Miætev, K., 1925, 5–14; Valeva, J., 1981, 117–150; Valeva, J., 1981a, 39–46; Valeva, J., 1984, 22–28) and Thessalonica (Pallas, D. I., 1975, 1–19; Pelekanidis, S., 1965, 215–235), tombs from Marcianopolis (Rostovcev, M., 1915, 4–68), Nicaia (Firatly, N., 1974, 919–932), Čalma (Milošević, P., 1973, 85–93), Solin (Bulić, F., 1903) and two tombs from Pécs (Fülep, F., 1984, 36–46).

In this case, the flowers only have the function of fulfilling the composition. Similar functions are given to flower decorations in the tombs from Brestovik (Valtrović, M., Vasić, M., 1906, 128–140; Nikolić, E., Rogić, D., Anđelković Grašar, J., 2018, 195–268) and one of the tombs from Sofia (Miætev, K., 1925, 5–14).

Flowers with four or five petals symbolise the microcosm, but they also signify the fragility of childhood and the temporality of life. A blue flower suggests remoteness, a red flower symbolises dawn, sunset, and, in combination with blue flowers, death. In this case it has an anthropoeic meaning and is of help to the deceased.

The flower with four petals painted on three sides of the Pagan Tomb is not given in an organised form, but is scattered and combined with the pictures of the peacocks, wreaths or figural depictions. What is immediately apparent is that the flowers are proportionately larger than the peacocks, and are particularly larger compared to the picture of the sacrifice bearing servant (Đurić, S., 1985a).

Depictions of flowers with four petals are found almost in the entire Mediterranean basin of the Roman Empire, both as ceiling decorations, such as in Archosilia III and IV in the catacombs in Villa Torlonia in Rome, in the Lucina catacombs in Rome, or the so called "Hermes tomb" in Rome, dating back to A.D.

240 (Đurić, S., 1985a) in the tomb denoted as "tomb Z" under San Sebastian in Rome (Bakhuizen van den Bruk, J. N., 1933) or in the palace in Dura Europos (Perkins, A., 1973; Kraeling, C. H., 1967).

Some examples from Ostia (Calza, G., 1940), Rome (Andreae, B., 1963), Sicily (Boeselager, D. von, 1983), Ciusi (Bianchi-Bandinelli, R., 1980) and Kazanlak (Mikov. V., 1954; Zhivkova, L., 1975; Bianchi-Bandinelli, R., 1980a; Vassiliev, A., 1963, 22–68), Syria (Tchalenko, G., 1953) or Pani (de Palol, P., 1969) strikingly show just how popular flowers with four petals were.

At this time, we will not enter into a discussion of their symbolic, astral (Buisson du Mesnil, 1941, 240–260) or botanical (Pfister, 1924, 277–328; Pfister, R., Bellinger, L., 1945; Đurić, S., 1985a) meaning.

Three red flowers with four petals are painted on the southern lateral side, and twelve are painted on the northern lateral side of the Pagan Tomb. The eastern side, on which the sacrifice bearing servant is painted, has one blue four petal flower and one red four petal flower. Two red ivy leaves are painted on the same side next to the four petal flowers. Ivy, as an evergreen plant, also emphasises the deceased's aspiration towards eternal life.

A sacrifice bearing servant is painted on the eastern, lateral side. Unlike tombs in other parts of the Roman Empire, on which several sacrifice bearing servants are depicted (for example in Beška or in Silistra), the Pagan tomb from Viminacium contains only one representation of a sacrifice bearer, making the entire composition more suggestive and direct.

The servant is placed diagonally to the trapezial field in which it is located, painted in lively movement, turned in a three-quarter profile with a somewhat bent back. He has thick curly hair, large dark eyes, and rouge on his cheeks that is meant to evoke all the plasticity of his beautiful face.

The servant is wearing a torque around his neck, which is painted dark red, the same tone used to emphasise his face, the contours of his nose and the ivy leaves in the background. He is wearing clothes typical for the first half of the 4th century, which, with some small changes, were worn throughout the whole 4th century (Pace, B., 1955, T.XVII; Димитров, Д. П., Чичикова, М., 1986, 22; Чубова, А. 1966, fig. 103). These are a knee length white tunic (*tunica*) that is hemmed (*mutare clavum*) and has a thin belt around the waist.

The tunic is a garment that the Romans took over from the Semits. This is also confirmed by Lucullus who says: *tunicae Lydorum opus*. According to Plautus, there were also tunics with short sleeves (Plautus, Transl. Nixon P., LCL). They had the shape of a sleeveless shirt and were tied around the waist. Roman men wore a toga over them and the women wore a stole. It was not until the later period that the Romans wore two tunics, one on top of the other; the one worn underneath was called a *tunica interior*, and the one worn on top of it was a second long-sleeved tunic, a *tunica manuelata*.

The tunica has a decorated hem around the knees and a tavlion in the thigh region (Huston, M. G., 1931 (2003), 117). A tavlion is visible on the right thigh in the shape of an almost closed "U" letter. Another tavlion is probably located around the left thigh, just above the knee. The tavlion underwent its own development: at first it was low, almost at knee height, and then it climbed to the chest, and in the 6th century it was placed on the back of the shoulders. The tavlion is actually a decoration in the form of a square or rectangle that is sewn along the front vertical edge of the garment.

On one of the frescoes in the catacomb of the Pretextat in Rome (Wilpert, J. S., 1903; Wilpert, J. S., 1907; Wilpert, J. S., 1916; Wirth, F., 1968), which depicts the mysteries dedicated to Sabasius, one of the three sacrifice bearing servants is dressed in the same clothing as the sacrifice bearing servant from Viminacium. There are two parallel lines at the transition from the forearm to the arm on the sleeves of the *tunica manuelata*, representing a cuff like decoration.[18]

The sacrifice bearing servant in Viminacium Pagan Tomb has a pallium thrown over his left shoulder. The pallium (Huston, M. G., 1931 99; Wilson, L. M., 1924; Wilson, L. M., 1938) was a type of Greek cape worn by the Romans (Kreis v. Schaewen, R., , Art. Pallium, 249–254.). It was usually made of wool and was

[18] Concerning Greek and Byzantine clothes, there are very useful works by Wilson, L. M., 1938, *The Clothing of the ancient Romans*, London 1938 as well as Huston, M. G., 1931 (2003), Ancient Greek, Roman & Byzantine Costume, New York, 1931 (last edition in 2003).

described as a piece of clothing by Cicero (Cicero, De Nat. Deo. and Acad., LCL; Cicero, De Rep. and De Leg.; Somnium Scipionis, LCL), Petronius (Petronius, LCL), Martial (Martial, LCL), and Ammianus Marcellinus (Amm. Marcel., LCL).

Classical authors mention several types of *pallia*, such as the *pallium tavlion* mentioned in Codex Theodosanius (Cod. Theod. XII, 2, 21; Cod. Theod. I, 1954; Codex Theod., I, 10, 1) or the purple pallium known as the pallium discolour, worn by the Roman emperors Carinus (SHA, LCL) and Probus (SHA, LCL). The work of L. M. Wilson is very useful concerning the clothing worn by the Romans in the classical period.

There are numerous depictions of pallia in Roman art. They are found in tomb or grave paintings and in crypts, such as the frescoes in the catacombs of Vitta Silvestris, or the catacombs of the Gnostics in Rome (Wirth, F., 1968), on sculptures (Strong, E., 1926) and sarcophagi, such as the sarcophagus of Claudia Antonia Sabina (Morey, C. R., 1924, V, 1; Morey, C. R., 1953).

The sacrifice bearing servant in Viminacium Pagan Tomb is wearing leather footwear, some sort of low-cut shoe that is tied with a strap and was called calceus by the Romans and worn with their toga, stole or tunic (Polybius, LCL).



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Several types of footwear were worn in the Roman era: *caliga*, a sandal tied with several straps (Mau, Art. Caliga, PW RE III 1355), *carbatina*, also a special type of sandal that was primarily worn in the army, *solea*, sandals with only one or two straps (a type of slipper like those found in Fimmersdorf) (Marschalleck, K. H., 1959, 397–398), *soccus*, a type of house shoe (Chapot, V., Art. Soccus, DS, IV 2, 1365), and *calceus*, a type of half-closed shoe (Mau, Art. Caliga, PW RE III 1355).

There were several models of *calcei*: *calceus mulleus*, *calceus patricius* and *calceus senatoris*, and some, as cited in Diocletian's edict, had a very specific tariff, such as the senators', which were 100 denarii or patricians' which were 150 denarii (Blümner, H. B., 1893, 453; Blümner, H. B., 1912, 1875–1887; Lauffer, S., 1971, 126, 243, Kap. 8). Reliefs on the triumphal arches of Titus and Diocletian and the pillars of Marcus Aurelius and Trajanus offer considerable proof of the footwear and clothing of different periods and different occasions during the Roman era (Petersen, E., Domaszewski A., von, Calderini, G., 1896; Cicorious, C., 1896).

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The sacrifice bearing servant in Viminacium Pagan Tomb is wearing low-cut shoes which were not part of the daily Roman costume, such as sandals. Low-cut shoes were normally worn on festive occasions and during feast days. Concerning Roman footwear, there are several very detailed studies (Gopfrich, J., 1986, 5–67) by Gopfrich, as well as Busch, Paret, Forrer and Marschalleck (Busch, A. L. 1965, 158–210; Paret, O., 1951, 166–167; Forrer, R., 1942; Marschalleck, K. H., 1959, 397–398).

The sacrifice bearing servant is carrying a blue ellipsoid tray bearing two loaves of bread. The Romans name for bread was *panis* (Pliny, Natural History, LCL). Depending on the property status or depending on the celebration and ceremony, several types of bread were used. Triangular shaped bread was known as *panis trifidus* (Paulinusm vita Nola, ed. Hartel, CSEL; Dölger, F. J. D., 1929), quadrilateral shaped bread was *panis quadratus* (Dölger, F. J. D., 1910), and there was also bread in the shape of a pentagon (Besnier, M., Art. Pistor, pistrina, DS 4, 1, 494–502, (5698)), hexagon or octagon (Dölger, F. J. D., 1910).

A sarcophagus from Lateran depicts the process of making bread in all its phases, from wheat to the finished bread, *panis quadratus* (Blümner, H. B., 1893, 453; Blümner, H. B., 1912, 1875–1887). Virgil left notes about how bakers would use a special wooden mould to print bilateral cross like cuts into rolled out bread dough.

In the Greek era, bread was round and flat as a rule. In ancient times, bakers baked oval or round flat bread, most often in ashes (Klebs, L., 1915). Larger round bread loaves were used for daily consumption (Steindorff, G., 1913; Klebs, L., 1915).

One of the finest breads was made in the shape of a wreath and was called *panis corona*, which is the type found on the tray which the servant is carrying as an offering.

It has been recorded that once on a special occasion Aurelianus distributed this kind of bread to the people (SHA). Distributing bread to the people has also been immortalised on coins such as *Annona Aug.* and *Liberalitas Aug* (Mattingly, H., Sydenham, E. A., 1927; Mau, Art. Caliga, PW RE III 1355). On feast days, this bread was used as the bread of health and happiness and was then called *accullata*.

Pictures of *panis coronae* have often been found (Dölger, F. J. D., 1910). The wreath shaped bread used in them had a larger circular opening in the middle. A circular shaped bread is also found on a relief from Troy showing Helios Serapis and Izida.

This bread is similar to *spirae*, a flat bread made like a kind of pretzel or đevrek (Ekstein, F., 1927, Art. Gebildbrote; Ekstein, F., 1933, 238) (a round roll with a hole in the centre). This type of bread is carried on a blue tray by the servant depicted in the tomb in Beška (Marijanski-Manojlović, M., 1987).

In the early Christian period, *panis corona* was readily served during communion as one of the most refined breads. Its use in a completely different meaning (obscene) is mentioned by Martial (Martial, Transl. LCL) under the name *cunni siliginei* as food used by Priapus in special circumstances. Petronius also associates this type of bread with Priapus.

According to some elements, the closest stylistic analogy to the sacrifice bearing servant is the depiction of a servant from the tomb in Durostorum (*Silistra*). Their clothing, in particular, is similar as well as some details such as the tavlion on the tunic above the right thigh, which is identical.

Scenes with a sacrifice bearing servant were also found on wall paintings in the "Praetextat" catacomb in Rome, on which several servants are taking part in mysteries dedicated to the cult of Sabasius (Wilpert, J. S., 1907).

However, the manner in which the hair of the sacrifice bearing servant is styled is closer to the reliefs and sculptures from the 4$^{th}$ century (Ruprechtsberber. E. M, 1980, 128–140) than to those painted in tombs during the time of the Roman Empire. The hairstyles of the barbarians from the porphyry sarcophagus of St. Helena from the second quarter of the 4$^{th}$ century are very close to the hairstyle of the sacrifice bearing servant (Delbrueck, R., 1932).

The western, anterior wall contains a portrait of the deceased. It is the central tomb painting, which evokes the person for whom the tomb was intended.

It is a woman aged between twenty and thirty. Unlike other tombs in which the painted human figures are rather schematic and standardised, the departed woman here is not shown in either a hieratic or conventional manner (*cf.* Anđelković Grašar, J., 2015, 269–275; Anđelković Grašar, J., Tapavički-Ilić, M., 2015, 17–19). The portrait is individualised, and probably bears a genuine resemblance.

Portraits are one of the foremost characteristics of pagan sepulchral iconography. They are very frequent on stelae and sarcophagi, and they are somewhat less typical for tomb painting, as in this case. Their basic characteristic is the symbolical meaning of the deceased's apotheosis. The deceased woman is placed facing forward, looking to the right.

The woman is young and has a long oval face, large chestnut eyes, a long straight nose, sensual lips and a delicate, slender neck. Unlike the face of the sacrifice bearing servant, which is emphasised with rouge on his cheeks, the face and neck of the deceased woman are painted white, without highlighting her young age. Her chestnut coloured hair falling to her chin is bluntly cut and shaped and is decorated in the upper part with a small thin net. It is known that married women were depicted either with nothing on their heads, or wearing a kind of a cap. Unmarried women wore nets or forehead bands. Such representations are mostly known from the early Byzantine period (Sydow, von W., 1969; Ruprechtsberber. E. M, 1980, 128–140).

Short chin length hair was a style that was popular in the 4$^{th}$ century, although some women painted on frescoes wore such a hairstyle as early as the end of the 3$^{rd}$ century, for example the virgin with child from the catacomb of St. Priscilla.

Hair is similarly fashioned in the frescoes of the catacomb of St. Agnes, cemeterium Maius from the mid 4$^{th}$ century (Denis, M., 1939; Hamann, R., 1932), or the portrait of the woman from the catacomb of Vigne Massimo.

It can be also seen on the coins of Galeria Valeria minted in Serdica and Thessalonica in 308, as well as on the posthumous medallions of Flavia Julia Helena (Constantius Chlorus's wife, who died in 330) and of Flavia Julia Constantina (Licinius's wife, who died in 328 or 335). Another analogy is depicted on sarcophagi from the 4$^{th}$ century, such as the "Adelphia" sarcophagus from Siracuse (Lasssus, J., 1976).

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The closest analogy to this painting can be found in the portrait of a woman from Frosombrone, Vernarecci Museum 24 (Sydow, von W., 1969; Rilliet – Maillard, I., 1979, 17–28; Ruprechtsberber. E. M, 1980, 128–140). The treatment of the coiffure is almost identical, the only difference being that the decorative hairnet covers only its upper part. This kind of coiffure was in fashion from the 3rd century. In pictures showing Iulia Mammea from about 220, her hair is down to her chin and divided in the middle and swept behind her ears. Iulia Domna wears a similar hair style, but her hair is not divided in the middle (Zaloscer, H., 1961). Similar hairstyles are shown on coffin reliefs, like from the Thermae Museum in Rome, on the sarcophagus of Baebius Hertophilus from the 3rd century, or on the sarcophagus from Tarragona, also from the 3rd century (du Bourguet, P., 1973).

Another portrait very close to the painting from Viminacium is the one forming a part of the representation of a married couple on a 4th century glass cup. On this glass, there is an inscription PIE ZESES (Vollbach, W. F., 1961; Vopel, H., 1899; Froehner, W., 1901).

There are considerable similarities between the two portraits. The hair is treated in the same way, the face is elongated, the eyes, looking right, are large with dark irises near the lid. The two portraits differ only in the decoration of the hair: one has a diadem and the other a hairnet.

Such depictions on glasses are rare (Vopel, H., 1899), but they can be found in the stucco decorations of some catacombs in Rome. The deceased woman is wearing square gold earrings inset with a precious blue stone. The extent of this type of earring's chronological sensitivity is difficult to determine: they have been found in tombs of the Viminacium necropolis dating from the beginning to the end of the 4th century, while some depictions on mosaics from the 6th century only confirm how chronologically insensitive they are. The deceased woman is also wearing a string of round beads around her neck, probably made of semiprecious stones. Seven beads can be seen. This type of necklace was also fashionable in the 4th century and adorns the neck of Gala Placidia on a medallion fashioned from a combination of gold and glass (Morey, C. R., 1924, V, 1; Morey, C. R., 1953) where she is depicted with her children Valentinian III and Honorius. The same type of necklace is also found on a coin of Aelia Flaccilla, the wife of Theodosius I, which was minted in Antioch between A.D. 383 and 386, and even on a coin of Aelia Eudoxia from A.D. 400–404 (Kent, J. P. C., Overbeck, B., Stylow, A., 1973).

Next to the portrayed head of the deceased there were garlands hung with one of the endings on the corner of the picture. The other ending was hung onto the rectangular field behind the woman's head. These two garlands depicted above the head of the deceased stress the idea of immortality.

A study of the paintings in the cemeteries of Viminacium poses several problems to the present author. One of them is the interpretation of the blue rectangular panel painted behind the head of the deceased woman. One possibility is that the artist wanted to make use of the phenomenon that blue and yellow (ochre), when juxtaposed, have a scintillating effect and gain in intensity.

Another is that the panel represents a *fenestella* (a kind of window), i.e. an architectural detail meant to symbolise the Epiphany (Pfister, 1924, 277–328), together with the garlands. There are also other possible explanations, but the most likely is that the artist painted a blue quadrangular halo.

On Coptic clothes that were discovered at the Eh Sajet necropolis near Ahimn (now in the Museum of Christian Antiquitis, in The Louvre), there are curtains decorated with garlands and portraits, with women praying under arches, and priests and orates under flowers. They belong to graves and mausoleums and, in 5th century, they influenced catacomb paintings from Naples as well as African sarcophagi. In the picture on the arch of Neo's baptistery in Ravenna there are deceased standing in front of such curtains, praying on their way to Heaven. Such curtains represent an *antependium*, a symbol of what is called *mors utique vitae medium* (Gerke, F., 1973).

Here is probably depicted a rectangular blue halo. Squares, named "tetragonon" are symbols of perfection, which comes from Pythagorean teachings and in which it represents a mystical number. Among other things, it symbolises the earthly life, a man's soul and a man's life. It appears as a symbol of ethical (moral) and intellectual perfection. Plato, in his work *Protagora*, names an exceptional man (a man with no sins) tetragonon. This idea was taken up by Aristotle in his *Nicomach's Ethics* and it continued to exist throughout the whole antique and late antique period and became accepted in Christianity. One

of the favourite names in early Christian times is exactly *Quadratus*. For Filon from Alexandria, a Jewish-Hellenistic philosopher from the first half of the 1st century, tetragonon is the symbol of justice (*orthos logos*). While describing a righteous Christian person or a "gnostic" in the twelfth chapter of the sixth book *Stromata* (written shortly after 200), Clemes from Alexandria compares him with a square. Origenes, Clemense's pupil, the most famous and most educated among the fathers of the church, describes a perfect life as a square (Origenes, Homilies on the Book of Genesis, II, 4; VI, 32, 1. 8).

Although haloes, as the light of the sky, are mentioned by Virgil, who takes this on from Homer (Keyssner. K., Nimbus, PWRE XVII, 1, 591–624), they were depicted for the first time in frescoes in Pompeii as a simple disc (Pistolesi, E., 1847; Rizzo, A., 1929). The shape of the Roman and early Christian round halo symbolises the world, but sometimes it possesses a merely decorative function, serving as a background for portraits (Ladner, G. B., 1983).

A halo is depicted above the heads of godly and holy persons, to show their dignity. It is represented in various shapes, depending on the person's rank. It is sometimes triangular, like in the representations of the Holy Father, Christ or the Holy Spirit. The Trinity is often represented with three beams of light, which substitute for a triangular halo. Most common are round haloes with a small cross on the top, and represent holy persons. A halo can be richly decorated, like the one crowning the head of Madonna, but also rather simplified and without decoration, when it crowns the heads of the Saints.

In the hierarchy of haloes, the square variant is inferior to the circular, triangular or polygonal forms and represents the lowest grade. It is used for two categories of secular people: for donors or founders and for persons of a prominent official status (as in the mosaic showing the prefect Leontius on the pillar in the Church of St. Demetrius, in Thessalonica) (Gerke, F., 1973).

In Late Antiquity, square haloes are rare and to date there are only 36 known cases. They are equally represented in paintings and mosaics (Wulff, O., 1918) with Christian or pagan content. They can be depicted in gold, ochre or blue (Ladner, G. B., 1983; Đurić, S., 1985a; Đurić, S., 1985, 5–18).

The deceased is wearing an expensive, heavy, indigo dyed draped brocade stole (stola, stola) (Wilpert, J. S., 1898; Huston, M., 1920, (second edition 1954); Wilson, L. M., 1938; Bieber, Art. Stola, PW RE IV A 1, 56–62). The stole was a luxurious ankle length cloak that the Romans took from the Greeks, and the Greeks took from the Persians through Media (Nonnos, Dionysiaca, Transl. LCL). According to Apuleius, the stole was a consecrated and inseparable part of the Isidas cult (Apuleius, The Golden Ass (Metamorphoses), LCL). Mar-

**Fig. 313**

tial tells us about the sumptuous stoles worn by some female Roman citizens that could be compared with the praetext toga of wealthy Roman citizens, saying ...*"quisquis stolaeve purpuraeve contemptor"*... (Martial, Transl. LCL).

Women usually wore a stole over the *tunica talaris*. The deceased woman is wearing a stole that is ornamented with gold thread and clavuses. According to Clemens from Alexandria, in his *Paidagogus* he mentions that such clothes were made in Militus or in Italy (Stählin, O., 1939). In the 3rd and 4th centuries, rich ornamentation was not in harmony with the austere Roman spirit. The broad and narrow vertical stripes with which the stole is decorated clearly indicate that the woman enjoyed a very high social status.

In addition to the clavus, Roman ladies used other forms of decoration and ornamentation on their stoles and dresses such as the tavlion and rote. The broader or narrower vertical stripes used to decorate the stole corresponded to the bearer's rank, i.e. whether it was the rank of a senator (*stola et tunica latisclavia*) or knight (*stola et tunica anguisticlavia*).

The garment is decorated at the shoulder with sewn on ellipsoid and square gems. The woman painted in the catacomb of St. Cecily wore similarly applied ornaments on her garment (Kraus, F. X., 1896, Bd. I).

In fact, a form of "golden collar" of the type also found in the 5th century (mosaic in the Church of St. Maria Maggiore, 432–440) was formed in this way. It became fashionable only in the 6th century, and from that time onwards it was an independent ornament, like the mosaics representing Empress Theodora and her ladies-in-waiting in the Church of St. Vitale in Ravenna (Fischer, P., 1971).

The right arm of the woman painted in the Pagan Tomb from Viminacium is bent at the elbow and the hand rests near the top of the thorax. She holds a bottle made of milk white glass. The bottle has an oblique, flared and slightly thickened rim, a high cylindrical neck, globular body and, probably, a slightly concave bottom. Several bottles of this type have been found as grave goods in the late classical cemetery of Viminacium.

Depicting glass also has a long tradition in pagan and Christian art (Isings, C., 1979, 81, 45–48). In some portraits from Egypt, painted on wood, there are representations of glasses. In one of the portraits, kept in the Brookline Museum, there is a girl depicted holding a glass in her right hand (Drerup, H., 1933).

The symbolical meaning of glasses is important both to Christians and to pagans. Some scenes depicted on glasses (like glasses from the 4th century showing married couples) (Vopel, H., 1899), or portraits made in clipaeus, like the portrait of one of Constantine's sons (Fremersdorf, F., 1967), clearly show the importance of glass in Roman times.

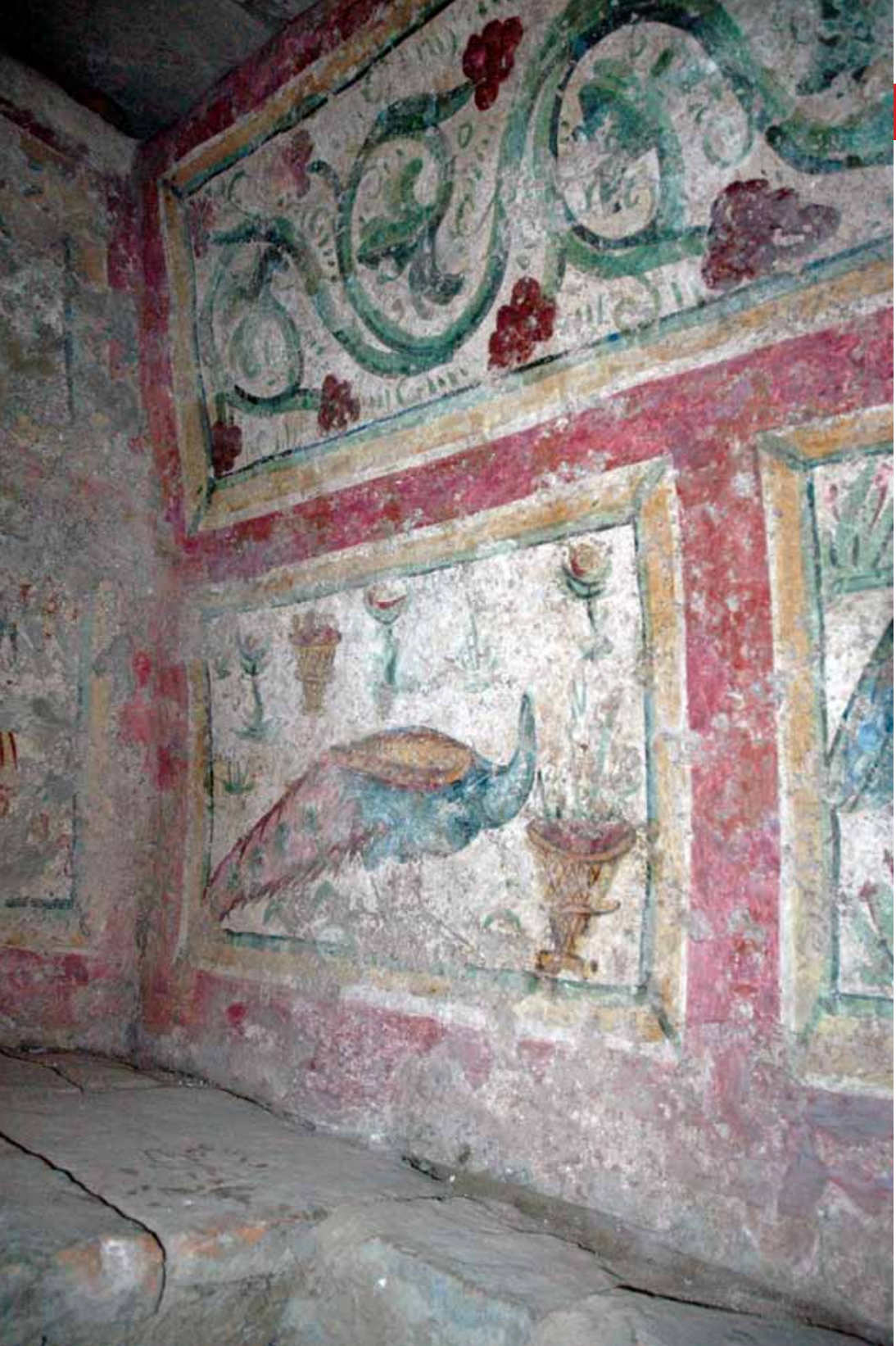
Based on stylistic analogies to paintings as well as iconographic parallels, the painting from the Pagan Tomb can be dated generally around the mid- 4th century, with closer chronological determinants of 346–350, or the end of the fifth and the beginning of the sixth decade of the 4th century.

On the one hand, this conclusion can be drawn by the relative chronology of the late Roman level in which the tomb was found and by coin and stamped brick finds originating from late Roman tombs on the other. All of the coins found in the tombs located directly inside the memorial and next to it, like the tomb marked as G-2800, belong to the 4th century and mostly date to the period of Constantine and Constantine II.

Several bricks with different stamps have been found in tombs made of brick. Among the bricks forming the coffin in Tomb G-2677 there was a brick with the stamp LEG VII CL C VICTXIII VI PP. Tomb G-2681 contained two bricks with the stamp LEG VII CLRENO EMP CONCORDV and LEG VII CL SD/ADVENTINI PF, as well as three bricks with the stamp LEG VII CL AS/SC MVCATRE PP. In tomb G-2766 there was a brick with the stamp LEG VII CL AV/SC MVCATRE PP. All the bricks chronologically belong to the period of the reigns of Diocletian and Constantine (Душанић, С., 1961, 141–154; Dušanić, M., 1976, 275–283). All the bricks are of late Roman Viminacium brick production which was highly developed during the entire Empire period.

The rubble above the Pagan tomb from Viminacium contained a bronze coin that was minted in Nikomedia at the time of Constantine II, between 346 and 350 (Carson R. A. G., Kent, J. P. C., 1965, LRBC), which was simultaneously a *terminus post quem* for the deceased's burial.

Fig. 314





**The Tomb with Cupids**

During excavations in 2003 at the site of "Pirivoj", the eastern necropolis, a tomb was discovered next to the outer, northern mausoleum side, which was marked as G-160. It possesses a trapezial cross-section and a construction made of horizontally laid bricks. It is orientated west–east, with a deviation of 6° of the western end towards the north. A gable roof was made of bricks and it remained preserved in its eastern part, while the western part was removed during a robbery. At the northern lateral roof side, three bricks remained preserved and on the southern side only one. Only one of the horizontally laid bricks, measuring 54 x 54 x 6 cm, of which the gable roof was made, remained preserved in its middle. The roof relied on a bank that was 8 to 10 cm wide. The eastern roof end was closed with two vertically laid bricks. They measure 41 x 40 x 6cm and 38 x 26 x 5cm. The tomb coffin consisted of horizontally laid bricks bound with lime mortar. The outer tomb dimensions are 2.80 x 1.85 x 1.40 m. The coffin dimensions are 2.07 x 036 m. Its depth is 1.35 m, measured from its upper level. The tomb was paved with three rows of horizontally laid bricks. The middle row consisted of five longitudinally laid bricks, while both lateral rows consisted of eight latitudinally laid bricks. Each brick measures 40 x 28 cm. The pillow at the western end consisted of four longitudinally, diagonally laid bricks, bound with lime mortar. Within the tomb, the bones of at least two deceased individuals were discovered. The bones were dislocated and fragmented. All four walls were fresco depicted on their inner sides. Unfortunately, the frescoes on the western frontal side remained only partially preserved. The western frontal side was framed red with a band of unequal width (5 to 8 cm). The framed field was divided into two unequal trapezial fields, of which the lower is bigger and the upper is smaller. The lower, bigger trapezial field was framed with a 3 to 4 cm wide ochre and green band. On its inner side, it is framed with a 1 cm wide black frame. Floral motifs painted red on an ochre background remained partly preserved. It is most likely that in this field the central picture was depicted, which was dedicated to the deceased person (or persons) buried here. Unfortunately, during a robbery, there was probably an attempt to remove the frescoes from the western frontal wall and, because of that, they were mostly destroyed.[19]

[19] In the earth filling of the tomb and on the tomb floor, cigarette butts and a cigarette package were found, left by the robbers. The production year printed on the cigarette package is 1997.

**Fig. 315**

Fig. 316

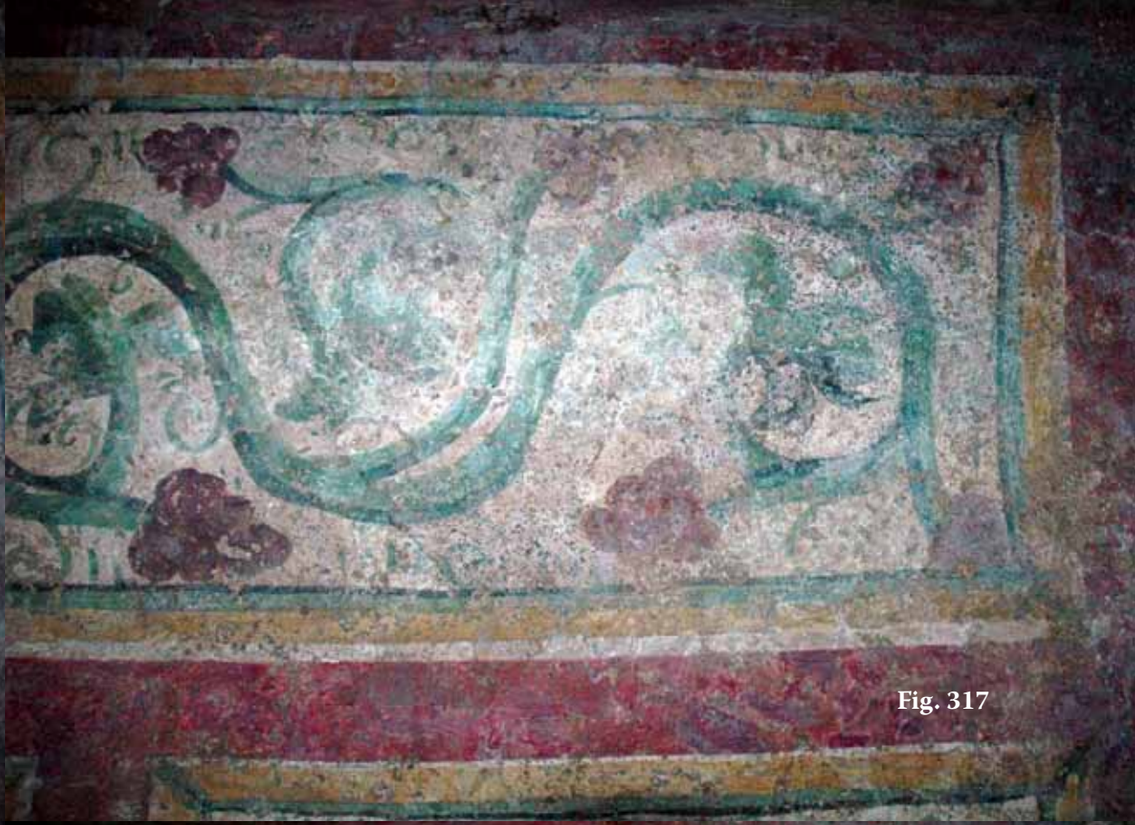


Fig. 317

Fig. 318

Fig. 319

**Fig. 320**

**Fig. 321**

The frescoes remained partly preserved in the upper and lower zones of the trapezial fields. The upper, smaller field, with a trapezial cross section, was also framed in ochre and green. In this severely damaged field, an inscription was found. It is mostly destroyed and only two rows remained preserved. Some letters are legible. In the first row, there are the endings of letters that could not be determined. In the second row, the letters TROP remained preserved together with TIA.N. in the third row.

Considering that inscriptions are very rarely found within tombs, this clearly shows the importance of this tomb.

The eastern frontal side was also framed with a red band of unequal width (5 to 8 cm). Just like the western side, it was also divided into a bigger, lower and a smaller upper trapezial field.

Both fields were framed with a 3 to 4 cm wide ochre and green band. In the lower, bigger, field, two Cupids with spread wings were depicted. They were depicted in a dynamic position, next to a cantharos. There are ornamental bands flying around their heads, showing a festive mood filled with love.

The longer, latitudinal sides were also framed with red bands of unequal width (5 to 8 cm). Each of them was divided into four rectangular fields of unequal dimensions. Each field was framed with a 3 to 4 cm ochre and green band.

On the southern longitudinal side, in its upper zones, a floral motif was depicted in green and red on an ochre background. In one of the fields under it, there is a peacock depicted next to a cantharos. The peacock is facing the central picture on the western frontal side. In the next field there is a pair of birds, possibly two peacocks playing a love game, with their heads hidden behind their bodies or doves/quails (cf. Anđelković Grašar, J., Nikolić, E., Rogić, D., 2013, 87–89). In the field closer to the western frontal side, there is a rectangular field with the representation of a sacrifice bearing servant. He is wearing a long gown and he holds a tray in his hands, on which ritual breads are depicted. His footwear clearly represents the fashion of that time.

On the northern longitudinal side, in its upper zones, there is also a floral motif depicted in green and red on an ochre background. There are two fields under it, in which peacocks were depicted. In the field closer to the eastern frontal side, there is a peacock depicted next to bowls filled with fruits and flowers. The peacock is facing the central picture on the western frontal side. In the field next to it and under the field with floral motifs, there are two birds depicted, representing parallels to the birds depicted on the southern lateral side. In a rectangular field next to the western frontal side, there is a representation of another sacrifice bearing servant. Just like the servant depicted on the southern wall, he is in a standing position. With is right arm he is pointing to the central picture on the western frontal side.

Representations of Cupids (*Cupido*) in Roman art and of Eros in Greek art, poetry and literature are numerous. Ovid describes him as a capricious and spoilt child. In his work Metamorphoses, Apuleius tells a story of Cupid and Psyche (Apuleius, Metamorph., 4,28–4,35, LCL). Cupid, the god of sensual love, is Venus' son. he is often represented as a winged boy following Venus or, sometimes, Victoria. His romance with Psyche, a beautiful princess, was one of the favourite topics in Greek and Roman art (*cf.* Anđelković Grašar, J., Nikolić, E., Rogić, D., 2013, 73–100).

The paintings from Viminacium confirmed an old fact and revealed a new one. They provided additional evidence that pagans and Christians were sometimes buried at the same cemetery and that the coexistence of the classical and the Christian was not only possible, but quite common. The necropoles of Gamart (*Carthago*) and Hadrumet (*Souse*) confirm this. The new fact is the great artistic worth of the Viminacium tomb paintings themselves, which rank among the finest from the late classical period.

The paintings in all the graves are distinguished by superb technique, which is rarely equalled in the tombs of the late classical period.

It is almost certain that artistic workshops existed in major urban centres and provincial capitals such as Thessalonica, Sofia, Salona and Pécs. The discovery of almost thirty painted tombs in the cemeteries of Viminacium shows that there existed a very important studio in that town in the 4$^{th}$ century (Rogić, D., Anđelković Grašar, J., 2015, 201–210). It is well known that during the antique period, painters worked either in their own workshops or in an already known, previously developed workshop (Gombrich, E. H., 1971, 145).

The Greeks named such workshops and the Romans named them *officina*. Nowadays, some workshop and atelier names are known that existed here in the 4$^{th}$ century. Even the names of some artists are known (Pliny, Nat. Hist, LCL).

The fresco painted tombs from Viminacium do not reveal the names of the artists who depicted them. In a tomb in Sardis, the name of the painter Flavius Hrisatius is known (in tomb nr. 76) (Hanfmann, M. A., 1983, 126) or the name of the mosaic artist Anastasius, the son of Domentian from Khirbet es-Samra (Piccirillo, M., 1994, 219–226). It is almost certain that such workshops existed in almost all the capital cities of the Roman provinces, as in *Thessalonica*, *Serdica*,

**Fig. 322**



*Salona*, *Soppianae* and *Viminacium*. The discovery of more than twenty fresco painted tombs proves that in the 4th century there was a very important *officina*.

The artist, obviously a very faithful follower of Roman aesthetic principles, according to which the treatment of the head represents an expression of spirituality, represents the most challenging artistic problem. The woman's face is not too expressive, but it does strike one as sincere. Similarities with the Fayum portraits include depicting the deceased's head as the central motif of the painting, with an especially highlighted appearance of the deceased, as well as the positioning of light and shade and the angle in which the faces were depicted (Zaloscer, H., 1961, 64).

If we compare the frescoes from Viminacium with the frescoes painted in the provinces of east Illyricum or in the provinces surrounding *Moesia Prima*, with the frescoes of Sremska Mitrovica (*Sirmium*) and Beška (*Pannonia Secunda*), Pécs (*Sopianae*) (*Valeria*), Constance (*Tomis*) (*Scythia Minor*), Niš (*Naissus*) and Sofia (*Serdica*) (*Dacia Mediterranea*), Reka (*Devnja*) *Marcianopolis*, Silistra (*Durostorum*), Varna (*Odessos*), Osenovo (*Moesia Secunda*), *Thessalonica* and *Philipi* (*Macedonia Prima*), Corinth (*Achaia*), Solin (*Salona*) (*Dalmatia*), Plovdiv (*Philippopolis*), Hissar (*Diocletianopolis*) (*Thracia*) and Nicea (*Nicopolis*) (*Epirus Vetus*), we can notice that the Viminacium frescoes have some very specific and distinctive stylistic features. Hence, these frescoes can be compared with others in some respects only. This applies primarily to the symbols commonly associated with tomb painting (the ministering servant, flowers, peacocks, cantharus and garlands) and to the choice of shades and colours. However, if we compare the half length portrait of the deceased woman (and even the representation of the horseman on the south side of the tomb) with other known tomb portraits, its stylistic uniqueness becomes apparent, so that we may say that there are no known analogies for this portrait in tomb painting in these provinces.

The way in which the deceased woman was portrayed has its parallels mostly in Fayum portraits. They were painted on wood, rarely on cloth (Zaloscer, H., 1961; Doxiadeh, E., 1998, 71). Most of the Fayum portraits are more than one century older that the portrait from Viminacium, but some are even more than three centuries older.

These portraits (to date, 429 are kept in various museums) are the most attractive parts of various collections: (Alexandria – [15], Athens – [9], Vienna

**Fig. 323**

[13], Berkley –[10], Berlin – [24], Blumington – [1], Boston – [6], Brighton – [1], Brooklin – [4], Brussels – [4], Budapest – [6], Zurich – [2], Chicago – [2], Detroit [1], Dijon [11], Dresden – [1], Dublin – [4], Edinburgh – [2], Philadelphia – [3], Florence – [1], Gilford – [1], Haifa – [9], Hartford [1], Hildesheim – [3], Cairo – [55], Kansas City [1], Cambridge [4], Cambridge ( USA) [5], Copenhagen – [10], Krakow – [2], Leipzig – [2], Leiden – [6], Liverpool – [1], London – [40], Manchester – [14], Michigan – [6], Montreal – [2], Milwaukee – [1], Moscow – [25], Munich – [7], New Haven – [3], New York – [24], Nottingham – [1], Omaha – [1], Ottawa – [1], Oxford – [14], Paris – [18], Princeton – [1], Providence – [3], Rome – [1], Salford – [1], Seattle – [4], St. Louis – [2], St. Petersburg – [8], Stanford – [2], Stuttgart – [7], Toledo – [1], Toronto – [12], Warsaw – [1], Washington – [1], Windsor – [3], Worchester (USA) – [3], Würzburg – [2] (Zaloscer, H., 1961; Doxiadeh, E., 1998, 71).

In fact, analogies with the portrait of the deceased woman should be sought in the western rather than eastern parts of the Roman Empire. Even so, parallels cannot be found in painting, but in sculpture, reliefs, mosaics and representations on coins and glass cups. Some of the closest parallels to the Viminacium portraits are: the head of a young woman from Frosombrone, mosaics in Piazza Armerini in Sicily or tomb paintings from Elia Arisut from Garesh in Tunisia. Although ichnographically and stylistically there are some elements similar to the Viminacium tomb paintings (Carandini, A., 1964; Rinaldi, M. L., 1965, 200–268), the distance is too great to point to a direct influence (Đurić, S., 1985a).

Such an approach to portraiture in tomb painting has not been recorded in any of the capitals of the eastern provinces, such as *Sirmium, Naissus, Serdica, Thessalonica, Philipopolis, Nicopolis, Marcianopolis* or *Tomis*. This is remarkable, since Viminacium did not play nearly such an important role in the

**Fig. 324**

**Fig. 325**

**Fig. 326**

late classical times like, for example, Sirmium, one of the major towns of that time, or *Thessalonica*, the capital of *Macedonia Prima*, a town renowned for its works of art, workshops and mints. The present author is therefore inclined to interpret the Viminacium tomb paintings as the work of a highly original artist, familiar with the trends in late classical art. In this sense, we can speak of one hypothetical and two indubitable facts.

The hypothesis concerns the origin of the represented woman. According to some stylistic traits (the blue quadrangular halo, the ministration scene), she is supposed to have been of Eastern origin. All the late classical quadrangular haloes, apart from those found in the synagogue in Dura Europos (Ladner, G. B., 1983, 33), are of Egyptian provenance. A more specific, but hypothetical, geographic location, would be the region of classical Syria or Egypt. The presence of cultural elements of that provenance is unequivocally confirmed with the objects discovered not only in the cemeteries of Viminacium, but also further north, in the region of Pécs, the capital of the province of Valeria. It is well known that the arts of Syria, Egypt and Palestine developed under different influences. On the one hand, the inner life was stressed, but on the other hand, usual "oriental" treatments were accepted, like the frontal position of a portrayed person, a depicted bird or an animal, with a Tree of Life between them (Talbot-Rice, D., 1963, 26–44).

The portrait of the deceased woman from Viminacium shows a tradition in Roman art, which represents portraits as *imagines maiorum*. Originating from Greek art, especially from the late Hellenistic period, and according to Varo and Pliny, a portrayal of the deceased means to represent him/her as a *virgo perpetua* (Pliny, Nat. Hist., LCL).

What we can say without any doubt is that in the middle of the 4$^{th}$ century a very distinguished lady of Roman citizenship was buried in the cemetery of Viminacium and that at that time, an artist with an exceptionally fine sense of the art of portraiture, of what the Romans called the *lineamentum*, or more precisely, the *lineamentum corporis*, was working in this region.

## JEWELLERY

The size and power of an ancient metropolis was not only reflected in its geo-strategic position, military and territorial supremacy, but also in the socio-economic status of its inhabitants. Heterogeneous Viminacium inhabitants, dominated by Europeans and Asians, were specific for each city that found itself at the meeting point of the east and the west of the Empire. The presence of troops required specific craftsmen, merchants, engineers and other people who covered the needs of the military and civilians. After looking at jewellery that at first initiates the idea of beauty, one is encouraged to analyse it deeper and to realise that "beauty" also hides an ethnical, social and symbolic element, needed to be understood in the right way. Therefore, a piece of jewellery can tell a story not only about the skills and origin of its creator, but also about its owner.

During the decades of archaeological research at Viminacium, the "world of the dead" was examined most. For centuries, several Roman cemeteries situated outside the city walls were used for burying soldiers, the rich, the poor, the domestic, the Romanised and Oriental inhabitants of the city. However, different burial forms (cremation or inhumation), grave types (common grave pits, wooden coffins, built structures, sarcophagi, family tombs – *memoriae*), as well as grave goods, make it possible for archaeologists to reconstruct, make vivid and bring closer the world from the past in which, just like today, people were classified according to written and unwritten norms.

During archaeological research, jewellery is mostly discovered in graves and rarely in hoards, hidden from the public. It is easily understood that people also wished to bring their valuable possessions to their afterlife, as spoken about in eschatological philosophy of that time. All the well-being of the earthly life should also be kept in the next. Observed in such a way, cemeteries are a true data source needed to obtain all the information about the life of a population. Metals are one of the groups of elements that determine the social, but also partially the ethnical status of the people. The majority of bronze jewellery pieces from Viminacium indicate a society of the middle-class, while silver jewellery can partly be connected to the strong autochthonous roots still alive among Romanised inhabitants. On the other hand, gold jewellery combined with precious

**Fig. 327**

Fig. 328

Fig. 329

Fig. 330

Fig. 331

Fig. 332

Fig. 333

Fig. 334



stones, mother-of-pearls and different glass beads indicates the presence of wealthy people of high socio-political status, capable of affording very expensive pieces.

After careful analysis of the Viminacium jewellery,[20] phases of its development during Antiquity can be distinguished, chronologically equal with parallels from other parts of the Empire. In other words, Viminacium was equal to other "metropoles" and responded to all the fashion trends coming directly from Rome via the empresses of the time. Different production techniques, fine processing and the meticulous hands of the master craftsmen, produced unique artistic pieces which left everybody in awe, such that modern goldsmiths are barely capable of making equivalent replicas. It can easily be understood that during Antiquity, goldsmiths (*vascularii*) were highly ranked people. First of all, they were artists who showed great passion for a skill they practiced to perfection. Even two thousand years later, their skills have not been surpassed.

Recent archaeological excavations of the Viminacium cemeteries have brought many new pieces of ancient jewellery to light, especially pieces that stand outside the standard forms. All of the jewellery forms (necklaces, ear-rings, medallions, arm bands and finger rings) are equally represented. Special attention was given to luxurious examples, partially mentioned in the paper dealing with development and changes of Roman fashion in Viminacium (Raičković, A., Milovanović, B., 2010, 77–107). Periods of great prosperity were always

[20] More on Viminacium jewellery see in: Milovanović, B., 2018, 101–141.

**Fig. 335**

Fig. 336

Fig. 337

Fig. 338

Fig. 339

Fig. 340

accompanied by great artistic achievements. The same happened in Viminacium. At the end of the 2nd and in the 3rd century, this city reached the peak of its economic prosperity. The most luxurious jewellery pieces were produced during the same period. Nevertheless, during this period, certain stylistic features appeared, common to all of the jewellery forms. Under the influence of the eastern Mediterranean cultural circle, a polychrome jewellery type was developed, called *uniones*. Its main feature was the combination of precious stones of different colours with pearls and beads made of glass paste. The *opus interrasile* technique became a favourite and, with the inclusion of perforated metal, achieved a "lace-like" appearance. All of these novelties were also seen on jewellery pieces from Viminacium, mostly made in local workshops. Apart from immigrants from the eastern provinces, local craftsmen also worked in such workshops. Although jewellers' workshops have not been archaeologically discovered in Viminacium, they doubtlessly existed, since the number of discovered jewellery pieces indicates their existence.

The Roman term *monile* was applied to all of the jewellery pieces worn around one's neck. This term includes necklaces made of interlaced wire with glass beads, pearls and precious stones, while metal wires connected using a variety of interlacing techniques were called chains.

A luxurious example of a necklace known as a *hormoi* was discovered in a female inhumation tomb (the "Pirivoj" site, G-134, C-349). It comprises a gold chain consisting of rings, with beads of different shapes made of different materials. The discus-shaped beads are among the dominant ones, made of red stones and red glass beads. The necklace has a heart-shaped pendant made of wire, with volutes at its endings and a polyhedron-shaped bead made of green stone. Similar examples of fully preserved and fragmented necklaces are kept at the National Museum in Belgrade and at the Belgrade City Museum (Поповић, И., 1996, type III, cat. 107–114; Крунић, С., Игњатовић, М., 2016, 61, 145, cat. 48–51). Numerous parallels can be found at the Aquincum Museum in Budapest (Facsády, A. R., 2009, 114, Type II, cat. nos. 219–222).

The owner of a large necklace with cylindrical beads made of black glass with a pendant and a cameo (the "Pirivoj" site, G-290, C-846) possessed subtle taste and elegance. Contrary to the monotonous and single-coloured beads, the oval medallion made of gold sheet and possessing a frame decorated with pal-

**Fig. 341**

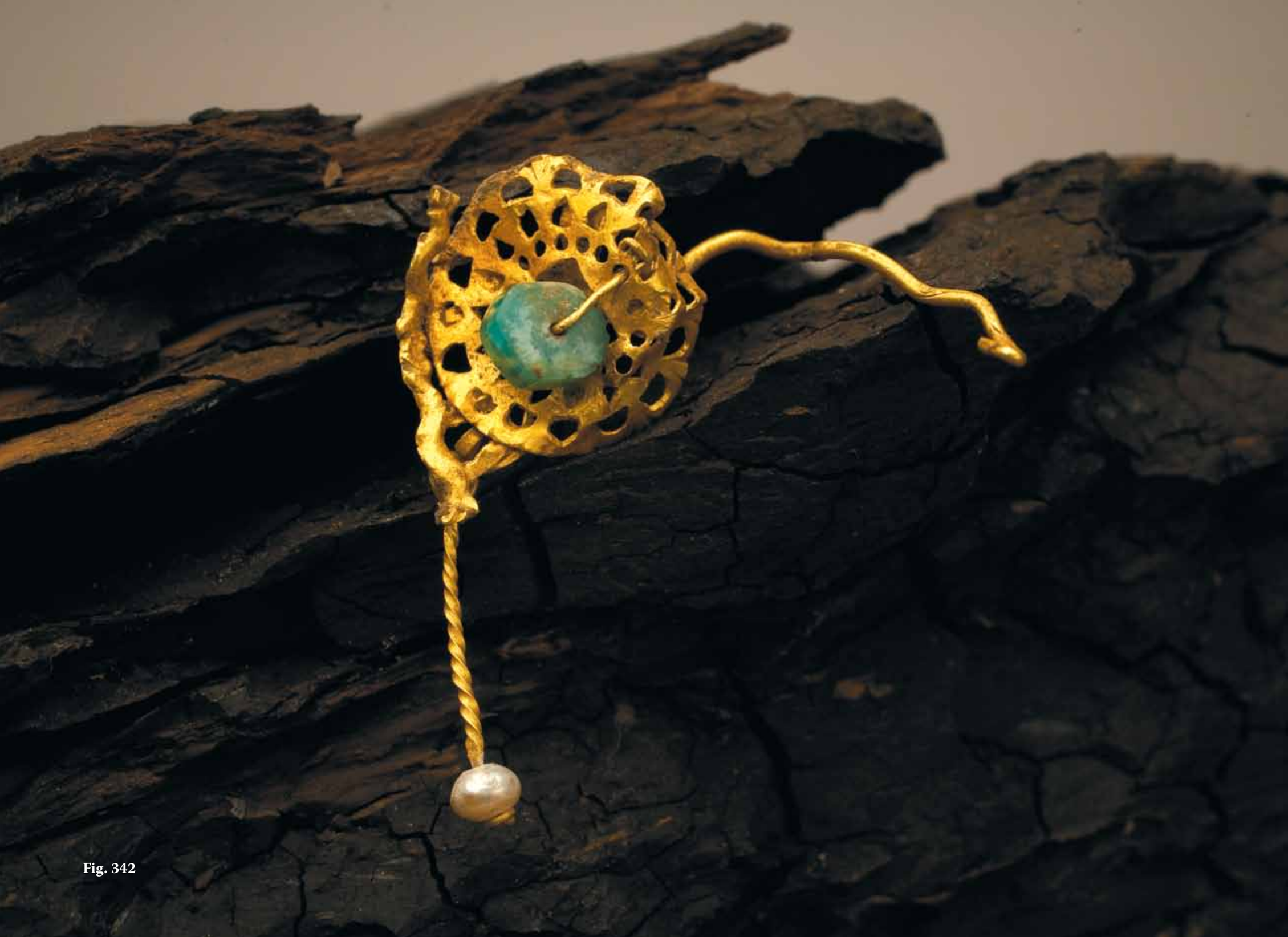


Fig. 342

Fig. 343

Fig. 344

mettes makes this necklace unique. Within the medallion, there is a two-coloured cameo, made of blue and white opal and a relief female portrait facing right carved in the white layer. The features are portrayed schematically, while the hair-style is typical of the empresses from the second decade of the 3rd century (Поповић, И., 1996, 37–38, type IV; Vágó–Bóna, I., 1976, 193, Taf. XXIII; XXV, 1).

Earrings are typologically the most diverse. There are two basic earring forms: those in the shape of an opened or closed ring and those with an "S"-shaped hook. They often have pendants. They overlap chronologically and are difficult to date precisely. The typological analysis of the Viminacium earrings was made by Lj. Zotović (Зотовић, Љ., 1995, 233–242). Here, only some of the luxurious examples from the recent excavations of the eastern Viminacium cemeteries shall be mentioned: a pair of simple gold ear-rings with an "S"-shaped hook and their heads made of gold sheet in the shape of a hexagonal pyramid (the "Pirivoj" site, G-313, C-913), represent an original late Etruscan model further developed during the Roman period, until the end of the 3rd century (Миловановић, Б., 2007, 18-19, cat. 396–404, T. IX, 126, 128). Earrings of this type were only made of gold. A similar quantity of them has only been discovered in Bulgaria (Ruseva-Slokoska, Lj., 1991, 121, cat. 43–46 a–b), while single finds are known from other sites (Крунић, С., Игњатовић, М., 2016, 52, cat. 27; Цермановић-Кузмановић, А., Велимировић-Жижић, О., Срејовић, Д., 1975, Г-40; Girardi-Jurkić, V., Džin, K., 2003, cat. 191). The second pair of gold rings have an almond shaped cassette with a dark-red stone (the "Kod Koraba" site, G1-56, C-154). Similar examples have pendants with a glass bead or a pearl on their rings, like the gold pair from the site of "Pirivoj" (C-164). One ring ending has a specific feature, since it is spiral and represents the earring head. In Viminacium, gold pieces dominate, although two silver earrings of the same type are known (Миловановић, Б., 2007, 17, cat. 329–337, T. VI, 93–95; T. XIII, 182–185). An almost identical example is known from the vicinity of Viminacium (village Salakovac, Malo Crniće; Крунић, С., Игњатовић, М., 2016, 50, Fig. 25, cat. 16).

An extremely luxurious pair of gold earrings possesses an "S"-shaped hook and a head in the shape of a square cassette decorated with grooves and a polyhedral green bead inside (the "Pirivoj" site, G-290, C-843). The cassette is additionally decorated with applied hook-like wires on all four sides. This original pair of earrings belongs to the 2nd or 3rd century and reflects the vivid imagination of the goldsmith, but also the subtle taste of the customer. Unusual wire additions are

**Fig. 345**

Fig. 346

Fig. 347



also attached to the gold earrings discovered in a marble sarcophagus from Viminacium (Спасић-Ђурић, Д., 2002, 89–90, Fig. 71). Similar examples are known from *Serdica*, *Carnuntum* and *Aquincum* (Ruseva-Slokoska 1991,123, cat. 48; Facsády 2009, 12, Type VII, cat. nos. 281). Special skills were required for an earring with the same shape as a ring and a skilfully formed, flower shaped head (the "Pirivoj" site, C-72). The flower has eight petals made of hammered gold sheet, while in the middle there is a circular, dark-red stone (ruby?). Beneath the head there is trapezial shaped metal sheet with the remains of rings for pendants, now missing. The earring was discovered in a cremated grave from the end of the 2nd or the first half of the 3rd century (Pirivoj, G1-5). A similar pair of gold earrings was discovered in Singidunum, in a grave made of bricks (Pop-Lazić, S., 2002, Fig. 21/1; Крунић, С., 2016, 56, Fig. 35 а, б; cat. 38 а, б). On this pair, stones in the middle can be expected. An identical petal design was applied on a pair of gold earrings from Ratiaria, from a grave dated into the 3rd century (Ruseva-Slokoska, Lj., 1991, 125, cat. 54 a, b). The peak of handicraft was accomplished on an earring with an "S"-shaped ring and a circular head made of thin metal sheet by applying the piercing technique and decorated with pelta-shaped forms. In the middle, there is a polyhedral green stone, fixed with a wire (emerald; the "Pirivoj" site, G1-31, C-487). This technique was applied for accomplishing the lace-like style, very popular at the end of the 2nd and during the 3rd century. Beneath the head, there is a diagonally placed ribbon in the shape of stylised dolphins. Only one pendant remains preserved on the ribbon, made of twisted wire with a pearl at the end. Two pairs of earrings, one from Viminacium and another from an unknown site, are kept at the National Museum in Belgrade and are dated into the 3rd century (Поповић, И., 1996, cat. 97–98; Миловановић, Б., 2007, 101–102, cat. 477–478, T. XVI, 199). The earliest example comes from Plovdiv, dated into the middle or the second half of the 2nd century (Ковачева, Т., 1973, 51-52, Fig. 4 а, б). The examples from the Mainz Museum and from the British Museum are dated into the 3rd century (Deppert-Lippitz, B., 1985, Taf. 33, 76; Marshall, H. F., 1969, Pl. 2665).

Although not originating from the Romans, but from ancient craftsmen from Egypt, Greece and Etruria, glyptic art had a special influence on the production of Roman jewellery. During Hellenistic times, figures were

Fig. 348

carved into multi-coloured precious stones, thus becoming relief images, actually cameos. They were usually worn on necklaces, within gold squares or on earrings. Numerous gems and cameos from Viminacium indicate the existence of a workshop in this city, offering valuable pieces of art to wealthy citizens (Поповић, *И.*, 1989, 8–13). The Viminacium cameos mostly bear images of female portraits, their hairstyles resembling those of empresses, often also depicting images of Medusa (*cf.* Milovanović, B., Anđelković Grašar, J., 2017, 167–182). On a necklace with cylindrical black beads, one such image is portrayed. On a medallion from a tomb (the "Pirivoj" site, G-134, C-352), Medusa's head is depicted en face. On gold earrings with an "S"-shaped hook and an oval head made of gold sheet and bearing carved decoration, within the cassette, there is a cameo made of white opal and showing Medusa's head en face (the "Kod Koraba" site, G-76, C-465).

Arm bands (*armillae*) can be divided into two basic groups: with opened or closed endings. The most numerous pieces were made of bronze and silver, while gold examples are rather rare. The arm bands with opened endings end with a hook and a loop in the shape of a snake's head or with differently profiled endings. Arm bands with overlapping or wound endings are also rather common (the "Pirivoj" site, G-292, C-864), sometimes also bearing pendants (the "Kod Koraba" site, G1-3, C-9). Similar examples are known from Aquincum (Facsády, A. R., 2009, 105, Type IV, cat. 139–140). On a large arm band made of bronze, with overlapping and wound loops, on one side only, a heart-shaped pendant remained preserved. The most common ones are arm bands made of bronze, with opened endings in the shape of a snake's head (the "Pirivoj" site, C-105; G-122, C-313, C-316). They were made from the 2nd to the middle of the 4th century. Arm band endings can be profiled differently, thickened or decorated with simple carvings (the "Pirivoj" site, G-135, C-343 and C-344). The last type was discovered in Aquincum, and still in use at the beginning of the 5th century (Facsády, A. R., 2009, 109, Type VI/c, cat. 173–175).

Closed arm bands made of multiple twisted bronze wires, with a hook and a loop on their endings mostly belong to the 3rd and the 4th century (the "Pirivoj" site, G-232, C-685; G-248, C-722). Somewhat younger examples with closed endings and made of bronze wire, were decorated with carvings (the "Pirivoj" site, G-212, C-753 and 754).

In Roman times, wearing gold finger rings was originally only the fashion of the aristocracy, governors and senators. Only iron finger rings were worn by the masses. Over time, this changed and only during the time of the emperor Septimius Severus (197) were soldiers allowed to wear gold finger rings, too. They were worn not only for aesthetic and socio-political reasons, but were also used as stamps. Inscriptions carved on the rings' heads or sides marked their owners or contained a message of happiness, piety or loyalty. Over time, rings and their heads became larger and larger, with inlayed gems, cameos, precious stones or glass beads. Silver pieces from Viminacium often possess heads with gems or glass paste, while more luxurious examples made of gold bear precious stones. Silver finger rings (the "Nad Klepečkom" and "Pirivoj" sites, C-220, G1-43; C-751, G-212) possess gems with images of lions, actually deities, while the gold finger ring from the "Pirivoj" site (G-290, C-848) possesses a dark-red stone (ruby?). The widened side of the gold finger ring has two peltas made by piercing. Finger rings of this type were made from the end of the 1st to the middle of the 3rd century (Поповић, И., 1992, 10). Similar examples are known from neighbouring sites (Ruseva-Slokoska, Lj., 1991, 172, 187, 193, cat. 198, 237, 251; Facsády, A. R., 2009, 91, Type I, cat. nos. 2–3). Especially interesting is the gold finger ring with a double ring and a head formed in the shape of an oil-lamp with two nozzles (the "Nad Klepečkom" site, C-53). Within the nozzles there are red stones, while on the discus (the ring's head) there is a blue stone. Above the head there is a leaf-shaped lid. Identical pottery lamps were produced in Viminacium during the 2nd century (Nikolić, S., Danković, I., *in print*). The ring comes from a devastated grave. Based on the grave construction, it could have belonged to the late 3rd or the 4th century.

**Fig. 349**

## AMULETS[21]

1. Amulet with a magic λόγος.
Find-spot: Viminacium, Serbia.
Date: 4th century AD.
Dimensions: height 0.045 m; width 0.028 m; letters c. 0.002–0.003 m high.
Gold tablet, kept in Viminacium (inv. no. C-1672).

Thin gold plaque found rolled up in a silver suspension capsule (length 0.023 m; diameter 0.01 m) with three eyelets for suspension (all three broken), was unearthed on November 17, 2015 at the site known as 'Rit', north and northeast of the civilian settlement and legionary fortress of Viminacium in East Serbia, the Roman capital of Moesia Superior (Mirković, M., 1986; Spasić-Djurić, D., 2002; Mirković, M., 2007). At the same site known as 'Rit' several *villae rusticae* have previously been investigated, along with the parts of necropolis possibly connected with the *villae rusticae,* and clay- and sand-deposits. The grave marked as G-51 contained the buried remains of a child four to five years old. At the depth of 0.40 m, the upturned bottom part of an amphora (C-1671) covering the legs of the child was discovered. The rest of the body was covered by two fragmentary *tegulae* and an *imbrex*, the complete dimensions of the cover being 1.00 x 0.62 m. The remains of the infant's skeleton were uncovered at the depth of 0.85 m. The child lay on his back, in north–south orientation, his/her head facing left. The skull bones are fragmented, upper arms and parts of femur bones being the only ones preserved. The preserved length of the skeleton is 0.73 m. Below the skeleton's lower jaw a silver capsule was found with a gold tablet rolled inside it (C-1672), indicating that during the burial it was placed around the child's neck. Next to the skull lay three iron nails.

The rectangular gold tablet (Dzwiza, K., 2013, 50) displays eleven vertically incised ruling-lines forming twelve columns. Of these twelve columns, the marginal ones on the left and the right side are uninscribed, while the remaining ten contain a Greek text: such a layout is rare but not unparalleled in this type of documents (Kotansky, R., 1994, no. 4). Moreover, a single line of nine Π-shaped

[21] This text, with a different name, has been previously published (Korać, M., Ricl, M., 2017).

**Fig. 350**

forms separated by punctuated dots is visible along the top margin atop a snake-like figure. There is also some decoration on the left and right margins of the tablet, roughly to the left and right of the fourth and fifth letter in the first and tenth column of the text. On the bottom part of the tablet, the authors suspect a boat-like figure. If that is correct, this boat could represent a funerary boat, i.e., means of transportation to the underworld: it is actually possible to identify a couch with animal legs in the middle of the 'boat' that would supposedly serve to carry the body of the deceased person to the underworld. If this is right, then the amulet was produced to protect the deceased both on earth and in the netherworld. The reverse side of the tablet is blank. Anyhow, it is obvious that a substantial amount of work and care went into the production of this tablet, which is the first one of its kind found after more than 14.000 graves of Viminacium. After the text was engraved on the foil with a sharp instrument, the tablet was rolled up horizontally and deposited in a silver tubular capsule discovered below the lower jaw of the buried child. Similar objects were 'mass produced' during the Roman Imperial period, and as we shall see, this particular example contains no 'personalized' sections showing that it was made to be worn by any owner, regardless of sex and age, both in life and death (Kotansky, R., 1994, no. 24; Ruscu, L., 2003, no. 45). There are two more unpublished gold amulets from Serbia: the first one, with a Greek text in four lines, was found in the late 1950's in the Kosmaj mining region about 35 km south of Belgrade, and the second, containing two lines in either Greek or Latin, is of unknown provenance. Both tablets will soon be published.

The text inscribed on the Viminacium gold tablet is a magical logos – a 'pantheistic' invocation of divine names and epithets meant to provide general protection of the owner of the amulet in life and death.

**Fig. 351**


**Fig. 352**

Text, from left to right:
1 Θωβαρραβαυ *vacat*
2 Σεμεσειλάμ *vacat*
3 Σεσενγενφαρανγη
4 Ṣαṣ‹ιβὴλ σαρεμ Φθῶ
5 Ἰάω ḛηου Ἰὰ θυιθηω
6 Πανχουχι θασσουθ
7 Σῶθ Φρῆ ιπαχθηβωρ
8 ΑΕΗΙΟΥΩ *vacat*
9 Ωλαμβωρω σεπανησασḛ
10 Θωβαṵ Σῶθ Ἰὰ Φθῶ ṣǫṵθ.

2. Gold lamella with magic signs (*characters*)
Find-spot: Viminacium, Serbia.
Date: c. 350 A.D.
Dimensions: height 0.025 m; width 0.04 m.
Gold tablet, kept in Viminacium (inv. no. C-13732).

**Fig. 353**

**Fig. 354**

Thin gold plaque, found rolled up in a pentagonal bronze tubular capsule (length 0.04 m; diameter 0.01 m), together with a silver tablet (no. 3 here) (Kotansky, R., 1994, no. 12), unearthed on August 21, 2015 at the site known as 'Pećine', south of the civilian settlement and legionary fortress of Viminacium in East Serbia, the Roman capital of Moesia Superior. The urban necropolis of Viminacium takes up the largest part of this site. In the same area, archaeologists have uncovered professional installations for brick production. The grave marked as G-5754 contained the buried remains of a female individual 25–35 years of age, with no signs of pathology on her bones. The remains of the skeleton were uncovered at the depth of 1.85 m, in west–east orientation. The dimensions of the burial pit are 1.80 x 0.50 m; on the west side, it was lined with two, and on the east side with three horizontally placed bricks (dim. 0.42 x 0.28 x 0.04 m). The bricks were found at the depth of 1.50 m. Due to the pressure of the soil, the middle brick on the east side collapsed over the legs of the buried person. The deceased woman lay stretched on her back, with arms bent at elbows and resting on the abdomen. The bones are poorly preserved, with the vertebrae, ribs, left part of the pelvis, and foot bones missing, and the skull deformed by the weight of the soil. The length of the skeleton is 1.50 m. In the abdomen region three bronze coins were found (Constantine II as Caesar: 320s A.D.; Constantine the Great: 330–336 A.D.; Constantine the Great and Constantine II: 330–336 A.D. By the feet of the deceased person were two glass vessels, and a bronze capsule containing a gold and a silver lamella, while in the skull region lay a bronze earring.

The gold amulet is creased and damaged on the left and right hand side. It contains a series of magic signs of unknown phonetic value and meaning, engraved for protective purpose (Kotansky, R., 1994, no. 6; Gordon, R., 2014; Dzwiza, K., 2013; Mastrocinque, A., 2013; Dzwiza, K., 2012a; Dzwiza, K., 2012b; Frankfurter, D., 1994). The signs were engraved on the wide side of the tablet in horizontal 'lines'; a series of punctuated dots is visible on the lower margin. The backside is blank. The tablet was tightly folded horizontally and deposited in a bronze capsule. Of the twenty-six signs on the tablet,[22] seven belong to the so-called 'Brillenbuchstaben'-type resembling the letter B in horizontal (four) or vertical (three) orientation (Kotansky, R., 1994, nos. 6, 18, 22–23, 45, 62, 66; ), six signs are single ringlets without a connecting line, organized in two groups of three (the larger one in the middle), five are of the so-called 'ringlet' type with a connecting line between ringlets, three resemble the Greek letter Δ (Kotansky, R., 1994, nos. 6, 46, 62; Mastrocinque, A., 2012, no. 116), and the same number have the form of a box with one or two intersecting lines (Kotansky, R., 1994, no. 18, Mastrocinque, A., 2012, p. 95).

[22] It is impossible to claim absolute certainty that all of the signs were drawn correctly, especially the ones on the left and right margin, nor that some of them accidentally were omitted – some signs are probably lost on the left and right hand side of the tablet.

**Fig. 355**

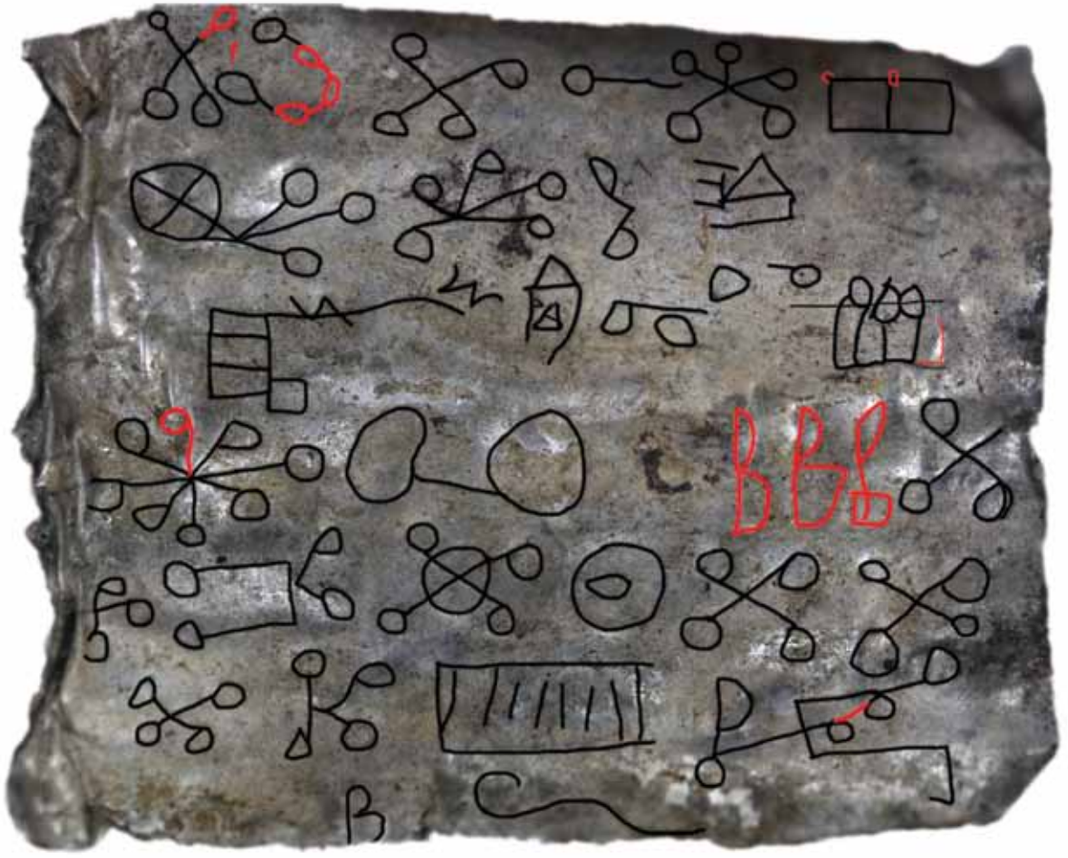
**Fig. 356**

3. Silver lamella with magic signs (*characteres*).
Date: c. 350 A.D.
Dimensions: height 0.029 m; width 0.037 m.
Silver tablet, kept in Viminacium

Thin silver plaque, found rolled up in a pentagonal bronze tubular capsule (length 0.04 m; diameter 0.01 m) together with a gold tablet (no. 2 here), unearthed on August 21, 2015 at the site known as 'Pećine', south of the civilian settlement and legionary fortress of Viminacium in East Serbia, the Roman capital of Moesia Superior. The amulet comes from the grave of a female 25–35 years of age, with no signs of pathology on her bones. It is creased and slightly damaged on the left hand side and on bottom. For a description of the archaeological context, see above, under no. 2.

**Fig. 357**

**Fig. 358**



The silver tablet contains a series of magic signs of unknown phonetic value and meaning, engraved for protective purpose. The signs were engraved on the wide side of the tablet in seven horizontal 'lines'. The backside is blank. The tablet was tightly folded horizontally and deposited in a capsule. About one third of the surface, mostly in the upper part of the tablet, is corroded.

Among the forty-five signs on the tablet, only seven display no ringlets in their design The most frequent form is a pair of 'X's with ringlets (of the so-called 'astral signs', numbering some ten examples). These, four-pointed 'asterisks', together with the six- or eight-pointed ones, can be seen on numerous papyri, tablets and gem amulets collected by Gager, Kotansky, Daniel-Maltomini, Michel and Mastrocinque. On the new tablet we also encounter a combination of astral signs and circles, boxes with ringlets, single ringlets within a circle, circles and ringlets on their periphery, individual ringlets, and other, less common assemblages of linear and circular elements. Also noticeable are signs resembling Greek letters (B, 'reversed E', Δ, and K). Finally, in the lower part of the tablet a *tabula ansata* can be seen with what looks as letters, namely, three Ns in the upper part and possibly three or four more letters below that (an M, a Φ, K and I?). Nevertheless, some photographs of the tablet give the impression that there were no letters in the second line, just lines and loops, so the question must remain open. There are other instances of similar 'cartouches', usually enclosing divine names, on tablets and gemstones.

**Fig. 359**

**Fig. 360**

Fig. 361

## GLASS

The numerous and typologically varied forms of glassware found in Viminacium testify to the quality and craftsmanship of the Roman glassworkers (Milovanović, B., 2005, 293–317). Their richness and inventiveness are particularly evident on the vessels worked in the millefiori technique and the vessels which imitate the polychromatic effects of marble. The rich range of toilet bottles, primarily balsamaria, testifies to the use of various aromatic oils and medicaments, which were, for the Romans, a sign of the cleanliness of the body and purity of the spirit. The finds show that luxurious and elegant glass tableware was used in addition to the more general ordinary pottery. Numerous beakers, glasses, bowls, bottles and jugs testify to their use in everyday life. Besides the simpler forms, there are some special glass-vessels made by casting, pressing or blowing, either into a mould or shaped completely free-form. Particularly noteworthy are the so-called Mercury bottles and the narrow-necked vessels (*guti*), the use of which has not been ascertained. The wealth of forms and the simplicity of style indicate serial production, which may well have originated in Viminacium itself, while the more luxurious examples were products of the Cologne, Gallic and Syrian workshops. The glass vessels from Viminacium date from the period from the 1$^{st}$ to the 4$^{th}$/5$^{th}$ centuries A.D. and give us a good idea of glass work production in the Roman Empire.

**Fig. 362**

**Fig. 363**

Fig. 364

## POTTERY

As the greatest urban settlement of Upper Moesia, Viminacium possessed a variety of well-developed handicrafts with pottery production certainly being one of the most productive branches. Within the city area, a huge production centre was unearthed for pottery production, the production of bricks, oil-lamps and vessels with human face images.

Since the excavations were focused on the cemeteries that surrounded the city, the largest amount of pottery originates from there (Raičković Savić, A., 2018, 143–161). A division into several functional shapes was made, according to their usage, into kitchenware, tableware, transportation ware and storage ware. Furthermore, there are special forms, such as cosmetic vessels, clepsydrae or water-clocks, money boxes and all of the other forms with uncertain methods of usage. Most of the vessels were wheel-thrown, but there were also those made without a potter's wheel and those made in moulds.

Among the kitchenware, pots take the dominant place. Their shape was the most suitable for placing on a fire, while their grooved rims enabled the application of lids. Basically, pots were made of coarse, sandy clay, burned red, brown, grey or yellowish-white and with rough surfaces. One of the most specific pot types is that made of white kaolin clay. Such pots are special for several reasons, first of which is the clay they were made of. It is a sandy clay burned white or

**Fig. 365** **Fig. 366** **Fig. 367**

Fig. 368

Fig. 369

Fig. 370

Fig. 371

Fig. 372

Fig. 373

Fig. 374

Fig. 375

yellowish-white and with a rough surface. In the vicinity of Viminacium, clay pits of this kind of clay have not been discovered, thus several hypotheses have arisen. The first is that local potters brought this kind of clay from distant clay pits. These must have been in former Dacia, since no such pottery types have been discovered outside the Danube valley or in the inland areas of the province. The second hypothesis concerns its universality, since such pots were not only included in kitchenware, but also in the repertoire of grave-goods. In most cases, and in most of the excavated parts of the Viminacium cemeteries, such pots were used as urns. Besides pots, kitchenware also includes deep bowls and different tripods – vessels with three legs. In the preparation of food, many of the ingredients had to be crushed. Different shapes of mortars (*mortaria*) were used for this and in them, using stone pestles, food was crushed and crumbled into small pieces. Several types of these large and heavy vessels have been discovered. According to their shapes and morphologic features, they were divided into imported pieces and those produced locally. What they both have in common is a rough inner surface that makes it easier for cereals to be crushed.

Storing food, particularly grains, was carried out in pithoi. The shape itself originates from the oldest pottery forms. Throughout the entire territory of the Empire, their form is unique – they were made of red burned clay, with a red resinous coating and a combed motif. In rare cases, on the outer surface, graffiti inscriptions were made. Besides pithoi, there were also deep pots with an oval opening and horizontally upturned rims. Initially, authors brought this type of pots in connection with the army, since they were most commonly discovered within military camps. They were described as storage vessels. Lately, chemical analyses are being performed and on some of these vessels, urine traces have been discovered, thus describing them as chamber pots (Petznek, B., 2014, 39).

In Viminacium, amphorae have been discovered at all of the excavated areas. They are chronologically and typologically more sensitive than other pottery types, so they can be used to determine the methods of importing the different food products that were stored inside them. In Viminacium, besides their basic function, the transport of wine, olives, oil and garum, they were also used for many other purposes. They were used as a building material, replacing pillars for ridge support, for improving air-circulation within kilns and they were also used as a constructing material in cemeteries (as was the case at the Viminacium site of "Pirivoj"). Here, an entire grave was made of amphorae belonging to a single type, some of which bear artisans' stamps. Several times, such amphorae were discovered at other Viminacium sites, but the exact location of the workshop has not yet been determined (Bjelajac, Lj., 1996, 17/5). Furthermore, inhumation burials were also performed in amphorae, mostly of children. On several occasions, the lower, conical amphorae parts were used as lids for urns. Produced locally, they can be separated into two groups. The first group was developed under local influences only, while the second one was influenced from the Mediter-

**Fig. 376**

ranean. Most likely due to great demand, local craftsmen started to imitate certain amphorae forms, but in coarseware and not processing them in the same way as the imported pieces. A specific feature of all of the amphorae is that they were used for a longer period of time, even after their contents had been consumed.

The widest range of forms and their types is shown with tableware, most of all bowls and beakers. They were mostly wheel-thrown, while the more luxurious ones were moulded. They come in all dimensions and production techniques, from small ones with thin walls, to deep, heavy ones with thick walls. Of special interest is a group of luxurious pottery that could have been either imported or produced locally. Among them, there are smooth shapes or relief decorated, mostly on bowls, beakers and plates. At this level, the intensity of trade with other parts of the Empire can be traced, but also their influence on fashion trends of the local population, leading to the situation where local craftsmen initiated the production of local variants of the imported ware, also decorating them with their own relief images. At a certain point, craftsmen reached such a high level of quality that they were able to export them along the Danube valley. Such types have been discovered at several sites, both in their original province, but also in the neighbouring ones (mostly Pannonia and Lower Moesia). The potters' inventiveness deserves special credit, since they combined motifs not previously used by craftsmen from the developed centres like Rheinzabern and Westendorf. However, as indicated with finds of craftsmen's stamps from Viminacium, almost all of the workshops were represented. The production intensity is also indicated with

**Fig. 377**

**Fig. 378**

the number of discovered pieces in Viminacium, but also at sites along the Danube. The beginning of pottery production in this centre is dated into the second quarter of the 2nd century. Besides relief decorated vessels, the Viminacium production centre also made smooth vessels, imitating the already well known forms of Samian ware, produced in Gallic and German workshops. Although the shapes of relief decorated vessels are simple, artisans offered a great variety of figures and decorative motifs. On the bordering frieze, they most commonly applied egg-shaped motifs combined with rosettes, leaves or bucrania. Within the decorated fields, ornaments were arranged either freely or within zones. Only a single bowl possesses decoration separated into metopes. The ornaments are stylised, usually including floral motifs combined with images of animals, rarely humans (Bjelajac , Lj.,1990, 145). Only a few of the vessels are glazed, but the most common shape is made in the style of Drag. 37. Although it has not yet been discovered, finds of moulds for making such vessels indicate that there was a workshop in Viminacium. It is suspected that within the city area there were several pottery complexes, both for the production of luxurious pottery and for covering the daily demands of the inhabitants. After certain analyses, it was attested that clay was obtained locally. Luxurious pottery, either imported or produced locally, was rarely used for grave goods, thus attesting that this kind of ware possessed no funerary character.

The beauty of the Viminacium pottery collection also includes plates of different forms. They were decorated either by simple colouring, over lacquered and marbled surfaces, stamping (usually in the shape of a stylised leaf) or those produced with relief motifs or entire mythological scenes. Their shapes were made according to Samian types, although the motifs are connected to the local inhabitants who produced them. Occasionally, leaf-shaped ornaments, garlands, concentric circles and rosettes were also applied.

Within the handicraft repertoire, a tableware pot type has been discovered, commonly represented in the settlement layers from the 2nd to the 4th century, but also, surprisingly, as a common grave good. It is a pot type with a horizontally upturned rim, a cylindrical neck and a belly narrowing down to a ring-shaped foot. Although quite common, it is chronologically not very sensitive. It is found throughout the province, but also outside its boundaries. The cylindrical belly was mostly only coloured, rarely decorated with engraved floral motifs or faceting. Besides being used as tableware, this pot type was also used in religious rituals. These are the "snake-vessels", their outer surface bearing medallions, but also relief-formed snakes over the greater part of their surfaces. It is interesting that such vessels mostly possess large dimensions.

Among numerous tableware types, beakers take a special place. Sometimes they have handles (one, two or three). Pieces without handles are usually of small dimensions, on a ring-shaped foot and with different rim profiles. They also show differences in production techniques, which also determines them chronologically, since the form itself remained unchanged since prehistory. According to the recipient shape, they can be divided into biconical, bell-shaped or spherical. Beakers with thin walls and made of fine fabrics sometimes bear barbotine decoration. They were red or grey burned and possess an outer surface

**Fig. 379**

Fig. 380

Fig. 381

Fig. 382

that is either lacquered or painted red, grey or black. Some of the most beautiful examples were the imported ones, but also those belonging to Samian relief ware from the Viminacium – Margum workshop. Beakers were equally represented in settlement layers and in graves. Variants can be traced that were used as grave goods, both in cremated and in inhumation graves.

In order to have a full meal, one also needed to drink. Drinks were served in several types of jugs, mostly single-handled, but sometimes also in locally produced, small amphorae with a flat bottom. The Viminacium types were equally represented in everyday life and as grave goods. They are distinguished according to their shapes and production quality. Elegant, imported pieces were placed on tables, decorated with reliefs or glazed, depending on the period they come from. Locally produced shapes were also used, made of fine fabrics and always bearing finely painted outer surfaces. The painting was performed both for aesthetic and functional reasons. Contrary to those, typical "grave good shapes" were made of medium fabrics, burned red and possessing outer surfaces also painted red, but with an easily erasable paint. Such jugs were produced in large series, and at Viminacium cemeteries they represent the most common finds, usually in groups of three (Raičković Savić, A., 2012, 155). Along with them, censers were also well represented. They belong to typical forms of the provincial Roman production from the 2nd and the 3rd century. They can be distinguished according to their various decorations, made with ribbons and carvings, but also painted

**Fig. 383**

**Fig. 384**

Fig. 385

with white paint that could easily be erased. They were made like bowls, on a ring-foot or with a flat, widened bottom. The different ornaments usually indicate the craftsmen's inventiveness and not chronological differences. Some pieces bear perforations used for hanging. The discovery of a layer of censers within the amphitheatre is of special interest. Here, in a single complex, over 1,200 vessels were unearthed, all dated into the 2nd century. Censer finds from the city and not only from the cemeteries indicate that they were used widely, also in everyday life.

Compared to other sites from Moesia Superior, Viminacium revealed an unusually high number of beakers with facial images, either carved or with modelled features. They were wheel-thrown, wheel-thrown and moulded or just simply moulded. They have been discovered throughout the Empire and dated to a broad span of four centuries, unearthed both in graves and in settlement layers. They are considered to have been used in everyday life, but also in rituals. Pieces from Viminacium are dated into the 2nd and the 3rd centuries and are connected to funerary rituals, since they were usually discovered as grave goods or in sacrificial areas. Of special interest is that they are more often encountered in cremations than in inhumation burials. The reason for this is still unknown. According to their production technique, they probably belong to local, Viminacium production (Nikolić, S., Raičković, A., 2008, 327).

Pottery balsamaria exclusively belong to grave goods. Such vessels originated from the Hellenistic and early Roman period and the Mediterranean area. They were most likely used as packages for small quantities of products, possibly for perfumed oils. Since the greatest number was discovered as grave goods, they are considered to have been used in rituals for pouring liquids over graves. Very often, they were discovered in graves along with jugs. In Viminacium, they were most frequently discovered in the southern necropolis. Common features include a long and narrow neck and an absence of handles, while the profile of their rims and vessel-shape can differ. According to their production technique, they are presumed to originate from different pottery workshops (Nikolić, S., Raičković, A., 2008, 334).

The handicraft centre discovered within the necropolis at "Pećine" (Raičković, A., 2007, 11) was used to cover the everyday needs (including funerary ones) of Viminacium. Although showing a wide range of products (besides vessels, there were bricks, oil-lamps, terracotta and tiles), it was not sufficient to cover the needs of the entire city. This is indicated by an overview of products that were produced here and, after comparing them with the remaining forms discovered within the city area, all of them were defined as local products, due to their morphological features.

Although the production was highly developed, they were not in a position to immediately cast all damaged or deformed vessels away. Pithoi and pots were discovered that show traces of repair made with lead casting. Vessels deformed during production processes were not always disposed of, since they were used as urns or as grave-goods.

Besides the already mentioned shapes, the repertoire always grew bigger. Here, untypical shapes certainly deserve to be mentioned, such as an urn in the shape of a small house, a water-clock (clepsydra), a money box or a dish used for making cheese. The function of some of these items still remains unsolved. Not all of the vessels can be named here and, needless to say, neither can all of the specialties prepared in them.

What kinds of beautiful and unusual vessels can be expected in the future research of Viminacium, especially its villas and temples?!

One certainly needs to mention other forms made of pottery, first of all terracotta, but also other forms needed for other handicrafts, like loom weights and weights. For the needs of the youngest city inhabitants, different toys were made with or without wheels, but also miniature vessels, fully imitating the common ones and representing real masterpieces. The Viminacium range of pottery shapes certainly belongs to one of the richest in the territory of Upper Moesia. Chronologically, it covers the period from the 1st to the 4th century. Due to this, it needs to be considered when establishing the different typologies of Roman provincial pottery.

Fig. 386

Fig. 387

## COINAGE

**Imperial and provincial mint in Viminacium**

In the Danubian and Balkan provinces there were several occasions leading to the opening of provincial, but later on also imperial mints in Viminacium. Over the last decades, intensive research of the circulation of imperial coinage in the territory of Upper Moesia and the neighbouring provinces has contributed to a better understanding of this complex topic (Борић-Брешковић, Б., 1976; Црнобрња, Н., 1981, 5–23; Црнобрња, Н., 1993; Ivanović, I., 2009, 361–369; Borić-Brešković, B., 2011, 411–437; Војвода, М., 2011, 243–256; Војвода, М., Петровић, С., 2011, 283–307; Црнобрња, А., 2011, 309–318; Vasić, M., 2012; Војвода, М., Јесретић, М., 2012, 115-132; Vojvoda, M., Mrđić, N., 2015; Војвода, М., Бранковић, Т., 2016, 103–142; Vojvoda, M., 2017; Vojvoda, M., Mrđić, N., 2017). Regarding this issue, a large sample of provincial coinage from the Viminacium cemeteries was of significant help. One can say that it offers an excellent overview of monetary circulation during the first half of the 3rd century in this part of the Danube valley and Upper Moesia. [23]

During the first half of the 3rd century in the Balkan-Danubian provinces there was a lack of small bronze coinage. This was possibly the main reason for establishing a provincial mint in Viminacium in 239 and somewhat later, in 246, also in Dacia (Борић-Брешковић, Б., 1976, 8, н. 2; Црнобрња, Н., 1993, 17–19; Vasić, M., 2012, 21, ref. 83). Until then, the need for such small coinage was covered by the mints of Rome and also, to a lesser degree, by provincial mints in Macedonia (Borić-Brešković, B., 2011, 417–418, ref. 34–49). The Stobi mint was closed during the reign of Caracalla (Borić-Brešković, B., 2011, 411, ref. 3), which coincides with the appearance of larger amounts of coins from the Nicaea mint in the territory of Moesia Superior. Almost simultaneously, during the reign of Elagabalus, and especially Alexander Severus and Gordian III, in Macedonia, new, large quantities of autonomous coins were minted – Koinon Macedoniae (Kos, P., 1998, 225). During that period, contrary to the Nicaea coins, the Macedonian coins obviously had no larger influence on the monetary circulation of Upper Moesia. This tendency is noticeable until the reign of Gordian III, when the main role was taken over by the Viminacium mint (Војвода, М., Петровић, С., 2011, 288, н. 26). The opening of the Viminacium mint and the start of circulation of the coins minted in it immediately caused a reduced inflow of Gordian III coins from Nicaea.

To date, the generally accepted opinion is that of Professor Dušanić who considers that the Viminacium mint was opened between the 19th and 21st October, 239, which would represent the beginning of the provincial monetary era (Dušanić, S., 1976, 58; Борић-Брешковић, Б., 1976, 9, н. 8; Vasić, M., 2012, 21, ref. 83). The mint operated for sixteen years (AN I – XVI), from 239/240 to 254/255, with interruptions in 248/249 (AN X) and 253/254 (AN XV). The reasons for the interruptions have been extensively discussed and most experts agree that this happened due to economic reasons. Today, an opinion prevails that the interruption during year X of

[23] More on circulation of provincial coins of the Viminacium colony, see in: Borić-Brešković, B., Vojvoda, M., 2018, 73–100.

the local era was connected to Pacatianus' usurpation.[24] In 254, during the reign of Galienus 254, the mint was finally closed, along with most other provincial mints throughout the Empire (Борић-Брешковић, Б., 1976, 10, н. 11). Three nominals were minted: the so-called "large", "medium" and "small" bronze coins, for fourteen emperors and members of their families. Several special issues were also recorded – medallions – for Hostilian, Trebonianus Gallus and Volusianus, but also for Valerianus I and Gallienus (Борић-Брешковић, Б., 1976, 10, н. 16; Борић-Брешковић, Б., 1986, 123; Kos, P., 1998, 377, Sl. 5).

Their obverses bear images of emperors and their family members, accompanied by an inscription in Latin. The inscriptions on the reverse are always the same, containing the name of the province and the abbreviated name of the city in which the coin was minted: P M S COL VIM (*Provincia Moesia Superior Colonia Viminacium*). On the bottom of the reverse side, the year of the local era was stated (I–XVI). On most Viminacium pieces, the reverse image shows a female figure between a bull and a lion, symbols of the legions *legio* VII *Claudia* and IV *Flavia*, stationed in Upper Moesia. The female figure is believed to represent a personification of the city of Viminacium or the province of Upper Moesia.[25]

Contrary to the basic type, which were minted every year, there were also occasional series. In these series, the personification has different attributes, as a result of which she represents either *Fides militum* or *Pax*. On some of the occasional series, the reverse images are known to represent either Victoria or the emperor.[26] Among the occasional series, the personification images are highlighted between a lion and a bull, in each hand holding a vexillum marked with III and VII (Борић-Брешковић, Б., 1986, T. IV, V and VI). On rare occasions, personification images with a vexillum also appear in which the legionary emblems, the bull and the lion, are placed on top of the vexillum (Борић-Брешковић, Б., 1986, T. VII). Exceptional cases include the series of Gordian III from the year AN IIII, representing the only example known so far of a personification wearing a *corona muralis* on her head. This series is also specific because of the image of the emperor's bust on top of the vexillum being held by the personification (Борић-Брешковић 1986, T. VIII. 1, 2, 2a). As an exceptional motif, there is also the personification holding a vexillum without any inscription in one hand and a hare in the other. This motif on the Viminacium provincial mint of Gordian III has been scientifically much discussed. The explanation by Borić-Brešković is quite convincing, since the hare is interpreted as Diana's attribute and an animal from Venus's cultic circle, thus metaphorically indicating yet another aspect of Moesia – as *Moesia Felix* (Борић-Брешковић, Б., 1986, 138-142, T. VIII. 5, 6, T. IX.1–4).

**Fig. 388**

[24] Pacatianus' usurpation chronologically coincides with the interruption of minting in year X. The usurper chose Viminacium for his seat, opening a mint of Antoninians, most likely causing the temporary closure of the mint in which provincial coinage was produced; *cf.* Борић-Брешковић, Б., 1976, 9; Борић-Брешковић, Б:, 1986, 123, н. 2; Vasić, M., 2012, 7.

[25] Authors mostly pointed to numerous meanings of the personification and that its double meaning was deliberately left as an open question; *cf.* Борић-Брешковић, Б., 1986, 126, н. 13.

[26] Regarding the iconography of reverse images of the provincial mint in Viminacium see Борић-Брешковић, Б., 1986, 123–197.

**Fig. 389**

Among special series from the Viminacium mint there is another example of Gordian III coinage. On the reverse, the emperor is depicted wearing his uniform, holding a downward pointing spear in his right hand, while with his left hand he is placing a sacrifice on an altar. Bull's and lion's protomes are placed on vexilla stuck into the ground on both sides of the altar. This image is interpreted as a reflection of an actual situation – after including Moesian vexillations in the war in the East, the emperor brings offerings for a successful war against Persia (Борић-Брешковић, Б., 1986, 143). There are also two variations of the image of the emperor depicted with Victoria wreathing him. On the first variant, the emperor holds a spear and a shield, while on the other he brings sacrifices to an altar (Борић-Брешковић, Б., 1986, T. X). During year XI of the local era, for Philippus II, coins with reverse motifs were minted showing the emperor between a bull and a lion, holding a spear and a globe, with Victoria crowning him (Борић-Брешковић, Б., 1986, T. X. 7–10, T. XI). The precise chronological data given by the Viminacium provincial series indicate that they are very reliable sources for studying historical events from the middle of the 3rd century. In accordance with this, issues from the year XI of the local era significantly contributed to solving historical questions, mostly raised by disagreements of written sources regarding the murder of Philippus I, Philippus II and the beginning of Trajan Decius' reign. In his latest study, Vasić showed that Philippus II outlived his father for at least a month and that until the official inauguration of Decius he was the only legitimate ruler. For a short time, even after Decius' inauguration, he was the ruler. This time was long enough to mint the first series in year XI of the local era. This series was dated by Vasić from the middle of October to the beginning of November, 249 (Vasić, M., 2012, 22–24).

Besides those already mentioned, among the special types there is also a depiction of Victoria stepping between the bull and the lion, carrying a wreath and a palm branch. This motif, quite common on Roman coinage, has a victorious character and refers either to the emperor himself, to a specific victory or to several of them. In the first case, the motifs on the Viminacium series of Gordian III and Philippus II are ascribed to victories over the Persians and in the second case to the initial success against the Carpi (Борић-Брешковић, Б., 1986, 147–148). There are also reverse motifs showing a personification with added attributes (a branch, a horn of plenty, a sceptre with Victoria, a globe or a wreath), with which it modifies its basic meaning and expresses imperial peace, basically representing Moesia – *Pax*. Motifs of this group are known in sixteen variants (Борић-Брешковић, Б., 1986, 151–153, T. XIV–XXI).

Among rare known medallions (multiple) there are those minted for Hostilianus during the year XII of the local era. They are known to have been minted with two variants of the obverse legend. The reverse sides of both examples show the basic type of personification between the bull and the lion (Pick, K., 1898, 51, no. 153, no. 154, Taf. I.15; Vasić, M., 2012, 28, ref. 129). From year XIII, two medallions are known that were minted for Trebonianus Gallus and Volusianus, with two different exceptional motifs on their reverses. The obverse of both examples bear busts of the father and the son facing each other. The reverse of the first medallion shows both emperors wearing military uniforms and facing each other, each of them holding a spear and a globe with Victoria.

The legionary emblems, the bull and the lion, are placed in a separated reverse section, to the left and right of the number indicating the year (Pick, K., 1898, 55, no. 170, Taf. I.16; Борић-Брешковић, Б., 1986, 150, T. XIII.1–2). On the reverse of the other medallion there is an *adventus* motif: the emperor is depicted on a horse, holding a spear in his right hand, led by Victoria holding a wreath and a palm branch (Борић-Брешковић, Б., 1986, 151, T. XIII. 3–4). From the year XVI there is a medallion minted for Valerianus I and Gallienus, with busts of both emperors depicted on the obverse. On the reverse, the co-rulers are depicted in military uniforms, each of them holding a spear and a globe. Contrary to the medallion of Gallus and Volusianus, the medallion of Valerianus I and Volusianus does not depict images of legionary emblems. The usual reverse inscription was kept, as well as the number of the year (Kos, P., 1998, 377, Fig. 5).

Certain facts indicate that between the years XI and XIII of the local era, actually from 250–252 in Viminacium, the provincial mint operated as a so-called "pseudo-imperial" mint. Borić-Brešković first pointed out this fact, which was later also confirmed by Vasić in his recent studies (Борић-Брешковић, Б., 1986, 154–155; Vasić 2012, 28). The arguments given by them basically indicate a strong syncretism in which Victoria, depicted on reverses, unites the attributes of *Pax*, *Victoria* and *Abundatio*. By connecting the attributes of several deities, the personification of provincial Viminacium coinage also connects the basic political ideas of Trajan Decius. After a thorough analysis of historical circumstances in the Balkan provinces, Vasić concludes that the entire repertoire of images points to the presence of the emperor and his family in the Balkans in 250/251, thus resulting in the opening of a "pseudo-imperial" mint to cover the needs of military operations. Among other arguments, Vasić also names the high stylistic level of mould carvings, along with the appearance of the already mentioned multiple. Neither technically nor from the carver's point of view were they simple to mint, so experienced craftsmen of an imperial mint would have been needed.

Ever since the end of the 19th century, the topic of the operation and issues of the imperial mint, actually the mint of Antoninians in Viminacium, has been much discussed among scholars. Until now, this problem still remains partially unsolved and opinions remain divided.[27] Today, the basically accepted opinion is that the imperial mint in Viminacium minted Antoninians for Valerianus I and Galienus. However, Pegan proved that, during his usurpation, Pacatianus minted Antoninians in Viminacium. In his excellent analysis, Fitz tried to prove that the mint operated from the reign of Gordian III to Valerianus I and Galienus (Pegan, E. M., 1984, 204–213; Fitz, J., 1978, 633–684). Vasić's opinion, also supported by Pegan, suggests that the mint of Antoninians in Viminacium probably did not work continuously, but represented a secondary mint for occasional monetary interventions in the Danube valley for military needs (Vasić, M., 2012, 39). In his impressive analysis of minting in Viminacium during the reign of Trajan Decius, by having analysed moulds in detail, Vasić compared issues of this imperial mint with the issues of the mint in Rome. He concluded that during the period of the most frequent Gothic raids

[27] For all of the theories and discussions regarding this problem see Vasić, M., 2012, 39–71, with bibliography.

**Fig. 390**

Fig. 391

across the Danube, they represented logistical support for the military operations of Trajan Decius. Because of this, Vasić sees no reason for Decius not to have renewed the mint of Antonininas and keeping it active during the reign of Pacatianus and Philippus II (Vasić, M., 2012, 41).

The work of the Viminacium mint was bound with historical events of the 3rd century in the Danube valley. The secondary imperial mint was opened in Viminacium during the reign of Philippus I. During Pacatianus' usurpation, it minted Antoninians for him, later on issuing two ephemeral issues for Philippus II after the battle of Verona. As Vasić concludes, the mint of Antonininas especially developed during the reign of Trajan Decius, continuing to the reign of Valerianus I and Galienus. It was closed in 257 (Vasić, M., 2005, 19; Vasić, M., 2012, 74–75).

**Numismatic finds**

During almost five centuries of life in Viminacium, several cemeteries were formed, determined according to their location next to the legionary fortress and the settlement: the northern, southern, eastern and western cemeteries. For the needs of the Kostolac 2 thermoelectric power-plant and the opening of the Drmno strip mine, ever since 1977, the area of the southern cemetery has been excavated on a large scale.[28] Since 2000 until today, the eastern and the northern Viminacium cemeteries have been excavated. During these forty years, over 14,000 graves have been unearthed, with hundreds of thousands of finds, about 12,000 of which being numismatic finds.

Such a large sample of numismatic finds from closed archaeological contexts offers an excellent starting point for numerous analyses, such as: the percentage of imperial and provincial issues throughout the centuries; the percentage of issues and nominals from specific mints; the presence of coins in cremations, inhumation graves or in sacrificial areas; the analysis of coin positions in graves in relation to the positions of the deceased; the number of coins in graves; studies of the percentage of reverse motifs discovered in graves; the role of perforated coins; analysis of hoards within graves, etc. According to these detailed analyses, one can draw certain conclusions regarding the role of coins in funerary rituals practiced in Viminacium.

So far, systematic analyses of numismatic finds from the biggest Viminacium cemeteries of Više grobalja and Pećine have been made, most of them coming from the earlier excavations (1977–1997) (Vojvoda, M., Mrđić, N., 2015; Vojvoda, M., Mrđić, N., 2017). In the area of the Pećine site, three cemeteries can be distinguished. The oldest one, contemporary with the Više grobalja cemetery and established in the middle of the 1st century, was used both for cremations and inhumation burials. The second cemetery was established at the end of the 1st and the beginning of the 2nd century and used until the middle of the 3rd century. Here there were mostly only cremation burials, with the exception of infant inhumation graves. The youngest Pećine cemetery was established in

[28] Among numerous publications of various kinds of archaeological finds, we wish to highlight the following: Зотовић, Љ., Јордовић , Ч., 1990; Korać, M., 1996; Korać, M., 2007; Redžić, S., 2007; Golubović, S., 2008; Korać, M., Mikić, Ž., 2014, Vojvoda, M., Mrđić, N., 2015, Vojvoda, M., Mrđić, N., 2017; apart from these, hundreds of articles, papers, bachelor, master and doctoral theses thematically deal with many different aspects of Viminacium research and its rich cultural heritage.

the middle of the 3rd century and used until the first decades of the 5th century. The establishment of this cemetery was connected to changes in funerary rituals, actually the abandonment of cremations. From that period onwards, only inhumation burials were made in Viminacium (Зотовић, Љ., 1986, 42–45; Зотовић, Љ., Јордовић, Ч., 1990, 1–34; Korać, M., Golubović, S., 2009, 12–13, ref. 15–17; Vojvoda, M., Mrđić, N., 2015, 9).

In the Više grobalja necropolis, 3,161 coins were discovered while in Pećine, 3,865 coins were registered. In the first necropolis, the coinage belongs to the period from Marcus Antonius to Theodosius I, while in the second; this period continues to the reign of Theodosius II. In both cemeteries, imperial coinage is represented in a higher percentage than provincial (79.61 – 20.30 % and 84.38 – 15.58 %). In the Više grobalja cemetery, a larger amount of coinage in graves was registered (33.74 %) when compared to Pećine (19.22 %). However, this percentage is in line with the average when compared to similar cemeteries with known coinage analyses. Both cemeteries also show a larger presence of numismatic finds in cremations than in inhumation graves.

When studying monetary circulation during the Roman Empire, the data gained after analysing coinage from the Viminacium cemeteries is of the utmost importance. Regarding the frequency of coinage from the imperial mints in both cemeteries, starting with the reign of Septimius Severus, all the examples come from the mint in Rome. After 193, coinage from nineteen different mints is registered: Rome, Emesa, Alexandria, Laodicea, Sicily, Mediolanum, Serdica, Cyzicus, Antiochia, Viminacium, Ticinum, Heraclea, Lugdunum, Thessalonica, Sirmium, Constantinople, Aquileia, Arles and Trier. Again, the most frequent finds are coins from the mint in Rome. During the first half of the 3rd century in Viminacium, it was specifically noticed that there were large quantities of provincial mints compared to imperial ones. This is regarded as a consequence of the lack of small bronze coinage distributed in the Balkan provinces from the mint in Rome. This was especially noticeable in Upper Moesia and Lower Pannonia, from the reign of Caracalla to Gordian III.

At the cemeteries of Više grobalja and Pećine, mints from sixteen provinces were recorded, from a total of 35 mints and 1,100 pieces. Coins were recorded from the following provinces and mints: Bithynia: Iuliopolis, Nicaea, Nicomedia; Mysia: Pergamon; Asia: Taba, Antiochia; Phrygia: Laodicea; Cilicia: Isaura; Cappadocia: Caesarea; Ionia: Ephesus; Mesopotamia: Karhe; Lydia: Atalea; Egypt: Alexandria; Achaia: Argos; Thrace: Hadrianopolis, Mesembria, Pautalia, Perinthos, Philippopolis, Plotinopolis, Augusta Traiana, Serdica, Anchiale, Deultum, Bysanthe; Macedonia: Autonomno, Amphipolis, Apollonia, Edessa, Philippopolis, Stobi; Lower Moesia: Nicopolis ad Istrum, Marcianopolis; Upper Moesia: Viminacium and Dacia: Sarmisegetusa. Another 196 pieces need to be added to this, since it was impossible to determine to which provincial mint they should be ascribed, as well as another 79 heavily damaged pieces, most likely belonging to provincial mints of the 2nd and the 3rd centuries. The frequency of provincial and imperial coinage from such a large number of mints gives testimony to the intensive trade and human mobility of the time.

Analysis of provincial minting in the territory of Upper Moesia and its comparison to finds from the surrounding provinces contributes much to the understanding of the methods and boundaries of monetary circula-

**Fig. 392**

Fig. 393

tion between the provinces of Asia Minor and the Central and Western Balkans. Among the listed provincial issues, in Viminacium and generally in Upper Moesia, among the most important ones are series from the Bithynian mint in Nicaea. The greatest concentration of Nicaean coinage was discovered close to Viminacium and along the Danubian limes, connected most likely to movements of military units. While going to or returning from battlefields in the east, Septimius Severus, Caracalla, Gordian III and Alexander Severus spent some time in Viminacium. On such occasions, Viminacium also hosted military units that accompanied the emperors. On the other hand, vexillations of the legion VII *Claudia* also participated in those wars (Војвода, М., Петровић, С., 2011, 289, н. 32). Intensive movements of military units during the first half of the 3rd century along the Danube limes and the road from Viminacium to Naissus and further on over Thrace to Bosporus, significantly influenced the circulation of coinage from Bithynia.

Further analyses of numismatic finds from Viminacium cemeteries also included the percentage of specific nominals. As usual, bronze pieces, aes and dupondii, are much more numerous than the silver ones. When it comes to the number of coins discovered in each grave, there is usually just a single coin (in about 86 %). Also of great importance are the analyses connected to the position of coins within the graves. Logically, this can only be applied to inhumation burials. Only about one third of the graves from "Više grobalja" and one fifth from "Pećine" contained coins as grave-goods. Of this number, in both Viminacium cemeteries, the greatest number of coins (1/3) was deposited within the mouth of the deceased or close to the head. This all indicates that the custom of the so-called "Charon's obol" was respected in Viminacium only by a small number of its inhabitants. This also raises numerous questions related to the discordance of ancient sources and the actual situation of the finds.

Special attention was dedicated to perforated coins, discovered both within graves and on sacrificial surfaces (Vojvoda, M., Mrđić, N., 2015, 30–36; Vojvoda, M., 2015, 53–78; Vojvoda, M., Mrđić, N., 2017). While interpreting finds of perforated Roman coins, there is usually the problem of whether they were perforated in Roman times or later. Therefore, a large sample of finds from Viminacium cemeteries, entirely coming from closed archaeological contexts, is of great importance. A number of these coins represent so-called "monetary jewellery", with coins incorporated into parts of finger-rings, necklaces, arm bands or earrings. Some perforated coins were discovered on sacrificial areas, indicating that they played a certain role in funerary rituals and post-funerary rituals. A slightly higher percentage of coins were noticed in infant graves when compared to the graves of adults. Furthermore, a common find in infant graves includes one to three perforated coins. After a detailed analysis of each grave, it was determined whether the perforated coins represented parts of "monetary jewellery" or not.

The importance of a secondary symbolic meaning of coins should neither be exaggerated, nor neglected, since the data obtained shows a deeper connection between reverse images and the religious mentality of common people. While analysing types of reverse images and their role in funerary contexts, both Viminacium cemeteries, despite small differences, keep the same sequence of type representations. The domination of reverse types with military motifs was confirmed in both Viminacium cemeteries, contrary to results obtained in

cemeteries from Brigetio and Apulum. According to analyses of cemeteries from Upper and Lower Pannonia (3) and Dacia (1), as well as two Viminacium cemeteries, a difference between the frequencies of specific reverse motif types was confirmed. Religious motifs dominate in Pannonian and one Dacian cemetery, while in the two largest Viminacium cemeteries military motifs dominate. The reason for the great presence of military motifs in Viminacium cemeteries during the 3rd century (58.40 % in graves and 44.57 % in layers) most certainly represents a large presence of Bithynian coinage from Nicaea within the monetary circulation of Upper Moesia. In the "Više grobalja" cemetery, the large amount of military reverse types is influenced by the exceptional appearance of issues from the Nicaea mint. In the "Pećine" cemetery, the youngest cemetery in this area, there was a large quantity of coinage from the 4th century (27.96 % of all of the studied pieces from "Pećine"), again statistically indicating a higher percentage of military reverse types.

Based on the detailed analyses of the usage of coinage in funerary rituals, it was concluded that almost 80 % graves did not contain coins as grave goods. It seems that in Viminacium, the custom of placing coins within graves was rooted deeper with the section of the population that practiced cremations. The greatest part of the Viminacium population practiced identical methods of burials (cremation and inhumation burials, eventually moving towards the inhumations), but not the custom of depositing coins in graves. On the other hand, finds of coins from sacrificial areas in the cemeteries of "Više grobalja" and "Pećine" raise another question regarding the funerary usage of coins during regular funeral feasts. The fact cannot be neglected that approximately the same number of coins was discovered in graves as in the necropolis layers, mostly representing finds from sacrificial areas on graves. This custom indicates differences in the funerary usage of coins: graves that contained coins as grave goods during funerals, graves that had their own or a common sacrificial area with coinage or graves that did not contain coins as grave goods but have them on them, sacrificed during funeral feasts on the sacrificial area. There are cases of several graves (2–3 or even up to sixty) upon which sacrificial areas were formed, and in such situations it is difficult to determine to which graves the coinage from the sacrificial area should be ascribed. Such sacrificial areas were used over a period of time (100–150 years), as indicated by the thickness of the excavated layers. It is presumed that each year, family members of the deceased visited graves and performed funeral rituals at least six or seven times. However, it remains unclear during which feasts and in what amounts coinage was used.

Regardless of the numerous results connected to the research of funerary rituals during the Roman Empire, it seems that we will never be able to fully understand them. The ever growing number of detailed analyses of cemeteries throughout the Empire certainly contributes to this. A detailed analysis of the role of coinage in funerary rituals shows that the situation is much more complicated than originally presumed. In conclusion, one might say that a more complex, interdisciplinary approach is needed in the interpretation of funerary complexes and finds from sacrificial areas, in order to fill in the "mosaic" of funerary rituals as much as possible.

**Fig. 394**

## LEAD SARCOPHAGI

Burial in lead sarcophagi was comparatively rare in Upper Moesia in Roman times. The greatest number of such sarcophagi has been found in the cemeteries of Viminacium. In addition to the exceptionally richly decorated examples found in the family tombs (*memoriae*), there are some plain ones, which were laid in simple pits. So far, thirteen lead sarcophagi have been excavated, and seven of them are decorated. A very common form of ornament on the lead sarcophagi from Viminacium are applied bands that divide the surface of the sarcophagus into triangles and rhombes, this being a feature characteristic of the Jerusalem workshop. Although the decoration of the lead sarcophagi found in the cemeteries of Viminacium is very similar to that on the sarcophagi from Syria, they are probably the products of local artisans. These artisans were no doubt influenced by the population of Oriental origin. This might imply the use of imported patterns as an expression of a widely adopted fashion in a given period, in this case in the period from the 2nd to the 4th century. Although the greatest number of lead sarcophagi, particularly the ornamented ones, has been found in Viminacium, none of them features Christian symbols. The percentage of burials in lead sarcophagi is comparatively small in relation to the other forms of burials in the cemeteries of Viminacium, which seems to indicate that the people buried in them enjoyed a special social status (Golubović, S., 2002, 634). The greatest number of lead sarcophagi discovered so far contained remains of children.

**Fig. 395**

## MARBLE STATUES

In 2016, during archaeological research in the area between the amphitheatre, urban dwelling blocks and possibly a residential quarter, two exquisite marble statues were unearthed.

One of the statues represents a standing woman, its height preserved up to over 70 cm. The right leg is slightly bent and reaching forward. She is wearing a chiton and himation, their folds carefully sculptured. In her left hand, she holds the Horn of Plenty, while behind the figure, there is a plastic modelled part most likely symbolizing her throne. Next to her right foot, there is a figure of a small child. The sculpture's head and arms are missing. In the very vicinity, an arm and some other parts of the sculpture were discovered. The sculpture most likely represents the Roman goddess Fortuna**.** Fortuna (fortune, force) is a Roman deity of happiness and faith, her being the parallel of the Greek goddess Tyche. Fortuna was worshipped in temples in almost every city not only in Italy, but also in Roman provinces. One of the most famous temples of Fortuna is in Preneste. Surely, one needs to mention one of her temples in Sirmium. In her artistic images, the symbols of Fortuna were the Horn of Plenty (*cornucopiae*) and a rudder**.** The Horn of Plenty is a legendary horn from which fruits and vegetables endlessly emerged and therefore, talismans and amulets were made in the shape of a small horn. Those wearing such symbols were considered never to have difficulties of material kind.

The second sculpture also represents a standing woman. It was made of marble: it is damaged and about 30 cm high. Her head, both arms and legs beneath the knees are missing. The figure is leaning upon her right leg, while the left one is bent and placed slightly forward. The woman is wearing a long dress – from the neck and from the waist, is falls down in deep, asymmetrical, angled folds of different width. Beneath her waist and most likely down to her feet, the folds fall vertically. The back side of the figure was roughly sculptured and her dress falls down to her calves in the shape of a triangle. Most likely, the fabric that went from the right shoulder over the chest down to the left upper arm represents a veil that was pulled over her head.

**Fig. 396**

Fig. 397

Fig. 398

Fig. 399

Fig. 400

Fig. 401

## CHRISTIAN RELIQUARY

In 2006, a grave of a cremated deceased, designated G1-115, was found in trench no. 89 at the "Kod Koraba" site. The grave was oriented west–east. It was a double-levelled grave pit of the "Mala Kopašnica – Sase II" type, rectangular in shape with rounded corners. The lower grave pit measured 2.9 x 2.1 x 0.8 m. The dimensions of the upper grave pit were 1.2 x 0.8 x 0.6 m. A lead reliquary with cremated bone remains was found on the lower grave pit. Among the grave goods there was a ceramic mug and a bronze needle with a bird-shaped head (a dove), as well as part of a bracelet made of bronze.

The lead reliquary was partially damaged and deformed. The reliquary is cube-shaped, measuring 30 x 30 x 30 cm. The lid was also damaged and deformed, most likely as the result of looting. Three sides are dominated by an ornament of an equilateral cross, while on the fourth side there are two crossed lines. The aforementioned motifs are made in relief, using twisting. The reliquary had a lid fastened with three iron wedges.

**Fig. 402**

Fig. 403


Fig. 404

Fig. 405

Fig. 406

The relative chronology between the graves found in the mentioned trench clearly indicates that the lead reliquary dates from the middle or second half of the 3rd century. Bearing in mind the representations of the cross on the reliquary as well as the goods in it, such as the bronze needle with a dove-shaped head, it is possible that the lead reliquary represents the oldest representation of the cross known to date. It is possible that it contained the bones of early Christians who have been recorded in this area and which, in the Middle and Lower Danube region, had significant Christian bishops and Christian martyrs.

**Fig. 407**

**Fig. 408**

Fig. 409

## GNOSTIC URN

During June 2010, a grave with cremated remains was found within the Viminacium necropolis at the site of "Nad Klepečkom", containing a remarkable find. The grave was designated G1-46 and was found at a depth of 0.8 m from the surface. The grave measures 46 x 49 x 40 cm. The burial structure consists of four bricks positioned around a lead urn, which thus form a chest, while a fifth, horizontally placed brick, measuring 40 x 28 cm, forms a grave cover. The urn was carefully placed in the brick chest, with the lid facing up.

In the urn – ossuary (*ossuarium*, *ossarium*) measuring 31 x 25 x 15 cm, a large amount of cremated bones of the deceased was found. A bronze coin was also discovered inside the urn. The damaged legend and the image of the Empress of the Dynasty of Severus – probably Julia Mamea or Julia Maesa – are on the obverse, and three military insignia with the inscription NIKAIEΩN – the mint of Nicaea in the first half of the 3rd century, are on the reverse. There were no grave goods inside the brick grave structure.

What distinguishes this urn, the ossuary, is the fact that its lid and sides are decorated with plastic modelled ornaments. These ornaments are placed radially and unequivocally indicate a certain zodiacal structure. The cover is particularly interesting. There is an impression that those who stored the cremated bones in a lead urn wanted to emphasize the deceased's intellectual and mental affiliation. A rhomboid structure that indicates continuity, cut in the middle by an arrow, is obviously positioned to reconcile the circle and linearity. It seems that there was a desire to reconcile two existential situations in our perception of life, death and reality, a desire to connect the real-world experience and our historical perceptions of the linearity of time with the cosmic circular cycle, that is, to reconcile two different worlds – the one in which the deceased lived and the one to which he departed. Put simply, it is the desire to connect eternal time with man's spiritual dimension. It is as if the arrow that intersects the rhomboid – this closed curve (simplified circle) – indicates a linear continuation to an infinity.

The grave was dated to the first half of the 3rd century. Although without overwhelmingly convincing evidence, it could be assumed that in Viminacium, on this occasion, a Gnostic grave has been discovered, with an urn in which the bones of a Gnostic were buried.

**Fig. 410**

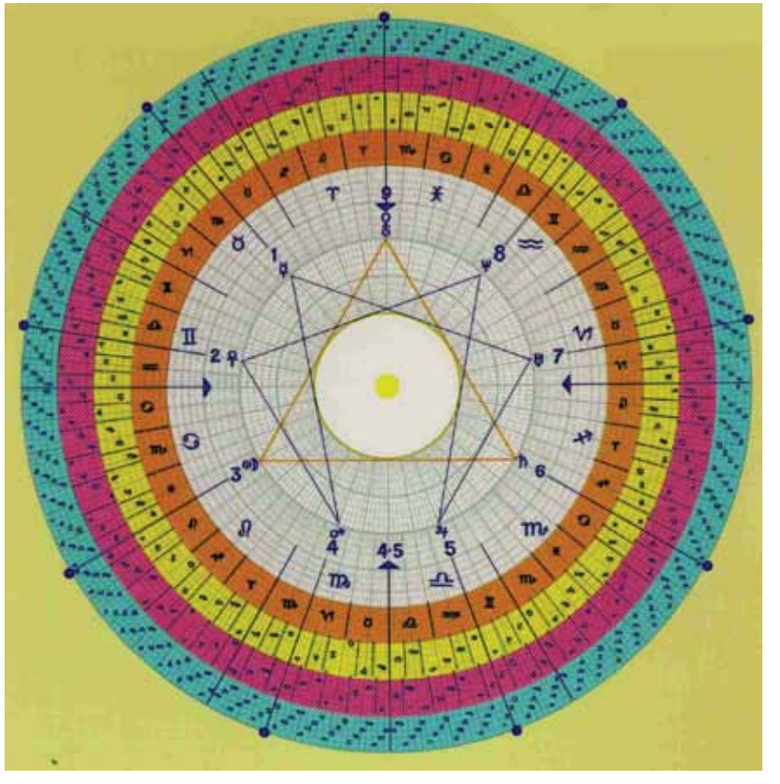


**Fig. 411**


Fig. 412

Fig. 413

Fig. 414

# PROTECTION

Fig. 415

## PROTECTIVE STRUCTURES APPLIED IN THE PROTECTION OF SITES

In the area of today's Viminacium Archaeological Park, protection of the unearthed archaeological sites using covering structures started in 1988, when the memorial buildings found in the area of today's "Kostolac B" thermal power plant, actually the family tombs G-4815 and G-4816, once part of the southern Viminacium necropolis. They were covered with a protective structure in the form of a building with concrete walls and a complex wooden roof covered with metal sheets (Тодоровић, Д., 1991, 165).[29] Only after the year 2002 (Maksin *et al*. 2011, 329), in which the extensive 21st century investigation of Viminacium was continued, this kind of structures' protection was applied again. Since then, the city bath, the northern gate of the legionary fortress and the mausoleum have been covered *in situ* with protective structures in the form of shelters and thus presented to the public, forming the initial part of the tourist offer of the Park.

A shelter, as a structure designed and erected over an archaeological site with the aim of physically protecting it from environmental agents and at the same time presenting its archaeological, historical, architectural or artistic values, whether it be permanent or temporary (Šekularac, J., Šekularac, N., 2006, 1315), can be a very simple or an extremely complex construction. In either case, its design is a very delicate task because of its important protective role and the need for the consideration of many varied conditions at a particular site, always bearing in mind that monitoring and the continuous care of the structure after it is erected is an obligation and "a long-term commitment" (Teutonico, J. M., 2018, vii).[30] Globally, the most successful examples of shelters are those providing suitable environmental conditions for the covered remains at the same time offering an attractive presentation for visitors, revealing to them the complex values of the monument.[31]

Since 2002 the protective structures erected over the archaeological sites of Viminacium are characterised by their simple structural systems (Kujundžić, V., 2014, 242), although great care has been taken in the design of these structures in an area with strong winds and industrial atmospheric agents. They are formed using a lightweight roof girder system – LKV system – or elements made of glued laminated timber and, thus, represent prefabricated constructions. The production of the elements that form these constructions is done according to a strictly defined production technology in factories so that all the elements of glued laminated timber represent products of a standardised quality, which can easily be assembled on site (Kujundžić, V., 2014, 11, 35).

The LKV system is an industrial system where, with the use of metal plates as connecting elements, the node connections of the individual wooden beams that form the truss systems are made. Within the system, beams made of solid wood form elements that can cover spans from 2.40 to 15.00 m, while specialised elements can reach spans of up to 30.00 m. They are spaced at small distances of 60 to 120 cm from one another, occasionally up to 2.50 m (Kujundžić, V., 2014, 11, 18).[32] Glued laminated timber is a building material formed by connecting thin solid wood lamellas of equal cross-section with special glues, making beam-like construction elements. The material has more uniform mechanical characteristics than solid wood, while the glue enables the production of elements of large dimensions, making it possible to produce a beam of over 50 m long, and 4.0 m high (Kujundžić, V., 2014, 35–36, 47–48). With the use of glued laminated timber, it is possible for the wood to spans distances exceeding the limitations of its natural growth (Nikolić, E., 2018, 30), allowing the coverage of very large spaces with no supports and, thus, not endangering the archaeological remains being covered (Maksin *et al*. 2011, 331–332; Golubović, S., Korać, M., 2013,

[29] The structure was designed by the architect Dragoljub Todorović and the civil engineer Jaša Preger.

[30] In recent years this topic has become very interesting among Serbian researchers. Studies have been carried out analysing the guidelines for the planning of the structures, but also the method of the structures' assessment and evaluation during their lifetime. See more in: Vasić-Petrović, E., Momčilović-Petronijević, A., 2015; Kostić, D., Gligorijević, M., 2016; Ivanović-Šekularac, J., Čikić-Tovarović, J., Šekularac, N., 2017; Kostić *et al*. 2019. The international studies include Aslan, Z., 2007; Mollaert *et al*. 2011; Hebbelinck *et al*. 2011; Briones, C. C., 2013; Gargano *et al*. 2017; Aslan *et al*. 2018; Viscuso, S., Zanelli, A., Barozzi, M., 2018.

[31] One of the most successful examples is the shelter over the Akrotiri archaeological site, Thera, designed by Nikos Fintikakis. See more in: Fintikakis, N., Doumas, C., 2014.

[32] More on the constructions of LKV system in: Kujundžić, V., Tekić, Ž., Đorđević, S., 2004 and Kujundžić, V., 2014.

Fig. 416



68).[33] The Viminacium shelters are covered with a PVC membrane. The partially transparent PVC membrane protects the inside space from snow and rain and allows sunlight to enter, being a roof and a facade at the same time, while the position of the openings in the membrane directs airflow, enabling efficient ventilation (Kujundžić, V., 2014, 192, 246).

The shelters at Viminacium are the first of this kind in Serbia used at an archaeological site, while the application of the PVC membrane as its cover is one of the pioneering examples in the country (Nikolić, E., 2018, 30).[34] The first protective construction in Viminacium was erected during 2003, over the partially excavated northern gate of the legionary fortress – *Porta praetoria*. It was designed as a temporary tent construction using a lightweight roof girder system - LKV system – which is convex on the upper side, and covers an area of 14.00 m wide and 30.00 m long (Kujundžić, V., 2014, 192–193). The temporary protective structure over the remains of the city bath (*thermae*), not fully excavated, was built in 2004, as a tent construction with shallow foundations. This allows the structure to be relocated, leaving room for an alternative construction after the completion of the excavation. The construction is a system of three-hinged arches of glued laminated timber with a span of 32.00 m, placed 5.0 m apart (Kujundžić, V., 2014, 246–247).

The Mausoleum, as a part of the excavated eastern Viminacium necropolis, with a central grave, has a shelter designed as a wooden construction covered with polycarbonate, but actually covered with a membrane, as with the previously mentioned buildings (Viminacium 2019). The designer of the structure writes that the task given to him was to make a permanent building with the character of a museum, but at the same time unobtrusive, not overshadowing the archaeological remains under it, and styled in accordance with the importance of a Roman necropolis (Kujundžić, V., 2014, 244). The protective structure was constructed in the period from 2004 to 2005 and repaired in 2016. It was made of glued laminated timber in the shape of a truncated square-based pyramid (Nikolić, E., 2018, 32), thus accentuating the central grave (Golubović, S., Korać, M., 2013). Its primary construction consists of two pairs of polygonal girders functioning as three hinged arches. (Kujundžić, V., 2014, 244). The archaeological remains are visible in the overview of the site from the gallery around the necropolis, during the descent to the area with the graves, and using the newly built corridor while accessing the underground wall painting grave, presented *in situ* (Nikolić, E., Roter-Blagojević, M., 2017; Николић, E., 2018, 378; Nikolić, E., 2018, 32).

The temporary protective structures over the northern gate and city baths in Viminacium fulfill the basic functions of physical protection of the ancient remains and primary presentation of these remains. However, it has been noted in discussions that the beams and trusses in the structure over the gate dominate the low ceiling space, detracting from the focus on the remains of the ancient monumental building. On the other hand, the much taller construction made of glued laminated timber over the city baths almost negated its own presence in relation to the ancient remains, whilst at the same time remaining monumental (Николић, E., 2018, 373; Nikolić, E., 2018, 30). After the full excavations of the buildings are completed, these shelters will be replaced with more permanent structures, dimensionally suitable

[33] More on the constructions of glued laminated timber in: Kujundžić, V., Tekić, Ž., Đorđević, S., 2004 and Kujundžić, V., 2014.

[34] The construction of the shelters in Viminacium was designed by the professor Vojislav Kujundžić from the Faculty of Architecture, University of Belgrade and his team from the company "LKV Centar".

Fig. 417

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for the fully excavated archaeological remains. At that time it will be possible to integrate different solutions to broaden the presentation and interpretation of the remains. However, the shelter over the Mausoleum, which, according to its constructor, was designed to be permanent, although erected over only a part of the necropolis, successfully fulfilled all the aims of a shelter. It was designed in accordance with the central grave position and the dimensions of the graveyard boundary wall and, thus, formed a aesthetically pleasing unity with them. Situated on the periphery of the Roman city and fortress, owing to its dominant hill position in the flat Park area, but also to the interpretation content it offers visitors, it also became "the most recognisable physical symbol of the Viminacium Archaeological Park" (Николић, E., 2018, 381; Nikolić, E., 2018, 32).

Finally, it should be noted that, as the shelters are accepted nowadays as "a material intermediary between the archaeological construction and context" (Germana, M. L., 2013, 188), any future protection of the individual Viminacium sites should take care to preserve their overall context,[35] which is in many archaeological sites around the world inevitably lost by having individually sheltered and presented buildings that were once part of the same settlement organism (Николић, E., 2018, 373–374, 381; Nikolić, E., 2018, 31–32). The decision regarding the choice of future protection of the Viminacium sites, which will have a permanent character, will be a very sensitive task, especially when more buildings are excavated in the area of the city and fortress that will need protection as well.

[35] The preservation of the context of an archaeological site is discussed by many authors dealing with the protection and presentation of archaeological heritage. See in: Aslan *et al.* 2018.

**Fig. 429**

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Fig. 437

# PRESENTATION

Fig. 438

# ARCHAEOLOGICAL PARK VIMINACIUM

## DOMUS SCIENTIARUM VIMINACIUM

Requirements for the protection of historic buildings, in addition to the performance of various conservation methods, often include fulfilling the principles of sustainable development and energy efficiency that are otherwise placed upon contemporary buildings, with a view to incorporating them into the context of modern life. As for archaeological sites, where most of the building remains cannot fulfil a useful function, the possibilities of these processes are much narrower, and for the use of different visitors, it is necessary to build new, modern structures (D'Agostino, S., Bellomo, M., 2003, 468; Николић, Е., 2018, 391; Nikolić, E., Roter-Blagojević, M., 2017, 199; Roter-Blagojević, M., Milošević, G., Radivojević, A., 2009, 36). In addition, the demands of modern archaeological science and the speed of exploration brought about by modern times, imply a multidisciplinary approach. This no longer encompasses traditional methods of research, residence in city and university libraries thereafter, and the processing of artefacts in laboratories away from the excavation sites, but also collaboration with various natural sciences and the use of modern technologies at the very sites. Today, it is very important that these places, which are often far from large city centres, contain technically equipped rooms for the accommodation and work of scientists from various fields of research (Николић, Е., 2018, 393). This is especially true of those archaeological sites where excavations are carried out continuously over a long period of time and where there is a need for accelerated research. This is precisely the case with Viminacium, where research is ongoing throughout the year, with continued work on protective excavations to save the remains of buildings and antique artefacts threatened by the advancement of the mining and electrical industries. Thus, since 2008, an important segment of Viminacium has been the modern building of the Archaeological Scientific and Research Centre, named Domvs Scientiarvm Viminacivm, purpose-built for the aforementioned needs of this archaeological site, but also for the needs of the large number of visitors to the Viminacium Archaeological Park (Николић, Е., 2014, 181–182).[36]

The Domvs Scientiarvm Viminacivm building is located outside the narrow zone of the Roman city and the legionary fortress, near the presented part of the eastern necropolis of Viminacium, or Mausoleum, which is the starting point for visitors to the park and its kind of symbol. In the area of Viminacium today there are not many presented remains of the ancient architecture and, owing to the centuries-old decomposition of the ancient city, the presented structures are often preserved only in the foundation zones. Prior to the construction of the Domvs Scientiarvm Viminacivm building, the only built unit within the village field was the "Kostolac B" Thermal Power Plant complex. In such an environment, a modern building was to be built, which, despite the existing industrial structure, would become a kind of accent in space, but would not allow its spatial elements to dominate the ancient remains of Viminacium. With its "peaceful and unobtrusive disposition", on the perimeter of the archaeological park, the Domvs Scientiarvm Viminacivm building blends in with the image of the part of the Stig plain beneath which lies the unexplored ancient architecture (Nikolić, E., 2009, 95; Николић, Е., 2014, 184, 187; Николић, Е., 2018, 391–393).

The Archaeological Scientific and Research Centre has facilities for researchers and students, as well as enthusiasts interested in participating in research; research facilities with offices, laboratories, workshops, a computer centre and a specialised library; museum facilities with exhibition halls and depots; conference facilities with lecture and meeting rooms; service facilities with a kitchen, dining room and cafe; and recreational facilities in the form of a small spa. The building is also open to tourists visiting as part of the regular visit to the Viminacium Archaeological Park, with limited access to certain areas (Maksin *et al.* 2011, 339).

[36] The authors of the architectural design of the building are Dr Emilija Nikolić and Dr Miomir Korać from the Institute of Archaeology, and the architects Brana Stojković Pavelka i Božana Lukić. The construction was designed by the civil engineers Zoran Cekić and Krstan Laketić.

Fig. 439

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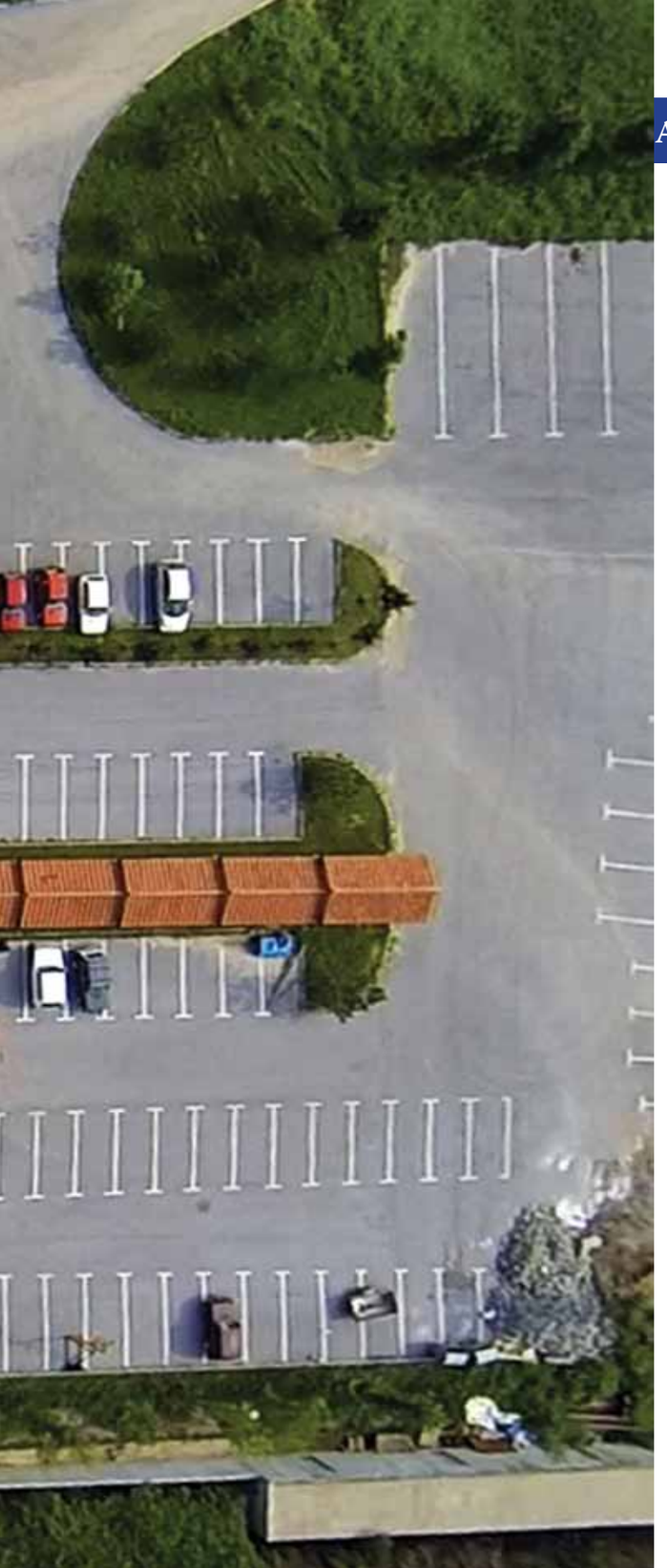
Fig. 444





The building is designed as a set of spaces where different groups of users can perform research and spend their free time, in the immediate vicinity of a Roman city whose excavations are ongoing. Its shape associates with that of a Roman villa, with the existence of nine closed functional segments and five inner courtyards in the form of peristylium. The building covers an area of 67.80 x 65.45 m, with its perimeter walls framing an area of nearly 4,000 m². Its usable area is about 3,500 m², and the premises are divided into three basic levels, two underground and one above ground – further cascading along with the natural fall of the terrain, and uniquely connected by a central porch with a colonnade, modelled on the ancient peristyle. The large inner courtyard – the central peristylium with pedestal columns, oriented to the central tympanum, is tiled with bricks, and its fountain is associated with a Roman impluvium, decorated with mosaics with representations of Neptune and mythological animals. Along the entrance to the building, there are security areas and offices, as well as service rooms with a kitchen. The dining area, which also offers meals prepared in accordance with Roman recipes (*Culina Romana*) served in replicas of Roman vessels (Korać, M., Raičković, A., 2014; Raičković, A., 2007), has 220 seats, a cafe and a gallery equipped with replicas of Roman furniture in the form of triclinium (Mrđić, N., 2012, 124). The building is designed to accommodate 135 people and has hotel and hostel units as well as apartments. Part of the building near the entrance offers hostel accommodation for students, in the area of two smaller green peristyliums there are accommodation units for researchers working on the excavation of Viminacium throughout the year, while the accommodation area with the largest green peristylium, with eighteen units, is intended for guest researchers and visitors (Korać, M., 2014, 17–18). The fourth peristyle with green courtyard is a work area with laboratories and workshops for geophysics, anthropology, bio archaeology, processing of ceramics and metal objects, as well as office work on data obtained with the help of new technologies, using photogrammetry, three-dimensional scanning, and modelling. The specialized library, as part of the scientific research area, has literature relating to the fields of archaeology, history, architecture and art, comprising more than 3,500 monographs and 1,500 serials, including several legacies of scholars from Serbia whose work made a remarkable contribution to these fields of research. There is also a gallery with a reading room as well as a unique lecture room. The total area of the research facilities in the building is 480 m², with additional storage space of 370 m². The recreational part of the building has a special ambience and is equipped with associations to Roman thermae with mosaic-decorated walls[37] and has two swimming pools and a Turkish bath with all the necessary service spaces. The green areas within the building occupy just over 200 m², while the central peristylium is 420 m².

The best form of presentation of objects found during the research of an archaeological site is the formation of a museum in its immediate vicinity, since this is the only way to directly understand the context in which the objects were created or in which they were used. For this reason, within the Viminacium Archaeological Park itself, the Viminacium Museum was established, with a total exhibition area of 630 m². Conceived as an integral part of

[37] Work on the mosaics was carried out by the artists Miroslav Lazović, a full-time professor at the Faculty of Applied Arts, University of Belgrade, and Biljana Velinović, an assistant professor at the Faculty of Contemporary Arts in Belgrade, their associates, and students.

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the Domvs Scientiarvm Viminacivm building since its inception, today this space is a unique setting filled with historical and contemporary works of art. The exhibition halls of the Viminacium Museum are arranged on three levels, with special security and climate control (Golubović, S., Korać, M., 2013, 71). The first, above-ground, level is accessed directly from the central peristylium, and its space is used for the purposes of contemporary presentation settings using virtual archaeology and presenting the results of current Viminacium research, such as models of heads of anthropological types who lived here in antiquity (Микић, И., 2018, 101–106). However, there is also one remarkable exhibit, a sculpture of Constantine the Great, created as a work by a contemporary artist after winning an art competition held in 2013 as part of the celebration of the Edict of Milan.[38] Set in the apse of the room, this monumental sculpture has become a symbol of the museum itself. Through an opening in the floor of the first exhibition level, the next level is clearly visible – the first underground level, or more precisely, its central exhibit, an impressive model of Roman Viminacium, created after lengthy work of the artist.[39] By accessing this level, visitors get the opportunity to see the original wall paintings from the graves and tombs of Viminacium, as well as an edicule. Through the glazed openings in one of the walls of this level there is a view of the lowest exhibition level, that is, the central hall of the museum with its mosaic floor bearing a representation of Christ's monogram. On this level, there is an exhibition space for objects found during the excavation of Viminacium, from which one can access the aforementioned 135 m² hall, with exposed bronze heads of eighteen Roman emperors born in the territory of present-day Serbia, all made by contemporary artists.[40] In the niches of the hall are stone sarcophagi found during the excavation of the Viminacium necropolis. The height of the 4.40 m hall is further accentuated by a coffered ceiling covered in blue mosaic with gold star motifs, just like the walls, whose pilasters formed by mosaic decoration give the impression of bearing the ceiling as a celestial vault.[41] The hall is also the central lecture room for the building and can accommodate 150 visitors. The exhibition ramp accessed from the hall is a space displaying wall paintings found in ancient Viminacium buildings, and those that stand out are from the arena wall of the amphitheatre, decorated with wild animal fur motifs (Rogić, D., Bogdanović, I., 2012, 46–49; Рогић, Д., 2014, 148–154). Considering that a very small number of Roman amphitheatres in the world whose walls were decorated with paintings have been explored, this part of the Viminacium Museum's exhibition is one of its most interesting segments.

The Domvs Scientiarvm Viminacivm is a structure consisting of several different functional wings that are interconnected and shaped to form a unique structure – a technologically equipped contemporary centre, but with the ambience of an ancient building. The ruling element of the composition of this structure is the peristyle, a very attractive element throughout the history of architecture, as it is still today. In this way, the focus of the building is its interior, creating intimate courtyard environments, suitable for work and leisure, but interconnected and easily accessible from the central

[38] The sculpture is the artwork of the artist Vuk Đuričković.
[39] The model was completed by the artist Dragomir Petrović, a full-time professor at the Faculty of Applied Arts, University of Belgrade.
[40] The bronze heads are the artworks of the artists Vuk Đuričković and Sonja Petrović.
[41] Work on the mosaics was carried out by the artists Miroslav Lazović, a full-time professor at the Faculty of Applied Arts, University of Belgrade, and Biljana Velinović, an assistant professor at the Faculty of Contemporary Arts in Belgrade, their associates, and students.

**Fig. 459**


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space of the building. The building was designed with the overwhelming use of traditional materials related to ancient Viminacium architecture. Green Ram schist, as the basic stone of Roman Viminacium architecture, was used to build the peristyle pedestals and to line the exterior walls, while brick, a local product of the Roman city, became the basic paving material in the building. The building has interior spaces with details modelled on Roman architecture, formed with the help of a peristyle motif and roofs covered with replicas of Roman tegulae and imbrices (Nikolić, E., 2009, 95; Николић, E., 2014, 185–188; Николић, E., 2018, 392). The walls of the peristyle are modelled after the walls of Roman houses, without figural compositions, with the help of simple divisions into painted wall fields. In order to meet the functional requirements of the space's users, as well as various regulations related to evacuation methods, the building has four entrances/exits for visitors. A large parking space of 3,750 m² and ninety-eight parking spaces is adjacent to the exhibition ramp, which is also an evacuation exit from the underground part of the building. The landscaped area around the building, with a total area of about 9,000 m², includes green areas with a large number of trees, as well as brick-paved footpaths.

From 2008 until today, a large number of scientific conferences have been held at the Domvs Scientiurm Viminacivm building, elementary and secondary schools in the surrounding area have organised history classes here, and a few years ago it served as the venue for summer schools organised by the Centre for the Promotion of Science. During 2013, the Viminacium Museum's exhibition space hosted a major national archaeological exhibition as part of the celebration of 1,700 years since the issuance of the Edict of Milan, named "Constantine the Great and the Edict of Milan 313: The Birth of Christianity in the Roman Provinces on the Soil of Serbia". During September 2018, lectures by scientists who were part of Limes Congress, one of the world's most important archaeological meetings, hosted by the Viminacium Archaeological Park, were held in the building's halls. In addition, the Domvs Scientiarvm Viminacivm building also hosts other types of gatherings, such as the 9th UNESCO Summit of Heads of State, held in September 2011, while a large number of concerts and cultural and artistic events have been held in the central peristylium (Golubović, S., Tapavički-Ilić, M., 2012, 73; Ilić, O., Nikolić, E., 2015, 231–234; Николић, E., 2018, 393–394; Nikolić, E., 2018, 29). Moreover, through the frequent touristic events that revive Roman history, visitors, with the help of replicas of Roman military equipment and costumes, can become a "legionary or even an emperor" (Korać, M., Golubović, S., Mrđić, N., 2009, CXIII).

By holding various events at the Domus Scientiarum Viminacium, the Viminacium archaeological site has been further recognised in national and international scientific circles, as well as in the fields of popular culture (Николић, E., 2018, 393–394). Today, this building is an extraordinary place with invaluable importance for the protection, research and touristic development of the archaeological site of Viminacium. Hosting a large number of visitors and organising scientific and thematic gatherings, along with the other facilities of the Viminacium Archaeological Park, this building helps to provide funding for future Viminacium research and the development of tourist facilities and, together with the Limes Park complex, has created a large number of jobs for members of local communities.

**Fig. 466**


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Fig. 471


BALCANICA XXVIII
BALCANICA XXVI
BALCANICA XXXVI
ARHEOLOŠKI PREGLED
Decebal si Traian
Geto-dacii
Nenad Cambi
ANTIKA

Fig. 472

Fig. 473

Fig. 474

Fig. 475


Fig. 476

The Domus Scientiarum Viminacium is one of the important factors in the continuity, authenticity and integrity of the Viminacium archaeological site (Nikolić, E., 2012, 68). In the last two decades, during which the presentations and popularisation of Viminacium have been ongoing, its researchers have received a great number of opportunities to show their work to the national and international scientific community and present the treasures of this impressive Roman city and legionary fortress. It is precisely the building of the Archaeological Scientific and Research Centre that gave them adequate space and conditions for these activities. This building, housed in the specific ambience of interconnected rural fields, powerful industry and archaeological remains, has attracted a large number of visitors who have wished to view the highly specialised research. Their positive reactions, following the opening of the monumental gate of the building and views of the central peristylium, are an indication of the huge importance attached to interpreting the cultural and historical heritage provided by the Viminacium Archaeological Park.

**Fig. 477**

Fig. 478

## DOMUS SPA

The recreational part of the *Domus Scientiarum Viminacium*, called the SPA Centre, is a clearly separated section of the building covered by a four-sided roof, located on its south-western side. It consists of a ground floor with a gallery and an underground space. The ground floor is illuminated via openings in the walls as well as by a skylight. It has a free space tiled with bricks around two pools, while above the staircase leading to the underground section there is a small gallery designed for sitting, made of wood and set on columns created according to simplified ancient models. Similar to a Roman latrine, there is also a bench enclosing the ground floor space from the staircase. The underground space includes sanitary and technical facilities, as well as a steam bath as an additional space for relaxation, besides the mentioned pools.

The desire to associate with the interior decoration of the walls of Roman luxury villas led to the installation of mosaic works in the spacious above-ground part of the SPA Centre. The walls and columns,

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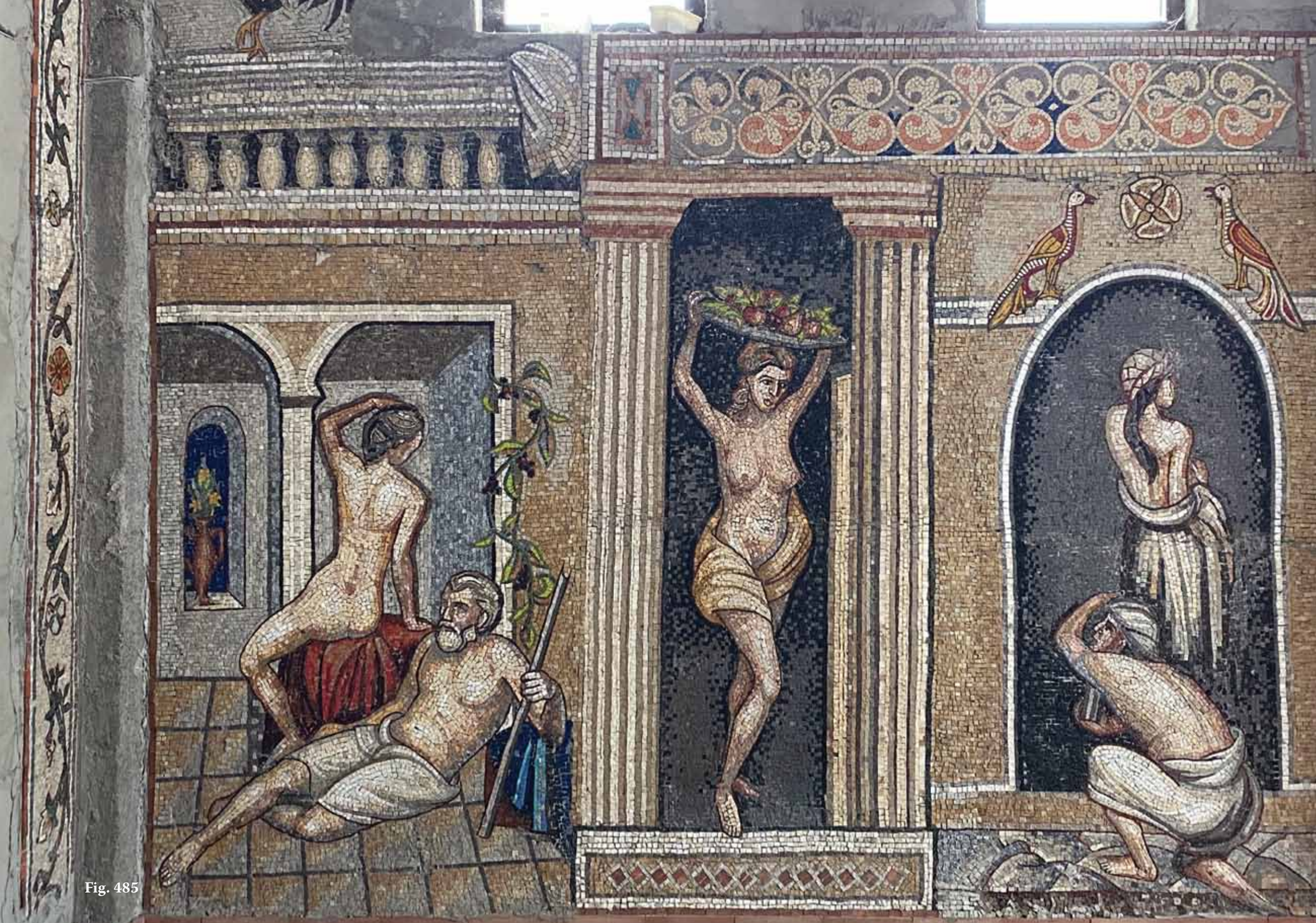

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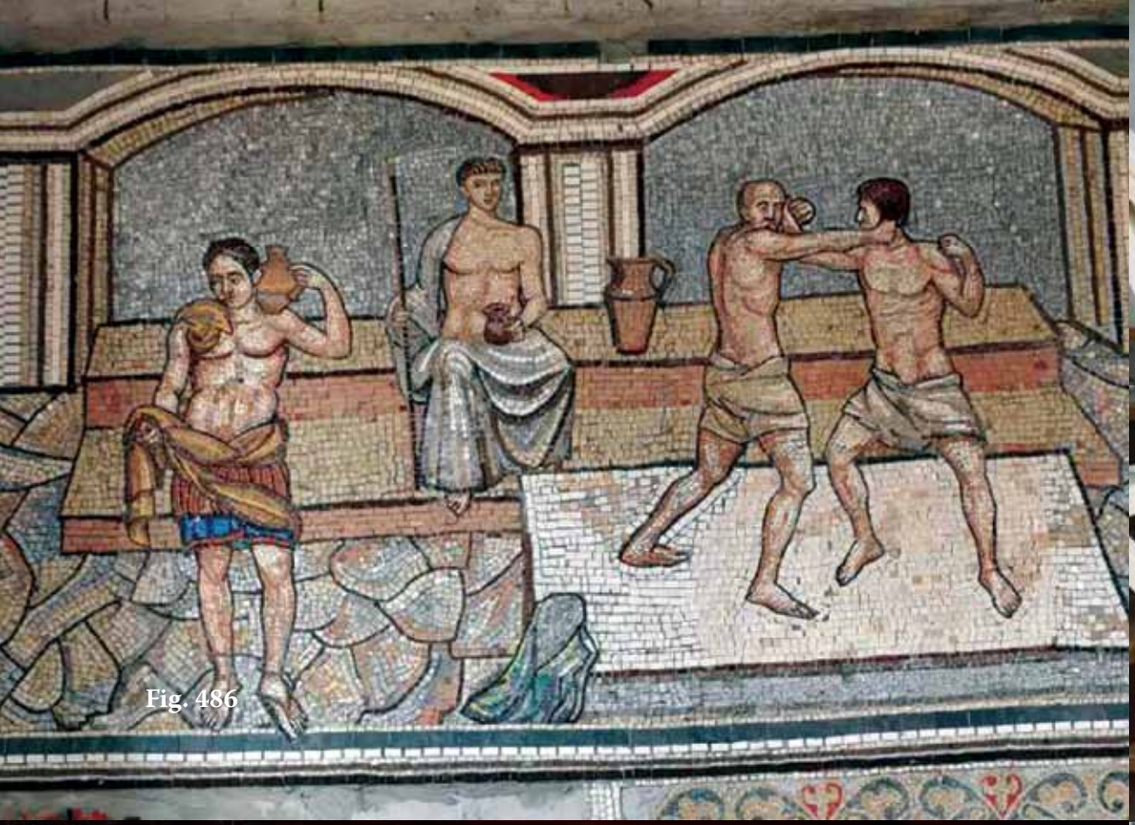

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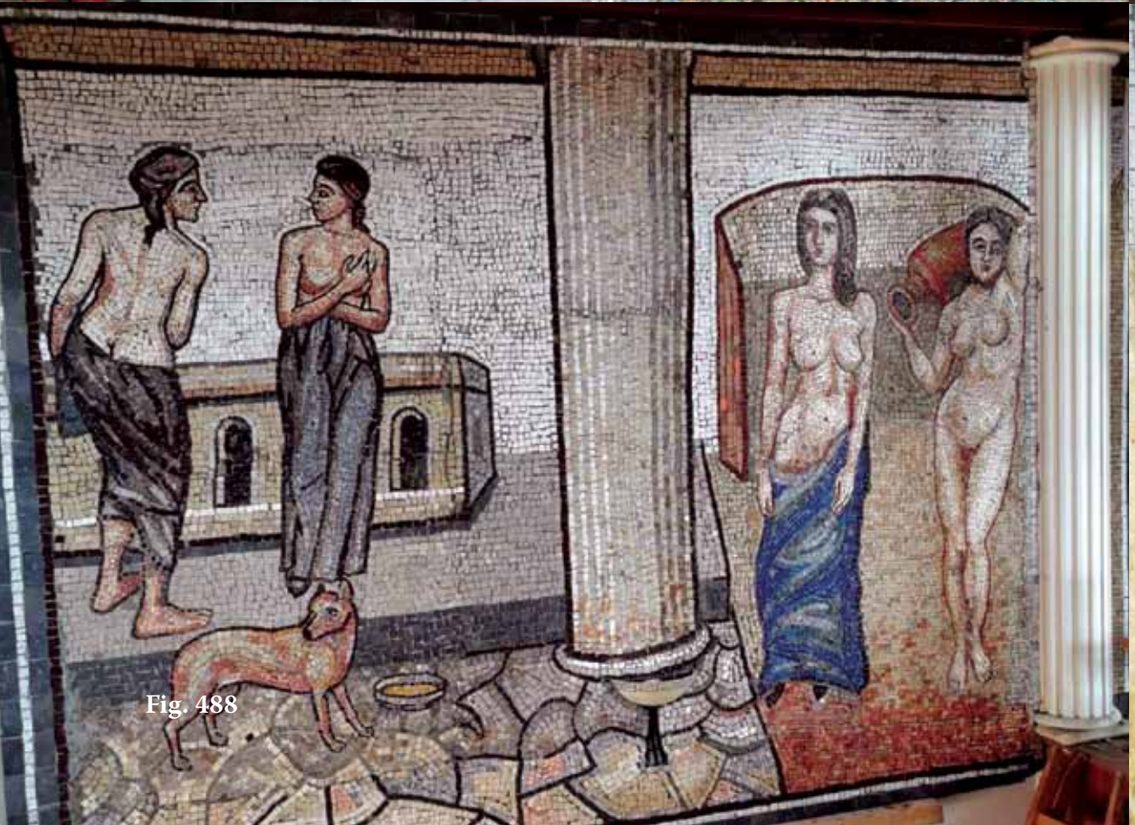

Fig. 488

Fig. 489

5.40 m high, bear representations of ancient people, mythological creatures, animals, plants, geometric and vegetative ornaments, but also that which draws visitors the most into the space – the interestingly combined elements of ancient architecture. The representations of women and men – warriors on horseback, servants, lovers and people resting, talking and entertaining, are intertwined with the enclosed rooms and corridors, the elements of arches, vaults, columns and niches, floors and stone socles, and with the bright rooms with wide expansive windows through which the outside nature seems to come in, as well as with the open spaces of the gardens, terraces and parks. The three-dimensional impression of the mosaic representations is enhanced by the different placements of the human figures. It seems as though some of them are standing right in front of us, while some are hiding behind the many openings through which we look at them, and we also see those far away from us, high up on the swings. The figures are depicted naked, half-naked, or fully clothed, engaged in a variety of relaxing activities while also mostly appearing to be in some kind of dynamic motion. The colours used to create large areas of the mosaic and the bodies of the human and animal figures are soothing, with ocher and grey hues predominating, while draperies and clothing, fruits, and leaves are depicted mostly in vibrant colours. The apparent incorporation of mosaic representations into the space in which we stand is, apart from the existence of perspectives in the representations of architecture and figures, emphasised by the inclusion of the existing semi-hidden structural elements – the pillars of the ground floor of the SPA Centre, in the mosaic story, are used as pilasters of the architecture of an imagined ancient space. In this way, though a unique representation of the architecture and the people of Antiquity, the space is divided into ambiences, or small stories that are all around the visitor. Throughout the space, four columns extend vertically, through which the artistic representations are performed with the help of ornaments and vegetative motifs, again using soothing shades for the backgrounds and

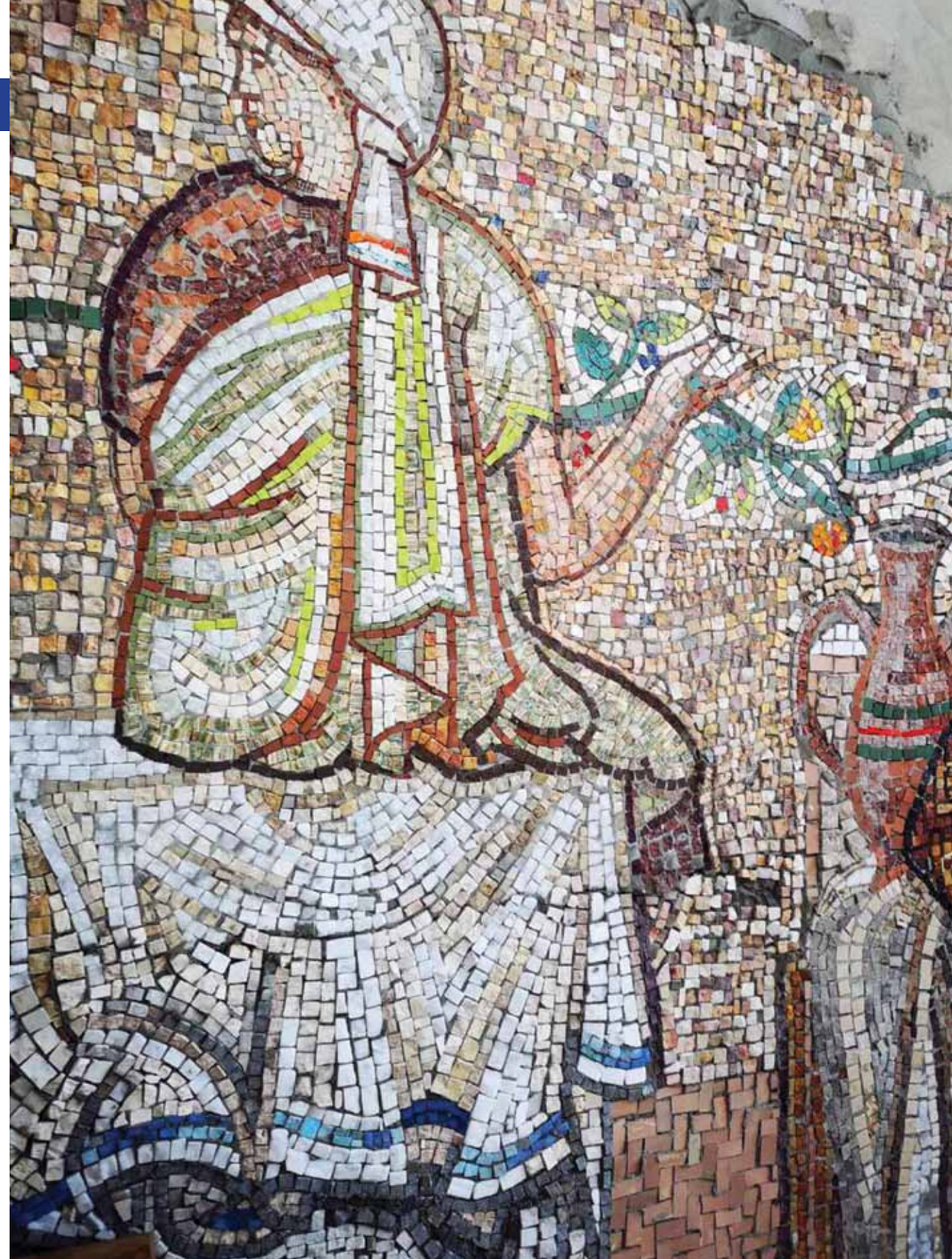

**Fig. 490**

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the skilful lifelike rendering of the trees, leaves, flowers and fruits that envelop the pillars, as if rising to the sky, and clearly showing the viewer the four seasons: spring, summer, autumn and winter.

The space described above, with its uninterrupted height, and completely illuminated by daylight, is the unique space of the *Domus Scientiarum Viminacium*. Entering this space is like stepping into another world. It is not a world of ruins, such as the space of the archaeological park around a building, or a world of contemporary architecture with associations to ancient times, which is a feature of the whole building, but a completely revived world of history, inhabited by people, who bring us into their own lives, thanks to the work of the artist who painted and narrated those lives. The mosaics at the SPA Centre represent the pinnacle of mosaic art, the uniqueness of which, I am quite sure, will be confirmed in time to come. They are, on the other hand, a reflection of the modesty of their great artist, Professor Miroslav Lazović from the Faculty of Applied Arts, who has given the entire building of the *Domus Scientiarum Viminacium* a new and, above all, enduring artistic dimension.

**Fig. 495**

## VIMINACIUM LIMES AND ROMAN ADVENTURE PARK

According to the *Spatial Plan of the Special Purpose Area of the Viminacium Archaeological Site* (Просторни план 2015*)* one part of the Viminacium Archaeological Park, located in the once peripheral zone of the ancient city of *Viminacium,* is designated as a tourist and scientific presentation zone (commercial and other content in the function of an archaeological site). In accordance with the aforementioned zoning and content designation for this part of the archaeological park, its spatial arrangement has begun, and today *Limes Park* is located here, a unique complex with accommodation, educational, service, conference, exhibition, and recreational facilities, along with the presented Roman buildings.

This complex, created in 2018, consists of buildings and open spaces designed in a way that is associated with Roman military camps and settlements for accommodation and various activities, the sports and recreational facilities "Adventure Park" and "Legionnaire Training Ground", as well as Roman buildings relocated due to the development of the "Drmno" coal mine and the complex of the "Kostolac B" thermal power plant. With the construction of *Limes Park*,

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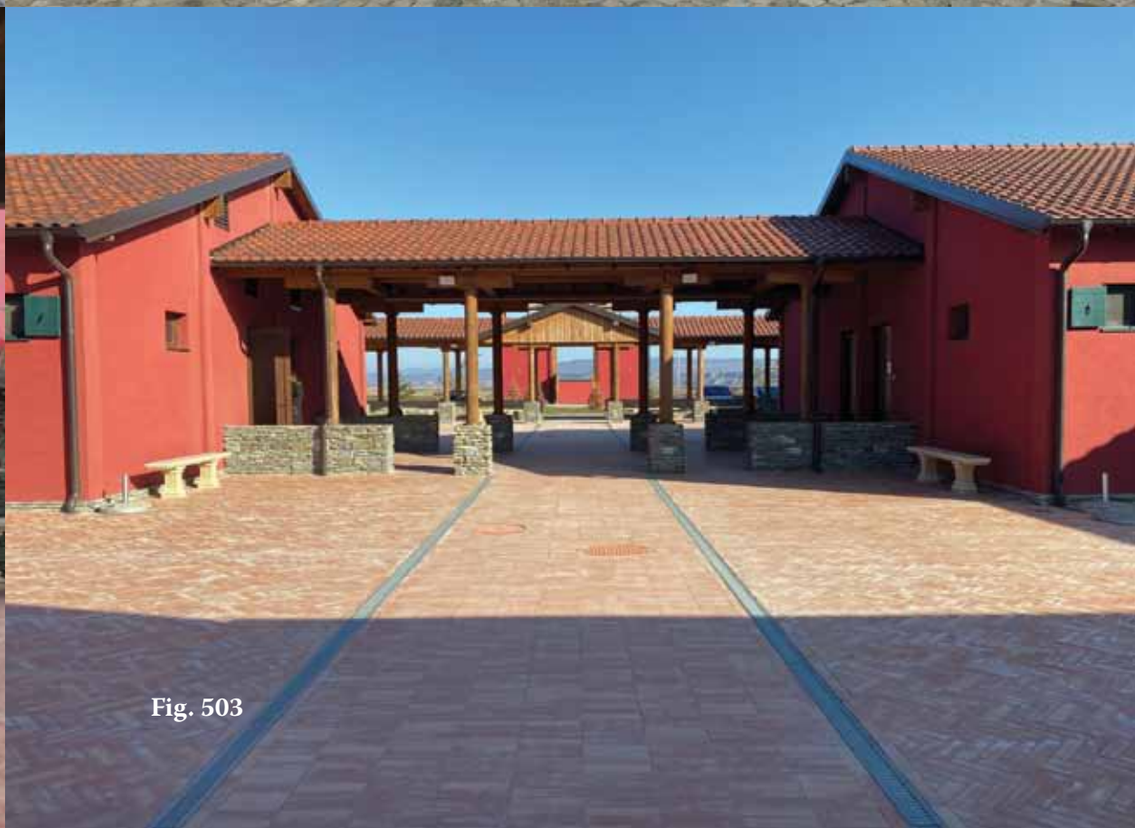

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Viminacium can now accommodate about five hundred visitors with multi-day accommodation. In September 2018, 24th Limes Congress was held at Viminacium, with many scientists based at *Limes Park,* while lectures were held in the halls of this complex (Limes). The construction of *Limes Park* brought employment to a large number of members of the local community, and the number of visitors increased. Visitors include a large number of children who use this space for day trips, recreational classes, and excursions, learn traditional skills and crafts, familiarise themselves with ancient agriculture and the life of Roman legionaries, whilst also developing a team spirit through sport and recreation. In addition to being a convenient venue for organising all kinds of scientific events, the service and conference facilities of *Limes Park,* together with the sports and recreational facilities are a favourite gathering place for businesses and other organisations in Serbia (team building).

The association with Roman military camps used in the design of the *Limes Park* accommodation, dining and lecture complex, with a total net area of approximately 4,500 m², implied the existence of a rectangular base with a trench surrounding it, gates with towers, a central structure as well as accommodation with barrack-like capacities.[42] The numbers associated with the organization of the Roman army were also important. Thus, each barrack has eight rooms with six beds, that is, it consists of a total of forty-eight beds, while the whole complex has ten barracks, i.e. 480 beds, which is related to the number of soldiers within one legion, that is to say that in one period of the Roman Empire a legion numbered about 4,800 soldiers, or ten cohorts of 480 soldiers, each one consisting of six centuries of eighty soldiers. However, not only the legion that resided in *Viminacium* (*Legio VII Clavdia PF*) but also other Roman legions are recognised in *Limes Park*. Each barrack is named after a legion (*Legio VII Augusta, Legio I Italica, Legio XIII Gemina, Legio III Gallica, Legio I Adivtrix. Legio II Adivtrix, Legio V Macedonica, Legio IIII Scythica, Legio IIII Flavia Felix*). Furnishing the accommodation units for six visitors included wooden bunk-beds and, in front of each barrack, there is the flag of the legion after which it is named.

The design, materials used, as well as the interior and exterior furnishings of the buildings and open spaces are also in accordance with the overall design. The accommodation buildings are ground floor buildings with porches, elongated grounds, and with gabled roofs, while the central building, as a place for preparing meals, dining, and lectures, has a sprawling form and complex roofs with entrance porches that can be used as gathering points. With the exterior finish of the walls, the red colour of the facade emphasizes the association with Roman buildings. The socle is made of local stone, that is, green schist from nearby Ram, which was the basic stone used in the construction of ancient *Viminacium* buildings. Bricks are present in the porches and open spaces of the central building as a paving material, and most of this material is also of local character, that is, it was produced by hand in a family workshop of the nearby village of Poljana (Cotto Rustico). After Roman *Viminacium*, which was a large brick production centre, brick making remained a traditional craft of the Požarevac area but, unfortunately, their manual production as a traditional craft is now slowly dying out. While exploring Roman brick kilns from *Sirmium*, the architect Miroslav Jeremić (1943–2016), used village

[42] The authors of the architectural design of the complex are Dr Miomir Korać, from the Institute of Archaeology and the architect Goran Milutinović. The construction was designed by the civil engineer Krstan Laketić.

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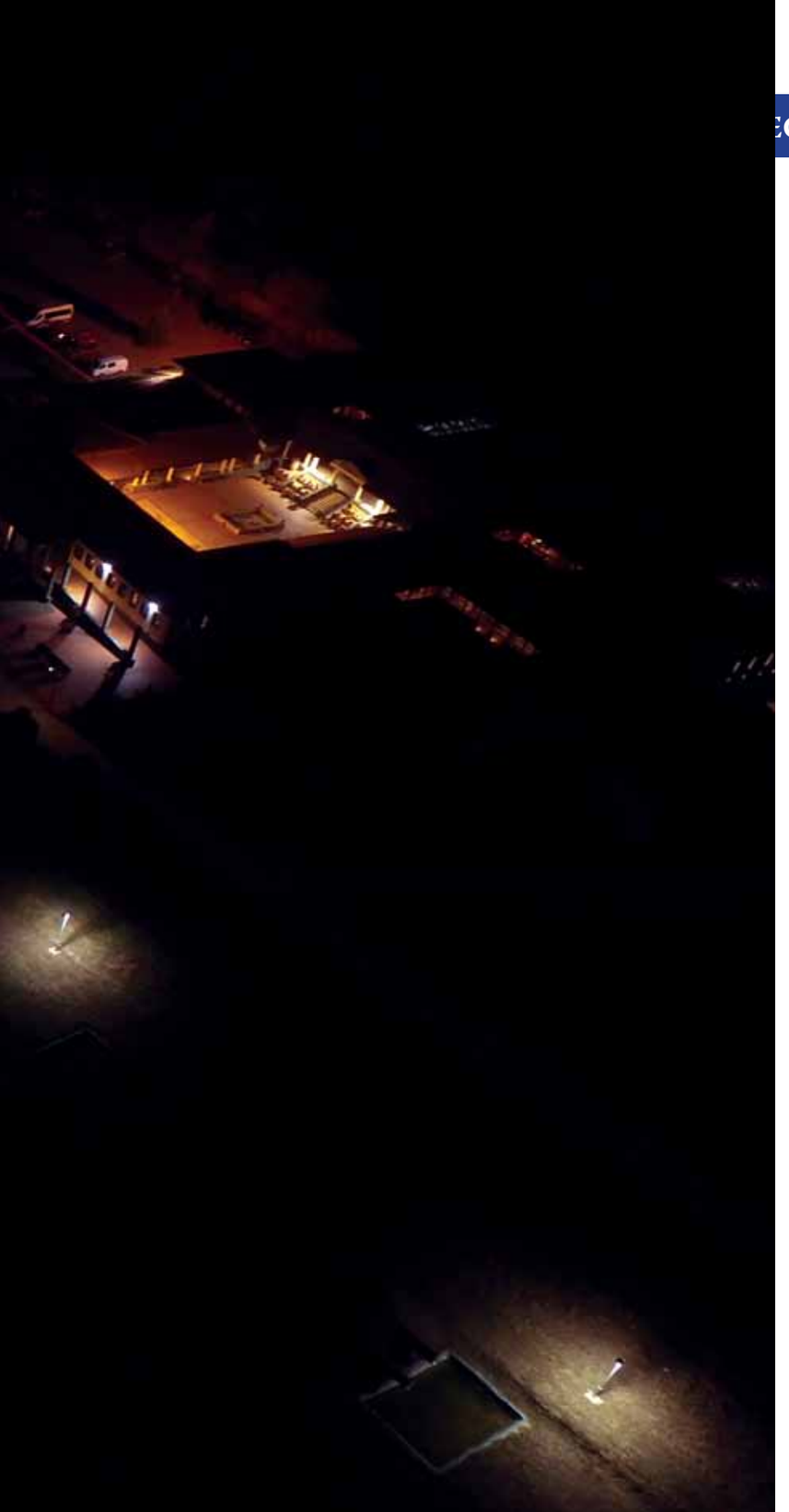



kilns from Požarevac as an analogy, noting their similarities in appearance and construction (Jeremić, M., 2000, 150–152; Николић, Е., 2018, 210).

The stone path leading to the entrance gate of the *military camp* (which, in addition to the administrative functions important for the operation of the complex, is also a lookout for small legionnaires), is framed by a series of stone sarcophagi found during the excavation of *Viminacium*, which, in turn, represents the beginning of the formation of the lapidarium. It is to be expanded to a nearby area and will feature fragments of architectural decoration and tombstones, along with planned pedestrian communications that connect the various elements of *Limes Park*.

As for the Roman buildings in the complex, there is a villa here, a displaced aqueduct with associated water supply structures (Mrđić, N., 2007), as well as a brick kiln centre (Јордовић, Ч., 1995; Raičković, A., 2007). The existence of *Limes Park* in the Viminacium Archaeological Park brings one important component to the process of preserving the cultural heritage of *Viminacium* and its surroundings, that is, it draws attention to the often neglected intangible heritage of the area, including traditional brick making. One of the presentations of this century-old activity is the organisation of a workshop for the manufacture of brick products, an activity that is planned in the near future at *Limes Park*. This is supported by the existence of a brick kiln centre, where one of the practical demonstrations of the parts of this process related to the drying and firing of bricks can be performed (Николић, Е., 2018, 445–446). A future presentation of the displaced aqueduct, unfortunately, thus far, prevented by two relocations due to the threat of surface mining (Благојевић, М., Стојковић-Павелка, Б., 2004, 62–64; Golubović, S., Korać, M., 2013, 66; Nikolić, E., 2016, 23), will include the production of a replica of a Roman water wheel with presented remains of gravity channels and associated structures. *Viminacium* archaeological research has also shown the existence of wells in the yards of villas for the purpose of water supply (Danković, I., Petaković, S., 2014, 60–63; Danković, I., Bogdanović, I., 2017, 471–472, 475–476; Николић, Е., 2018, 448), as well as in city houses (Васић, М., 1903), leading to reflections on the water-lifting technologies that could have been used (Николић, Е., 2018, 448). It is intended that the water wheel in *Limes Park* should be similar to the one that was created for the purposes of the Museum of London exhibition on the basis of the remains found during excavations of ancient *Londinium*. Viminacium researchers have contacted members of the team that designed the attraction, which deals with the reconstruction of historic wooden structures (McCurdy & Co. Ltd.), to their mutual satisfaction. Besides the possibility of the reconstruction of the water wheel, the idea of the reconstruction of aqueduct channels with the use of water exists, the one which has already been carried out at the archaeological site of the Roman fortress of *Vindolanda*, near the Hadrian's Wall, whose water-supply organised using springs and wells (ADF; Николић, Е., 2018, 447).

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VIMINALIUM ADVENTURE

The exploitation of the previously mentioned green schist, in the area of the present-day village of Ram on the Danube, during ancient times provided fragments for masonry buildings, as well as large blocks of irregular shapes from which the city streets were paved (Nikolić, E., 2013, 21, 22, 36, 41). The transfer of heavy blocks from quarries to the necessary means of transport, most probably ships carrying various goods on the Danube, and their subsequent placement on streets required the existence of elaborate technology, which included a type of crane for lifting the stone. The production of its replica was conceived as part of the presentation of Roman construction in *Viminacium*, and it is planned to be placed near the aqueduct and waterwheels, where this technology could be demonstrated during a variety of events.

The planned content of *Limes Park* will offer visitors an insight into the intangible heritage related to the functions of the existing Roman buildings in the complex and the technologies of water supply and construction, as well as to various branches of agriculture. The fertility of Stig Plain is well known, which in Roman times contributed to the development of agricultural estates in the vicinity of Viminacium, as evidenced by the investigated villas (Jovičić, M., Redžić, S., 2014; Николић, Е., 2018, 225; Redžić, S., Jovičić, M., Danković, I., 2014). There have been many vineyards on the two ridges that form the borders of Stig on its western and eastern sides over the centuries (Миладиновић, М., 1928, 54; Миленковић, М., Протић, Ж., 1936, 58; Пирх, О. Д. П., 1899, 65, 71; Stojaković, M., 1987, 71–72, 79–82, 76, 130). Unfortunately, this centuries-old activity is slowly dying out in this area, so the number of vineyards is decreasing. The first activity in the Viminacium Archaeological Park related to viticulture was conducted in 2013 when an experiment involving the planting of vines using Roman methods was carried out (Ilić, O., Tapavički-Ilić, M., Ćirić, Đ., 2014, 90–93). The "Roman Garden" in the immediate vicinity of the aqueduct is planned as a unique area of about 75 ares in the form of a garden of a Roman villa, with plots planted with vines, fruits, vegetables, and medicinal and ornamental plants, together with a vineyard cottage, winter garden, forest and a number of footpaths. Viminacium researchers searched for seedlings of those specific plants that, according to historical records, were the most prevalent in Roman times. To date, the garden space has been planned and the paths and plots formed. Planting is currently ongoing – again through the processes

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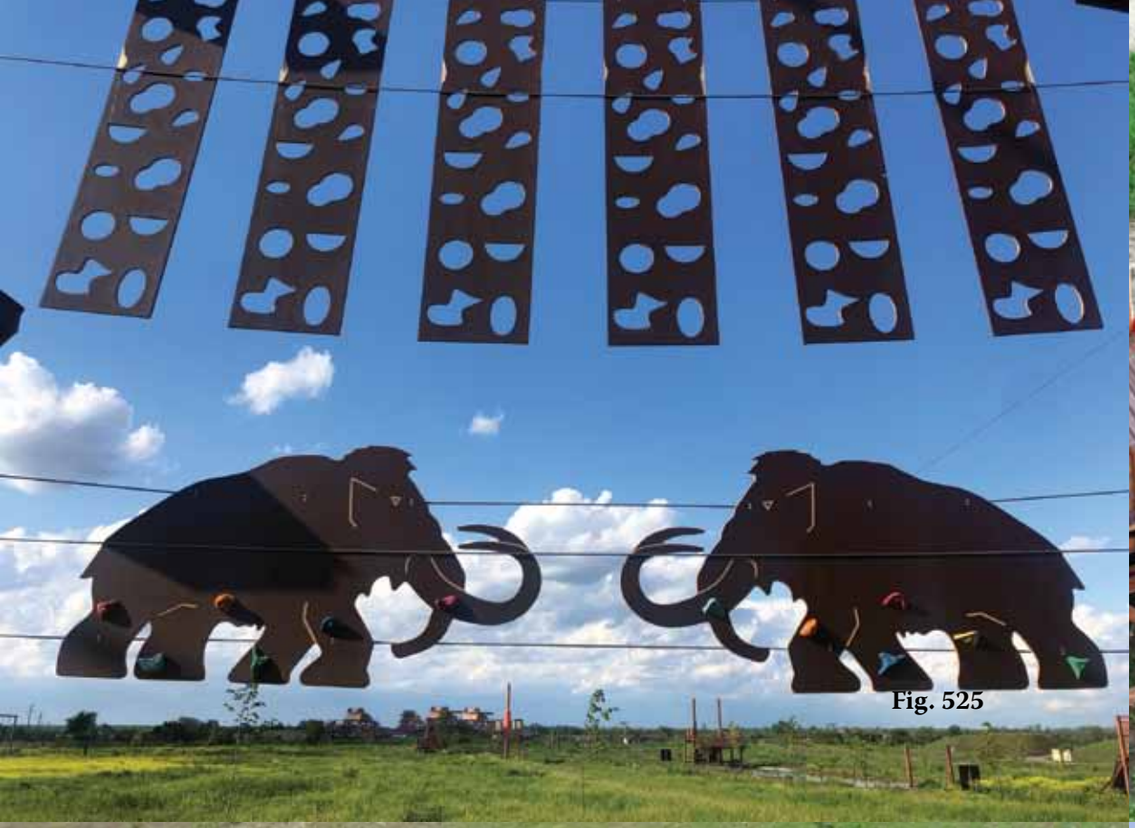

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of experimental archaeology, that is, using replicas of Roman agricultural tools, ancient space measures and recommendations for planting certain types of plants.

The sports and recreational facilities of *Limes Park* comprise an overall area of about 2.2 ha, bordered by the "Legionnaire Training Ground", or obstacle course. Within the space, the "Adventure Park", i.e. a high-rope course, was formed, while new facilities are planned in the form of trim tracks and interlocking, movable tiles for different sports activities. The "Legionnaire Training Ground" is a specially designed track modelled on specialist military infantry training grounds. The theme of the ground is the Roman Empire, and the obstacles bear the names of Roman emperors who were born in the territory of present-day Serbia. It consists of fifteen specially designed obstacles made of wood, rope, earth, water, and straw, which are placed on a track about 500 m long and 10 m wide. Obstacles are crossed individually or in groups, by climbing, crawling, sliding, wriggling, swaying, skipping, using only the power of ones arms and legs. The goal of the training ground is to encourage and test skills, as well as to motivate participants to work and play as a team. The "Adventure Park" consists of a 9.7 m high tower, a large number of obstacles placed in three different height zones, as well as a 110 m long zip line. The obstacles were designed with motifs associated with the Roman army.

The wider urban area of ancient *Viminacium* is still threatened by the future works of the "Drmno" surface mine, and it is certain that there are a large number of ancient structures that will have to undergo the process of relocation to the protected area of the Viminacium Archaeological Park. Attractions such as the water wheel and the process of lifting stone blocks, along with the remains of aqueducts, nearby Roman villas, displaced brick kilns, and the Roman garden are all part of a thoughtful presentation of the history of ancient Viminacium within *Limes Park*. Here, visitors are able to enjoy a revival of local history through various workshops, learning the elements of ancient crafts and construction, agriculture and technology. Together with the accommodation and sports and recreational facilities of the complex, this part of the Viminacium Archaeological Park today attracts a large number of children, young people, and adults with its wide variety of sports, recreational, business, entertainment and educational activities.

**Fig. 534**

Fig. 535

## MAMMOTH PARK AT THE VIMINACIUM ARCHAEOLOGICAL PARK

The first skeleton of a mammoth near the Viminacium Archaeological Park was found in the summer of 2009 by the mining machinery in the Drmno strip coal mine. After its conservation at the site of the discovery, over the next few years, the skeleton of the steppe mammoth, species *Mammuthus trogontherii*, was protected by a temporary construction (Lister *et al.* 2012; Muttoni *et al.* 2015).[43]

Despite the awareness of archaeologists and palaeontologists that the function of the close neighbour of the Viminacium Archaeological Park, an expansive surface mine, one day will no longer allow the survival of the skeleton *in situ*, the possibilities of its permanent presentation within this industrial setting still needed to be constantly considered (Nikolić, E., 2019, 936). With the unexpected finding of further skeletal remains, that is, individual bones of several more mammoths of the same species in the mine in 2012[44] (Marković *et al.* 2013; Dimitrijević *et al.* 2014; Dimitrijević *et al.* 2015), and the new concerns they brought in terms of their protection, it was suggested as a feasible and attractive solution for the presentation to move all previously found skeletons into one space for the purpose of their unified protection and presentation. The skeletons found in 2012 were soon relocated to a secure location within the Viminacium Archaeological Park, while in the spring of 2014, the almost perfectly preserved skeleton from 2009,

[43] Researchers from the Institute of Archaeology, Belgrade and the The Natural History Museum participated in the project of the excavation, protection and initial presentation of the skeleton within the Drmno surface mine during 2009, with the financial support of the Ministry of Education and Science and the Ministry of Culture of the Republic of Serbia. Skeletal conservation was performed by Dr Zoran Marković, a palaeozoologist, and Miloš Milovojević, senior preparer.

[44] The excavations of the skeletons found in 2012 were carried out by researchers from the Institute of Archaeology.

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was transferred in its entirety to a site intended for the future contemporary presentation of all skeletons located along the border of the protected area of the Viminacium archaeological site, that is, along the final edge of the area of the strip mine, entailing a construction and technological venture (Nikolić, E., 2017, 163; Nikolić, E., 2019, 936–938).

The relocation of the skeleton found in 2009 was performed by constructing a non-deformable platform measuring 400 x 600 x 100 cm below the layers of earth on which the skeleton was lying, using a drilling procedure, after which, using a variety of heavy plant, this unique sarcophagus was transferred to a previously prepared space (Nikolić, E., 2017, 163; Nikolić, E., 2019, 937–938).[45] The design of the mammoth exhibit space has gone through several stages and several potential solutions have been considered. The adopted choice has succeeded in integrating the new spatial element of Viminacium, completely different from the existing ones, into the archaeological park, without creating any competition for the presented Roman buildings and without dominating other values of area, which, in view of the importance of these palaeontological findings and the possibility of their grand presentation, could have been a real possibility (Nikolić, E., 2017, 163; Nikolić, E., 2019, 938; Николић, E., 2018, 395). The solution consists of exposing all the skeletons within the excavation pit, above which a protective structure is constructed, whose top is slightly above the height of the present ground, and which, thus, protects, but also hides the exhibition space in relation to the surrounding terrain. After the construction of the structure, additional skeletal conservation procedures were performed,[46] while the bones of other prehistoric animals found during the excavation of the mammoth skeletons remained protected in the depots of the Viminacium Archaeological Park. Their presentation represents a new challenge in the design of the existing exhibition space that awaits the management of the park in the future (Nikolić, E., 2019, 938).[47]

The protective structure, made using arched, glued laminated timber girders of a 22 m span above the excavation pit, is 31.5 m wide and 40 m long. It creates an interior space whose height beneath the arches is 4.7 m, enclosing a total exhibition area of approximately 1,200 m² (Nikolić, E., 2017, 163; Nikolić, E., 2019, 938), with a green passable roof above it that lets natural light in to illuminate the space throughout the day. The space, has retained its walls and floor made of earth, that is, the original appearance of the excavation pit. As an underground space, it bears a resemblance to the traditional underground coal exploitation in the territory of the village Kostolac, which was active in the nearby shaft during the 19th and 20th centuries. In addition to the use of old railway sleepers brought from the Drmno surface mine for the purpose of securing smaller earth slopes, the entrance to the space is designed as a portal resembling the entrance to a mineshaft of an underground mine and accessed through an environment resembling a natural canyon (Nikolić, E., 2019, 940). Around the exhibition space with the protective structure, there is a space with greenery in the form of a dendrological collection that also houses *Ginkgo biloba*, a species of tree hundreds of millions of years old, and a children's playground with a central figure of a life-sized mammoth. Today, all the mentioned facilities together form the Mammoth Park within the Viminacium Archaeological Park, which covers an area of approximately 10,000 m² (Nikolić, E., 2019, 940).

In order to partially restore the authenticity of the context in which the skeletons were found, which was necessarily lost during the displacement itself, the layers of soil beneath them were transferred with the skeletons, and the exhibition environment was constructed with the geological layers brought from the immediate vicinity of the original sites. While moving a skeleton found in 2009, the positions of all its bones were preserved and, during its placement in the exhibition space, it was important to maintain an orientation identical to the one in which it was found. Placing all the skeletons at a level beneath the present

[45] The management of the PD "TEKO Kostolac" and the employees of the Drmno surface mine have provided great assistance in the relocation of all skeletons.

[46] Skeleton conservation after displacement was performed by palaeozoologists Boban Filipović and Predrag Rajčić.

[47] The project to relocate all skeletons was carried out by the civil engineer Zoran Cekić. The authors of the architectural design of the protective structure are Dr Emilija Nikolić and Dr Miomir Korać, from the Institute of Archaeology, while the construction was designed by the civil engineer Krstan Laketić. Researchers from the Institute of Archaeology and the Center for New Technology Viminacium d.o.o. - Dr Nemanja Mrđić, Ilija Danković, Vladimir Miletić, Željko Jovanović and Dušan Tomašević, as well as sculptor Radoš Radenković also participated during the interior arrangement and construction of the building. The management of the PD "TEKO Kostolac" and the employees of the Drmno surface mine have provided great assistance during the construction of the protective building and the arrangement of the interior exhibition space.

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ground level presented them in a spatial context seemingly very temporally distant from today, thus contributing to the sense of the existence of another element of authenticity of the exhibition space for visitors (Nikolić, E., 2017, 163; Nikolić, E., 2019, 937, 940, 943).

As one of the spatial segments of the Viminacium Archaeological Park, the Mammoth Park provides an integrated protection and presentation of geological and palaeontological heritage with its interpretation (Nikolić, E., 2018, 32–33). Within the Park, as a result of the chosen method of displaying the mammoth skeletons, some of the elements important for a more complete understanding of the life of these animals are shown to visitors. The presentation mode is a synthesis of the museum and *in situ* exhibitions. The exhibition space is a kind of museum environment, since the skeletons have become museum exhibits, but the interior materialisation and skeletal treatment bring visitors closer to an *in situ* presentation that "reduces the need for additional content and the creation the artificial creation of an experience" (Nikolić, E., 2019, 943), more often necessary in a museum exhibition context.

The Drmno surface mine is a very significant palaeontological site (Muttoni *et al.* 2015), but the process of coal exploitation for the purpose of electricity production in this area made the survival of the mammoth skeletons in the mine itself unsustainable in 2014, which is also the case today with the geological layers of the mine which represent valuable geological heritage (Nikolić, E., 2019, 945–946; Tomić *et al.* 2015). Nevertheless, serious consideration needs to be given to the possibility of, at least, partially conserving this natural heritage of today's Stig plain along the Danube River, recognising it as an important part of the plans for the development of surface exploitation within the Kostolac coal basin, and making sure that it is protected and presented in some form to scientists and tourists, together with the extremely significant cultural heritage of the landscape (Nikolić, E., 2019, 946).

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# VALORISATION



## VALORISATION AND CAPITALISATION OF VIMINACIUM RESULTS

Valorisation and capitalisation of Viminacium development comprehend presentations of the research results at professional and scientific international conferences, participation at tourism fairs in Serbia and abroad and finally participation of the project Viminacium as well as Institute of Archaeology in several important EU funded projects. Among these projects is the *T-PAS, Tourist Promotion of the Archaeological Sites along the Route from Aquileia to Viminacium*, which was continued through the *Archest project – Developing Archaeological Audiences along the Roman Route Aquileia – Emona – Sirmium – Viminacium* (Tiussi, C., 2012; Golubović, S., Mrđić, N., 2013, 101–112; Mrđić, N., Golubović, S., 2018, 155–166). In 2012 at Viminacium conference "Tourist promotion of the archaeological sites along the route Aquileia – Emona – Viminacium" was organized under the project *T-PAS. Danube Limes Brand Project – Extension of the Danube Limes UNESCO World Heritage in the Lower Danube* resulted in great success (Mrđić, N., Golubović, S., 2014, 101–118). After several years of joint work of the Institute of Archaeology, the Institute for the Protection of Cultural Monuments of Serbia and responsible institutions from several European countries, in 2015, the Tentative list for an international monument under the name "The Frontiers of the Roman" Empire - WHS FRE") was made and Viminacium took the first step towards enrolling on the World Heritage List (Nikolić, E., Anđelković Grašar, J., Rogić, D., 2017, 574; Korać *et al.* 2014, 16, 36). In 2013 a meeting of the participants of the *Danube Limes Brand* project was held at Viminacium. The *OpenArch* project was funded by EU Culture programme and included twelve partners engaged in European archaeological open-air museums and experimental archaeology. The project resulted with two experiments carried out in Viminacium and the film "Interaction with visitors in Archaeological Open-Air muse-

**Fig. 561**

ums". The film was made as a toolkit for museums' management and presented Viminacium as an example of a good practice. (Tapavički-Ilić, M., Anđelković Grašar, J., 2013, 97–100; Paardekooper, R., Tapavički-Ilić, M., Anđelković Grašar, J., 2015, 211–219; Tapavički-Ilić, M., Anđelković Grašar, J., 2017, 177–180; Anđelković Grašar, J., Tapavički-Ilić, M., 2017, 147–150; Ilić, O., Tapavički-Ilić, M., Ćirić, Đ., 2014, 90–93; Tapavički-Ilić, M., Mrđić, N., 2014, 94–98). During 2012 within the project *OpenArch*, a conference entitled "Archaeological Heritage – its Role in Education, Presentation and Popularization of Science" was held at Viminacium and a hundred of archaeologists and heritage professionals from Europe, Asia and North America took part at this event. In 2014 a conference entitled "The Impact of Dialogue with Visitors on – AOAM Management" was organised at Viminacium as a part of of the *OpenArch* project. Under the *COST* scheme since 2016, Viminacium has been a part of the action *Arkwork* (*CA15201*), dedicated to the research of methods of archaeological knowledge and its impact on society (Tapavički-Ilić, M., Anđelković Grašar, J., 2018, 155–156), while under the same programme, since 2019 Viminacium has been participating in the action *Saving European Archaeology from the Digital Dark Age* (*SEADDA*) which aims to establish a priority research area in the archiving, dissemination and open access re-use of archaeological data, and includes proposers from 26 *COST* and four international partner countries. From 2019, it has been a part of *Erasmus+* programme *International Danube Camps*, dealing with the organization of the summer educational camps for children, but also of a *Western Balkans Fund* project named *Roman Heritage in the Balkans*, with an aim to virtually reconstruct several Roman sites in the Balkans (Tapavički-Ilić, M., Nikolić, E., Anđelković Grašar, J. *in print*).

Besides the Danube Limes as focal topic, Viminacium was the subject of discussion of five hundred of researchers, scientists and professionals who participated in the XXIV Limes Congress, one of the world's most important archaeological scientific meetings, hosted in 2018 by Viminacium Archaeological Park. Besides this and conferences dedicated to the EU funded projects Viminacium several other congresses and meetings were hosted: „Rei Cretariae Romanae Favtores" conference held in 2010, was dedicated to the ancient Roman pottery production and included hundreds of participants from all over the world; the 9th Summit of Heads of State of South East Europe, under the auspices of UNESCO, was held in Domus Scientiarum Viminacium in 2011; on the occasion of celebration of the 1700 years of the Edict of Milan, opera "Aida" was held in the amphitheatre, while the exhibition "Constantine the Great and Edict of Milan 313: The Birth of Christianity in Roman Provinces on the Territory of Serbia", was set up in Domus (Ilić, O., Nikolić, E., 2015, 231–243); the international numismatic symposium was held in 2017, named "Circulation of Antique Coins in Southeastern Europe" (Tapavički-Ilić, M., Nikolić, E., Anđelković Grašar, J. *in print*).

Many programmes are dedicated to the young population, bringing archaeological knowledge and practices to children and youth in interesting and inviting way. Danube Limes Day was organised in 2014, with workshops dedicated to Roman children games, demonstration of warrior techniques, culinary classes and degustation of food prepared according to the Roman recopies. During last few years science-educational camps for children are held at Viminacium, bringing pupils from Serbia to Viminacium in order to learn science from experts during summer holidays. In 2017 jubilee of 70 years of the Institute of Archaeology was the ideal opportunity to connect past and future, and present a new project "Digital Archaeology", organised by Viminacium research project. The purpose of this project was to present archaeological heritage adjusted to the demands of digital era and new generations. Virtual exhibition with 3D models of artefacts and buildings from Viminacium, together with VR glasses and holograms were the main parts of the project and the first exhibition was presented in the hall of the Serbian Academy of Sciences and Arts. The project had a great success and very positive public response, especially among the young public and youth. Before the exhibition was set in the gallery space of Domus Scientiarum Viminacium, it was promoted among wider audience during 2017. Digital archaeology was a part of Viminacium presentation at the 50$^{th}$ Tourism Fair in Novi Sad, as well as Belgrade Science Festival. Both events had a great impact on young generation and children (Viminacium exhibit space at Science festival was one of the most popular spaces within the event). Digital exhibition, as part of the IRS and Viminacium project was presented at the "Borsa Mediterranea del Turismo Archeologico" at Paestum–Salerno (Italy) in 2017, after the invitation and on behalf of the Ministry of Culture and Information of the Republic of Serbia. Among the latest features of the project Viminacium is a virtual tour which allows visitors to experience Viminacium Archaeological Park from their laptops or smartphones.


Fig. 562

## VIMINACIUM – A TOURIST ATTRACTION

Sacked and destroyed around the middle of the 5th century, Viminacium remained abandoned throughout successive eras. Like Pompeii, destroyed in A.D. 79, buried beneath ash, lava and other pyroclastic debris spewed out by Vesuvius, Viminacium also remained a forgotten city, under the fields of Stari Kostolac and Drmno. This analogy is not the only reason why Viminacium is called the Pompeii of the Balkans.

First and foremost, it is the presence of an exceptional archaeological site in an open field location. By way of contrast, most of the former legionary fortresses and adjacent Roman cities that we know of are buried today under contemporary urban agglomerations. To mention but a few: *Londinium* is under present-day London, *Novaesium* under Neuss, *Castra Regina* under Regensburg, *Moguntiacum* under Mainz, *Mediolanum* under Milan, *Emona* under Ljubljana, *Aquincum* under Budapest and *Singidunum* under Belgrade. The open nature of the site has already allowed the exploration of more than 14,000 graves over the past 35 years and the discovery of over 40,000 artefacts, currently held in storerooms or as the permanent exhibitions of the National museum in Požarevac, the National Museum in Belgrade and the Domus Scientiarium Viminacium Museum. As its researchers, we are happy to have a unique opportunity to investigate a well-preserved archaeological site of global significance. We feel a remorse, however, because this priceless cultural treasure was ravaged and looted by clandestine excavators to enrich private collections and foreign museums in other parts of the world. At the beginning of the 21st century, encouraged by the results of new excavations, an interdisciplinary team of researchers became more engaged in Viminacium presentation in order to show its potential and to protect its cultural treasures from the centuries long looting. In 2006, the Viminacium Archaeological Park, actually an open-air museum, was opened with presented ancient buildings, all necessary services, infrastructure and constant supervision (Golubović, S., Korać, M., 2013, 65–73; Anđelković Grašar, J., Rogić, D., Nikolić, E., 2013, 9–14; Tapavički-Ilić, M., 2013, 316–326; Mrđić, N., 2012, 121–127). Very soon it was clear that Viminacium had become an important tourist destination and an important economic factor for the whole region.

Unlike Pompeii, whose remains are outstanding, Viminacium's remains are mostly preserved at ground level due to the centuries long destruction and decomposition, so its presentation needed added value. This is why the interpretation was chosen as the main presentational method, especially focused on storytelling. Storytelling is based upon the historical narratives and archaeological knowledge connected to each archaeological site included in the visit. An important part of the Viminacium presentation are the guided tours, with well educated guides who are considered ambassadors of the site, as well as hosts dressed in Roman costumes, the possibility of trying Roman food and buying souvenirs inspired by or replicas of artefacts discovered at Viminacium (Anđelković Grašar, J., Tapavički-Ilić, M., 2014, 191–204). The use of interpretation based on storytelling has resulted in the creation of a memorable experience, not only based on the visible remains, but connected with all human senses. Thus, visitors' impressions after the visit to Viminacium Archaeological Park are mostly associated with their emotions, evoked by the unique presentation (Anđelković Grašar, J., Rogić, D., Nikolić, E., 2013, 11–12; Nikolić, E., Roter-Blagojević, M., 2017, 200; Tapavički-Ilić, M., Anđelković Grašar, J., 2020; Tapavički-Ilić, M., Nikolić, E., Anđelković Grašar, J. *in print*). This type of presentation of an archaeological site was something new in Serbia and soon after Viminacium became the primary destination on the map of cultural tourism in Serbia. The site's importance, successful presentational methods and well organised visits resulted in Viminacium with the involvement in two international touristic routes – The Roman Emperor Route and The Illyricum Trail.

All these facts have led to a constant flow of visitors. The popularity of the site has attracted many visitors who have brought a new life to the site and made looting impossible. The presence of tourists and organised tours has had a much stronger impact on looters than cameras or security. Not only has looting been stopped and site finally protected, but Viminacium also became "visible" to the Serbian government who started to understand the importance of such a project, which has gradually became a sustainable one (Anđelković Grašar, J., Nikolić, E., Tapavički-Ilić, M. *in print*). This is also important for the local community, since


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with the opening of the Viminacium Archaeological Park diverse job types have been offered to its members.

Regrettably, one must also be aware of the fact that Viminacium is situated in the area of the coal exploitation of the "Drmno" strip mine. We cannot escape the fact that domestic fossil fuels are necessary for the overall development of Serbia. Notwithstanding the need for energy resources, solutions are being worked on for the preservation of the largest possible area of ancient Viminacium so that it can be left to posterity as an outstanding monument of cultural heritage. Generally, the projected operations of the "Drmno" strip mine will not endanger the immediate zone of the ancient city and legionary fortress. Nevertheless, wide Viminacium area covers over 1,100 acres/450 hectares, some of which is directly threatened by the progress of the mine (Службени гласник 102, 2009, 7–13).

The threatened area contains important structures such as approximately 8 miles/10 km. of preserved aqueduct, a late Roman basilica, the agricultural estates of Roman veteran soldiers' farm villas and the Roman roads which connected Viminacium with neighbouring towns. Some of these structures were identified by remote sensing methods, including the analysis of aerial photography, ground penetrating radar and magnetometric surveys, whilst others have been explored by archaeological excavation as well. For example, the aqueduct was partially explored through excavation, and part of it had to be relocated because it was in the path of the advancing "Drmno" mine. Mining excavations had already destroyed parts of the aqueducts, which necessitated emergency measures for its preservation.

The threatened part of the aqueducts was transferred to another location where the course of the original aqueducts had been identified but no remains survived. The remaining identified sections of the aqueducts, which constitute a major tourist attraction, urgently require conservation, protection and presentation. A shortage of finances seriously endangers this process.

In the near future, other major ancient monuments will be directly threatened by the expansion of the strip mine operations. Among these is an important 6th century Roman basilica that also urgently needs to be relocated, preserved and presented to the public.

Under the Law on Cultural Property of the Republic of Serbia, the investor, in this case the Electric Power Authority of Serbia, specifically the "Kostolac" Open Cast State Company, is obligated to enable archaeological exploration and research

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in potentially impacted areas in advance of coal mining in the archaeological zone at Viminacium, then the relocation of threatened structures, and their conservation, restoration and presentation to the public. Public presentation includes publication of the results of archaeological research on the affected sites.

Given the extensive remains and exceptional importance of the archaeological complex at Viminacium, the cost of its exploration will clearly exceed the limited financial resources of the "Kostolac" Open Cast State Company and so the responsible ministry, that of energy, must secure the necessary funding. An additional impediment in financing the required archaeological work at Viminacium is the fact that the Electric Power Authority of Serbia has not budgeted funds for this purpose. The Ministry of Energy, i.e. the Electric Power Authority of Serbia, should secure and allocate funds specifically for archaeological exploration and research at Viminacium, which is, in fact, a statutory obligation of the investor.

It should be remembered that as far back as 1949, parts of Viminacium was placed under state protection as an archaeological site. In 1979, Viminacium archaeological site was declared cultural property of exceptional importance for the Republic of Serbia (*Official Gazette of the Socialist Republic of Serbia*, 14/79). After three decades, in 2009, the whole area of Viminacium city and legionary fortress was protected as a unique archaeological site with its official borders and protection regimes (Official Gazette of the Republic of Serbia, 102/09)

Today, when there are no classical wars of conquest, when Viminacium is physically protected and the looting and delivery of building material has been stopped, historic buildings are destroyed as a result of a coal exploitation. Being in the most important part of the mining area, the peripheral buildings of Viminacium and its necropolises are still not protected, but in an attempt to save as much as is possible, the only solution is the relocation of buildings and dislocation of wall paintings to other, safer locations. One of the main issues that arises is the preservation of authenticity. This is why it is important to perceive the site as a result of an inevitable civilisations flow that shows us that all historic periods are equally important and equally authentic in their own way (Nikolić, E., Rogić, D.,

**Fig. 573**



Anđelković Grašar, J., 2013, 205–214). Viminacium's importance consists not only of the physical remains of buildings, but also of the meanings resulting from the impact of all contexts through its evolution. After the cessation of the mining activity, the agricultural fields, the archaeological site of Viminacium and the industrial facilities will certainly be joined into one landscape as examples of human development, abolishing the artificial border established by the protection regimes introduced in 2009 (Nikolić, E., Anđelković Grašar, J., Rogić, D., 2017, 573–582).

We believe that archaeology can and must be a profitable science. The fact that the process and results of archaeological investigations are attractive to the public is clearly proven with Viminacium's example. Viminacium Archaeological Park is present in the media and on social networks, communicating weekly with the public. Regarding the huge public interest and the response to Viminacium discoveries, it should be mentioned that the *Daily Mail* story from 2016 about the "magic spell" scrolls discovery at Viminacium was viewed by more than 30,000 people on social networks. The Viminacium Archaeological park expands its touristic offer and number of visits with every new archaeological discovery. This is why its content is always inviting even for those who have previously visited the site. According to the *Spatial Plan of the Republic of Serbia* from 2010 to 2020, Viminacium is given priority in the field of tourism, environmental, natural and cultural heritage protection and sustainable development of cultural heritage (Закон 2010). This can be regarded as an important state support and confirmation of the Viminacium results. Some of the following steps should support the practice that excavated buildings and other uncovered features should be conserved, covered with protective structures as necessary and presented with other content within the Viminacium Archaeological park. Several positive features of its location make Viminacium an even more promising tourist destination. The fact that there is a small airport capable of handling light aircraft just 3 kilometres away of-

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fers some prospective visitors an agreeable travelling option. The Danube, renowned for waterborne traffic, is also only 3 kilometres away. Bearing in mind the fact that the Danube has been proclaimed a fluvial cultural zone along its entire course, Viminacium Archaeological Park has a great chance for further tourist development.

It is our sincere wish to continue the presentation and promotion of Viminacium, nationally and internationally, as the pioneers of the archaeological tourism, being an example and a role model for other sites of cultural heritage in Serbia.

Viminacium is situated only 4.5 km away from the Danube, a river that connects a large number of states and possesses a high volume of fluvial traffic. Apart from that, among the visitors interested in experiencing the Danube, there is great interest in the cultural heritage of the region. This is why the Danube bears the utmost importance for the tourist offer of Viminacium. Over 600 large tourist ships with about 200,000 international tourists pass along the Danube annually (Maksin *et al*., 2011, 340), most of whom visited Viminacium during the period from 2006 to 2013, using the port in the town of Kostolac. They cruise along the Danube, through seven or ten countries and visit capital cities and cultural monuments (Anđelković Grašar, J., Tapavički-Ilić, M., 2014, 193). In 2011, Viminacium was visited by 75,000 tourists. Of these, 15,000 arrived on ship (Maksin *et al*. 2011, 340.). The same trend continued in 2012, with 15,000 out of a total of 75,000 tourists coming via the Danube. During this time an average of one ship per week arrived, with a group of between 120 and 150 tourists from English-speaking areas (Anđelković Grašar, J., Tapavički-Ilić, M., 2014, 193). According to a study conducted among the visitors from cruise ships, during 2012, they mostly visited already well-known sites such as Pompeii, Hadrian's Wall, Ephesus or the Egyptian pyramids. Among other things, they praised the experience they had with the Viminacium remains and their interpretation, favourably comparing the "new born" Archaeological Park of Viminacium with these hugely important world heritage sites (Anđelković Grašar, J., Tapavički-Ilić, M., 2014, 191–204).

Bearing in mind that cruising is becoming more and more attractive, the number of requests for "alternative" destinations is also rising. Ancient Viminacium was near the Danube anabrach, which is just 4.5 km today from


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Fig. 587

the Danube main stream. This represents an interesting fact which can help Viminacium to become a more attractive destination for elderly tourists, mostly highly educated, from the West, who are the most common cruise passengers. A project to build a new port but with improvements based on international standards, is already prepared and ready to be implemented. Hopefully, this project will encourage foreign visitors from river cruises to visit Viminacium again.

In the period from 2006 to 2013 the majority of visitors visited Viminacium via the Danube and, thus, some basic elements of logistics regarding the following points needed to be organised and, according to the plans, prepared for future visitors. These are: the port, transfer of passengers from the port to the site by buses, and adequate programme at the site according to the requests of the cruise operators.

It is necessary to build the port as close as possible to the site, with water and electricity, and with adequate infrastructure for the representatives of the official institutions, as well as parking for buses, all included in the project that is currently seeking State approval.

The route from the port to the site measures 4.5 km. An adequate number of vehicles needs to be provided, including at least three buses of high quality, but also “old-timers” and open top vehicles.

Three types of visits can be offered in Viminacium Archaeological Park, with the possibility of modification if necessary. The basic tour lasts 1-1.5 h, including the visits to presented archaeological sites within the Park and light refreshments in the tavern. The extended tour lasts 2-2.5 h, including visits to the archaeological sites, Mammoth Park, Domus Scientiarum Viminacium and Limes Park. The full tour lasts 3 h, including the offer from the extended tour, lectures about the site, tasting of Roman cuisine and dressing like Romans.

Viminacium tourist development through the formation of the

**Fig. 588**

archaeological park made the area of ancient Viminacium alive again. It seems as it regained its old role of the important centre, after lying beneath the ground for centuries.

Today the ancient remains of Viminacium are protected and the the splendour has been restored, with the site revival. Our plans for the major increase of the number of visitors in the near future may seem unreal. However, they are firmly based on the scientific potentials of the site, public response our work has received so far, national and international support the work gets and valorisation of the results with thirteen years of experience in tourism management.

Perhaps, the past of the ancient city and possible future of Viminacium Archaeological Park can be both described using the thoughts of Flavius Gratianus that make us question ourselves if the dwelling in this city represents a good omen?

**Fig. 589**

Fig. 590

Fig. 591

Fig. 592

Fig. 593

Fig. 594

Fig. 595

Fig. 596

# SAVE THE EARTH 2007

Fig. 598

Fig. 597

# EMMA SHAPPLIN CONCERT

Fig. 599

Fig. 601

Fig. 600

# CELEBRATION OF 1700 YEARS FROM MILAN'S EDICT - OPERA AIDA IN ROMAN AMPHITHEATRE

Fig. 602

# ORNATUS ORNAMENTIS


Fig. 603

Fig. 604


Fig. 605

Fig. 606

Fig. 607

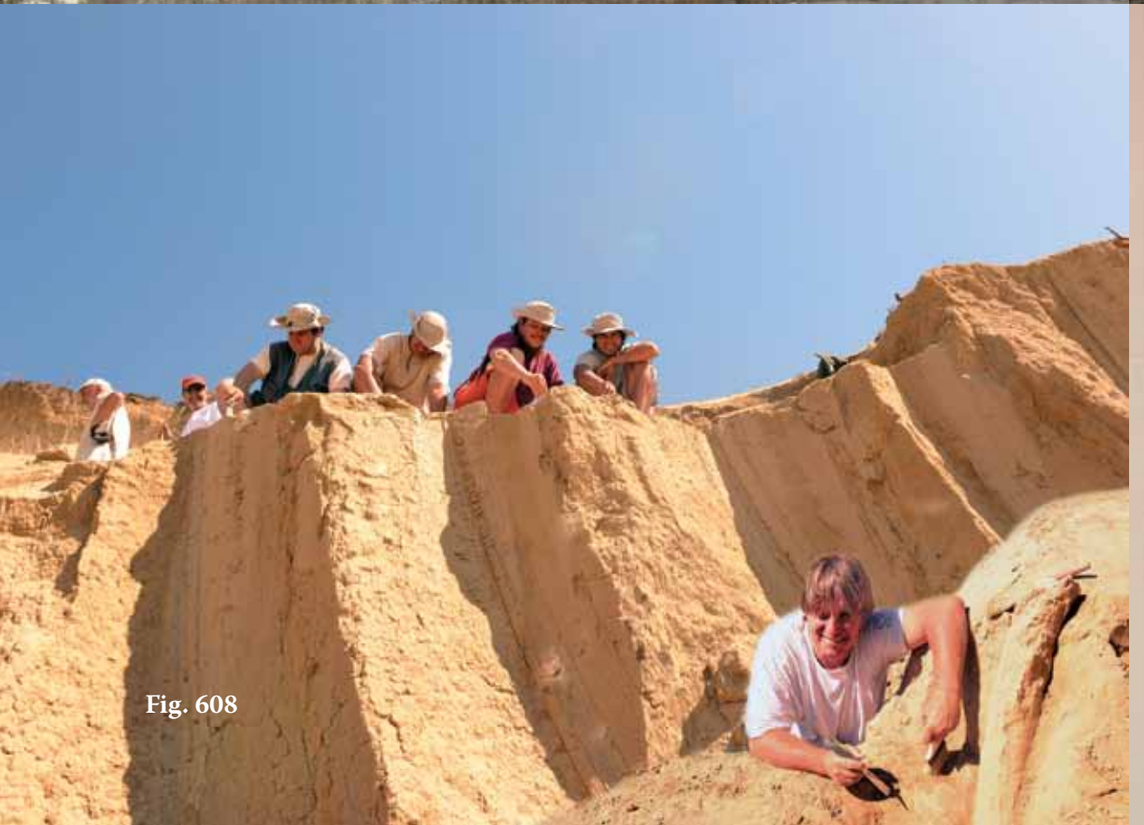


Fig. 608

Fig. 609

# TEAM


Fig. 610

Fig. 611

**Journey to the Past - Itinerarium Romanum Serbiae**
**Viminacium**

Far away from Rome, on the unpredictable Danube, the Roman Empire set up its border – *limes*. This established border extended from northern England, i.e. from the border with Scotland, across Germany, Austria, Hungary, Serbia, Romania and Bulgaria up to Iraq and Iran, including the Middle East with Turkey and the entire sub-Mediterranean part of North Africa. A series of fortifications were built on either side of the road along which the legions marched during the campaigns against the barbarian tribes across the Rhine and the Danube. About 40 legionary fortresses, the so-called castra (*castra*) were built on that long defence line criss-crossed with thousands of smaller forts. They served for stationing Roman troops, i.e. legions which included 5000 to 6000 men. What is particularly important to note is that the some of the Roman troops were recruited precisely on our areas. The army coming via a ramified road network from distant Asian and African provinces easily reached the most remote areas of the western part of the Roman Empire, followed by traders and craftsmen, so that cities cropped up soon along all major road communications. Starting from the middle of the 3rd century A.D., the former marginal border provinces of Upper Moesia and Lower Pannonia became the focus of events in the Empire in the following almost two hundred years. Illyricum and Illyricum and the troops recruited in this area revealed eighteen Roman emperors who ruled the Empire during the period of the deepest crises. It is indicative that from the latter half of the 3rd to the middle of the 4th centuries A.D., when the Roman Empire was undergoing a crisis, this area gained in importance.

The most recent archaeological explorations on the site of Viminacium (*Viminacium*), the capital of the Roman province of Upper Moesia (*Moesia Superior*), in late antique time First Moesia (*Moesia Prima*), have shown that this large city and legionary fortress was the transition point between the West and the East, at the time when Rome as the capital was transferred to the East, to Constantinople. This is attested by the abundance of items found in Viminacium in


**Fig. 612**


ITINERARIVM ROMANVM SERBIAE - VIMINACIVM
WORLD TOUR
WWW.MFA.GOV.RS
WWW.ALAC.RS
RUSSIA
CANADA
UNITED STATES
CHINA
BRAZIL
AUSTRALIA
ODRŽANE IZLOŽBE
HELD EXHIBITIONS
PLANIRANE IZLOŽBE
PLANNED EXHIBITIONS
WASHINGTON DC, USA
MAY 2013
NEW YORK, USA
JULY 2013
BOSTON, USA
OCTOBER 2013
CHICAGO, USA
OCTOBER 2013
LOS ANGELES, USA
MAY 2014
SAN FRANCISCO, USA
JUNE 2014
LONDON, UK
FEBRUARY 2014
BUDAPEST, HUNGARY
MARCH-SEPTEMBER 2014
ROME, ITALY
DECEMBER 2014
VALLETTA, MALTA
JUNE-AVGUST 2015
MONTEVIDEO, URUGUAY
OCTOBER 2015
BUENOS AIRES, ARGENTINA
NOVEMBER-DECEMBER 2015
ASUNCIÓN, PARAGUAY
DECEMBER 2015 - JANUARY 2016
BRASÍLIA, BRAZIL
FERBRUAR - MARCH 2016
SANTIAGO, CHILE
APRIL - MAY 2016
LIMA, PERU
JULY - SEPTEMBER 2016
LA PAZ, BOLIVIA
OCTOBER 2016 - JANUARY 2017
SANTA CRUZ, BOLIVIA
FEBRUARY - MARCH 2017
PRAGUE, CZECH REPUBLIC
JULY - AUGUST 2017
LISABON, PORTUGAL 2020
BRUSSELS, BELGIUM 2020
NEW DELHI, INDIA 2020
MELBOURNE, AUSTRALIA 2021
SYDNEY, AUSTRALIA 2021
BEIJING, CHINA 2022
MOSCOW, RUSSIA 2022
CAMBRIDGE, UK 2021
CENTAR ZA NOVE TEHNOLOGIJE
WWW.VIMINACIUM.ORG.RS

**Fig. 613**


ITINERARIUM ROMANUM
SERBIAE
Aquincum
Carnuntum
Sopianae
Intercissa
Mursa
AURELIANUS
MAXIMIANUS HERCULIUS
GRATIANUS
Romania
Croatia
CONSTANTINUS II
Sirmium
Tabula Traiana
Diana
Pons Traiani
Pontes
Viminacium
Singidunum
Sarmizegetusa
Tropeum Traiani
Apulum
TRAIANUS DECIUS
HOSTILIANUS
PROBUS
IOVIANUS
MAXIMINUS DAIA
Sarkamen
Felix Romuliana
Siscia
Emona
Poetovio
Aquileia
Mediolanum
CONSTANTIUS CHLORUS
GALERIUS
VETRANIO
LICINIUS
CONSTANTINUS MAGNUS
Naissus et Mediana
Ratiaria
Nicopolis
Oescus
Constantinopolis
Antiochia
Bosnia and Herzegovina
Burnum
Tilurium
Domavia
Spalato
Salona
Iustiniana Prima
FLAVIUS SEVERUS
Serdica
ISTINIANUS I
CLAUDIUS GOTHICUS
Montenegro
Ulpiana
Bulgaria
Doclea
Mare Adriaticum
Scupi
Roman city
Roman fort

Fig. 614

Fig. 615

Fig. 616

Fig. 617

Fig. 618

recent years, especially relating to the first decades of the 4th century A.D. The Roman emperors born either in the rich cities on the limes or in rugged hinterland changed the face of the world that existed until then. Having in mind that eighteen Roman emperors were born on the territory of present-day Serbia represent a fifth of the total number of all Roman emperors and the largest number of emperors born outside Italy, a project titled "Itinerarium Romanum Serbiae" or "Road Of Roman Emperors In Serbia" was launched. The purpose of the project is to link together all these places of immeasurable historical and archaeological importance in order to gain a full image of the Roman Empire parts that were once developing along the Danube banks. Only in this way can the names of cities and palaces recorded on yellowed papyri from old archives be brought back to life. The ruins emerge slowly from the ground which covered them for centuries. What used to be systematically destroyed now needs to be raised anew. The ancient glory of Roman cities on our soil must be restored. The Road of Roman Emperors should link up all the places with rich ancient heritage to make up a cultural route more than 600 km long and put them to use as a resource for enhancing cultural tourism. They represent not only Serbia's heritage but also that of Europe and the world.

The Archaeological park Viminacium became one of the most important Serbian brands and is oficially listed among ten most important European archaeological parks. This unique archaeological park is a part of the scientific and research project Viminacium which employs 26 researchers - twelve Ph.D. researchers and thirteen Ph.D. candidates. The previous year brough new international affirmation of Viminacium, but also great contribution to the promotion of Serbia's cultural heritage worldwide.

The project "Itinerarium Romanum Serbiae" and the Archaeological park Viminacium were presented to the public worldwide through a traveling exhibition entitled „Journey to the past – Itinerarium Romanum Serbiae – Viminacium".

**Fig. 619**

The exhibition „Journey to the past – Itinerarium Romanum Serbiae – Viminacium“ represents one of the best examples of promotion of Serbia's cultural heritage in the world. The Institute of Archaology from Belgrade was in charge of the exhibition's organisation, with the help of many colleagues and assistants and with the support of the Ministry of Foreign Affairs of the Republic of Serbia.

Indirectly, by promoting this unique Serbian brand, we also present all of the places in which Roman emperors were born, by including them into a "scientific product" – an attractive project within cultural and archaeological tourism. We believed that presenting Roman heritage goes beyond Serbian borders and the interest awakened by this project made our beliefs even stronger. Formal institutions in Serbia also recognized a chance to promote our country worldwide and this is how the Ministry of Foreign Affairs overtook all of the organizing and became the most important mediator in preparing these events.

The idea of a traveling exhibition was conceaved in 2010, in the Embassy of the Republic of Serbia in Washington, within the „Passport DC Day“ manifestation. This manifestation takes place in May, when all of the 176 embassies are opened. The interest shown by the American public was a good reason to work on the exhibition, prepare a much bigger number of exhibits and, the most important, make the exhibition last longer in order to reach as much public as possible. The result of such an idea is an exhibition with 18 portraits of Roman emperors cast in bronze, with a monumental model – the ideal reconstruction of the city and the legionary fortress of Viminacium, copies of golden jewelry and huge amounts of informative material in Serbian, English, Italian and Spanish language. By applying the concept of an exhibition consisting of copies of artefacts, transport and insurance costs were reduced to a minimum, enabling the exhibition to travel to a much bigger number of cities.

**Fig. 620**

So far, the exhibition was shown in several European cities and in North and in Latin America. In the United States, the exhibition has been shown in Washington, New York, Boston, Chicago, San Francisco and Los Angeles. Since the interest in Washington, New York and Budapest was so huge, the exhibition was shown twice in these cities. In Europe, the public interested in Roman heritage has seen the exhibition in London, Budapest, Rome, Milan, Valletta and Prague. This exhibition gained much attention in South America and it was shown in Uruguay (Montevideo), Argentina (Buenos Aires), Paraguay (Asunción), Brasilia (Brazil), Santiago de Chile (Chile), Lima (Peru), and Santa Cruz with La Paz (Bolivia).

Exhibitions are preapred in the following cities, worldwide. In Australia: Sidney, Melbourne. In Europe: Bruxelles (Belgium), Madrid (Spain), Lisbon (Portugal), Moscow (Russia), and Cambridge (Great Britain). In Asia: Beijing (China), New Delhi (India). In Middle East: Tel Aviv (Israel).

The exhibition consists of 18 bronze portraits of Roman emperors born at the territory of modern Serbia (authorised works of Sonja Petrović and Vuk Đuričković) and a model of the Roman city of Viminacium and the legionary fortress of Viminacium, in which the Roman legion VII Claudia (*legio VII Claudia Pia Fidelis*) was stationed. The model of Viminacium results from a long lasting work of a professor from the Faculty of Applied Arts, our leading scenographer, professor Dragomir Petrović. It was made according to the results of geo-physical research of the ancient city and the legionary fortress. The dimensions of the model are 8,50 x 4,50 meters. An exquisite exhibition design was made by professor Zvonko Petković from the Faculty of Applied Arts. The portraits of the Roman emperors were placed into transparent clirite capsules, making a great contrast between modern and antique styles. An additional content of the exhibition includes replicas of golden jewelry, replicas of archaeological finds, numerous back-drops and roll-ups, visually supporting the exhibition. The printed and marketing materials available at the exhibition are in Serbian, English, Italian, Spanish and Portuguese language.


**Fig. 621**

Fig. 622


Fig. 623

Fig. 624

Fig. 625

**Exibition History**

1. May 2013, Exhibition in Washington DC, USA
2. May 2013, Exhibition in Viminacium, Serbia
3. July 2013, Exhibition in New York, USA
4. October 2013, Exhibition in Boston, USA
5. November 2013, Exhibition in Chicago, USA
6. February 2014, Exhibition in London, UK
7. March 2014, Exhibition in Budapest, Hungary
8. May 2014, Exhibition in Los Angeles, USA
9. June 2014, Exhibition in San Francisco, USA
10. July 2014, Exhibition in New York, USA
11. August – September 2014, Exhibition at EXPO Milano, Italy
12. September 2014, Exhibition in Budapest, Hungary
13. December 2014, Exhibition in Rome, Italy
14. July - August 2015, Exhibition in Valletta, Malta
15. September – October 2015, Exhibition in Montevideo, Uruguay
16. November – December 2015, Exhibition in Buenos Aires, Argentina
17. December 2015 – January 2016, Exhibition in Asuncion, Paraguay
18. February – March 2016, Exhibition in Brasilia, Brazil
19. April – May 2016, Exhibition in Santiago, Chile
20. July – September 2016, Exhibition in Lima, Peru
21. October – November 2016, Exhibition in La Paz, Bolivia
22. February – March 2017, Exhibition in Santa Cruz, Bolivia
23. July – August 2017, Exhibition in Prague, Czech Republic


**Fig. 626**

Fig. 627

# VIMINACIUM SUMMARY



## VIMINACIUM – THE CAPITAL OF THE ROMAN PROVINCE MOESIA SUPERIOR

For a long time the tale of the one-time splendor and decline of the Roman city and legionary fortress of Viminacium is attracting the attention both the national and the international public. Viminacium is beginning to take its rightful place on the world's cultural-historical stage. The area occupied by this ancient Roman city and military encampment (covering an area of over 450 hectares of the wider city region and 220 hectares of the urban area) presently lies under cultivated arable land, with artifacts and fragments of objects from the Roman era scattered in many of its furrows. The necropolis (burial grounds) of Viminacium, explored over the last three decades of the 20th century, have yielded over 14,000 discovered graves. The exploration of the Roman city and military encampment is conducted by an interdisciplinary team consisting of renowned experts from various fields. Besides archeologists, the Viminacium project has gathered geophysicists, mathematicians, electrical engineers, geologists, petrologists, researchers engaged in remote detection, 3D modeling and form recognition, as well as in artificial intelligence. Their vision is for the fora and temples, the theaters and the hippodrome, the baths, the streets and the city quarters to rise from the fields under which they had been lying for centuries, in order to become a part of our own and the world's cultural heritage, as well as a recognizable symbol of the Danubian region.

The villages of Stari Kostolac and Drmno, at 13 kilometers from Požarevac, are lying on the remnants of the ancient city of Viminacium, the capital of the Roman province of *Moesia Superior*, in Late Antiquity known as the *Moesia Prima* province. Historical sources say that Viminacium was a significant military stronghold, where the Roman legion *Legio VII Claudia Pia Fidelis* was stationed. Through archaeological excavations, intensified during the last quarter of the 20th century, the city has slowly risen from previously scarce historical accounts to reveal itself as a place of dynamic development during its six centuries-long history, a meeting place of Eastern and Western cultures, with flowering craftsmanship and art, a place where merchants from the entire Roman Empire came to exchange their goods. It seems that it was the well-

**Fig. 628**

developed economy of this city, whose products found its buyers even outside the bounds of the home province, which gave rise to the great variety of crafts and artistic workshops that appeared in this area.

In the course of the 4th century it was precisely in these workshops that some of the most significant fresco-decorated tombs of late antiquity were produced.

An important military center and Roman provincial capital, Viminacium was built on territory belonging to the Celtic tribe Scordisci. It owed its size and significance to the rich hinterland in the Mlava River Valley, as well as to its exceptionally favorable geographical position, both within the defense system of the Empire's northern borders and as a crossroad for road, river and trade networks. Archeological investigations of Viminacium have gone on for more than a century. At the end of the 19th and the beginning of the 20th century, M. Valtrović and M. Vasić conducted excavations on the right banks of the Mlava River, at the Čair site, revealing the encampment's rectangular base, 442 x 385 meters, as well as large civilian settlement not far from its western rampart.

Its contours could already be discerned in the 19th century: broad avenues intersecting at right angles, forum, theaters, baths, aqueducts and ramparts. The settlement gained the status of a *municipium* (city) in the first half of the 2nd century, most probably in A.D. 117, during the reign of Emperor Hadrian, receiving the name of *Viminacium Aelium Hadrianum*. Viminacium's subsequent rise was interrupted, if only briefly, by a plague epidemic during the reign of Marcus Aurelius. However, already in the first years of the 3rd century, the city was once again in full expansion.

A number of Roman emperors either passed through Viminacium or stayed for extended periods. Hadrian organized hunting games on two different occasions. Emperor Septimius Severus also visited the city twice. Emperors Gordian III, Philip the Arab, Trebonianus Gallus, Hostilianus, Diocletian, Constantine the Great, Constantius I and Julian also paid visits. As far as it is known, Gratian was the last emperor to visit Viminacium. In the 3rd century, during the reign of Gordian III, Viminacium became a colony and obtained the right to mint coins. Historical sources state that a decisive battle for supremacy over these parts took place near Viminacium between two Roman emperors, Diocletian and Carinus, in A.D. 284. Serving as testimony to that time is the marble portrait of Carus, the father of Carinus, now held at the Požarevac Museum. In the 4th century, Viminacium was a significant Christian episcopal seat. The city was definitely razed in the middle of the 5th century during the Hun invasion and never subsequently rebuilt, except as a military fortress, during Justinian's reign in the 6th century.

## THE DOMVS SCIENTIARVM VIMINACIUM

**What is the Domvs Scientiarvm Viminacivm?**

Scientific and research centre (*Domus scientiarum*) in Viminacium was invented as a multi-purpose object. On several occasions, it was visited by elite scientists participating on various international symposia, conferences, workshops and congresses. In the year 2011, the IX International UNESCO summit named „Modern art and reconciliation" took place there, attended by numerous presidents and ministers from south-eastern Europe.

The Viminacium Scientific-Research Center (*Domvs Scientiarvm*) has been designed as a multipurpose facility. Besides the fact that scientists from Serbia and from abroad will use its studies, libraries and atria for researches, workshops with students, summer schools and organization of congresses and topical meetings, it will serve for accommodating tourists who show an increasing interest for visiting Viminacium.

The facility is designated in the shape of a Roman *villa rustica*. It has two levels: the upper one, containing working and accommodating premises, and the lower one with the museum, storerooms and conference halls.

The upper level consists of a set of atria, around which are workshops, laboratories, studies and rooms for accommodation of professional teams as well as for visitors. Next to them is the library with the reading room, document center, kitchen and dining room, a replica of Roman *thermae*, used as small spa center.

Fig. 629

The object consists of: one part intended for accommodation of the archaeological team, two parts for accommodation of guests and one in which there is the documentary centre, i.e. a part with workshops and laboratories used by expert teams, further on the library with the reading room, a presentation hall, kitchen with a dining room, while a replica of Roman thermae with the capacity of a smaller spa-centre is still under construction.

The lower level represents a partially isolated zone with increased security and strict climatic control of museum collections and storerooms. The subterranean hall decorated with a mosaic and premises for the future museum are completely finished. Late Antique frescoes discovered during archaeological excavations of the Viminacium cemeteries are also exhibited.

**Economic sustainability**

The Archaeological park was created as a self-sustainable project, supported by the resourcing Ministries while organizing important events. Income basically comes from individual visitors and selling souvenirs, as well as from catering within the park. On the other hand, the focus is on organizing congresses and thematic gatherings, spa weekends and attractive short-term holidays, offering Roman life-style as a special experience. Such a specific approach to tourist offer brings incomes which should sponsor further archaeological research and development of the archaeological park.

Domvs Scientiarvm represents the highlight of our archaeological tourism, with its unique atmosphere of ancient Rome, in which a visitor be whatever he/she likes – an archaeologist, a legionary or an emperor. Such an offer includes Roman costumes, tasting Roman food prepared according to ancient recipes and staying in an object built according to a typical Roman model.

Ever since 2006, Viminacium possesses a ponton port on the Danube, enabling access to big river-cruisers. In 2018, some 90.000 visitors came to Viminacium, out of which some 15.000 arrived on ship, along the Danube. In 2019, an even greater number of tourists is expected arriving along the river, even over 200.000, while some 300.000 people would visit the site arriving along the landroads.

**Fig. 630**

## MAMMOTHS IN VIMINACIUM

**Viminacium mammoths**

In June 2014, all of the mammoths discovered so far "moved into" a specially designed part of the Archaeological Park Viminacium, followed with a great festival – actually the millionth birthday of the mammoth Vika, attended by numerous guests, like the President of the Republic of Serbia, the Ambassador of the USA and so on. Vika's skeleton and partly preserved skeletons of five other mammoths are exhibited in a natural environment, aiming to show the climate, flora and fauna of the era in which they lived. All of them belong to the species of the steppe mammoths (*Mammuthus trogontherii*).

Ever since it was discovered in 2009, the mammoth Vika represented a special attraction within the Archaeological Park of Viminacium. It was discovered some 350 meters to the east of the Imperial mausoleum, within the layers from the Early Pleistocene – a million years old geological period. The area in which it was discovered is placed within the ancient delta of the river Morava, which was formed as the Pannonic Sea withdrew. Exactly during this period, a female mammoth of about sixty years of age, some 4,5 meters tall and over 5 meters long, almost 10 tons of weight, lived here. She belonged to an extremely rare species. Up to this day, worldwide, some twenty mammoth skeletons were discovered, mostly during the 19$^{th}$ century, but none of them was preserved where it was discovered, in a fully preserved anatomic position. Since the skeleton was situated at the very edge of the strip-mine, with an extremely difficult access and limited security, its discoverers faced a new unique challenge: they moved it to a safer location, into the Mammoth Park. Another almost impossible act took place in Viminacium. Actually, the moving of Vika's skeleton drew much attention and this unique action was filmed by many filming teams from all over the world. Luckily for the visitors, the mammoth remains are now accessible in a new, unusual environment, just like in the era of the Early Pleistocene – offering them a possibility to sense the atmosphere of some million years of age, all of this just next to to ancient Roman site of Viminacium.

In 2012, while following the excavation in the strip mine "Drmno" at the eastern edge of Viminacium, in the loess profiles, massive cut mammoth bones were traced. They were discovered at the depth of some twenty meters, making it necessary to remove almost 100.000 m$^3$ of earth in order to form a platteau for a systematic protective excavation. The here conducted research revealed a complex eco-system from the Pleistocene era, focused on the nearby river, with at least three to five individual mammoths and a large number of deer, horse, bison remains and bones of other Pleistocene mammals. Opposite to the extremely well preserved remains of the mammoth Vika, discovered in 2009 in the mud of the ancient Morava delta, the mammoths from the site Nosak remained lying in the steppe, torn to pieces by different carnivores, so that their bones were scattered over a wide area and exposed to different weather conditions before they were covered with loess. With great efforts, all of the bones were extracted, while the biggest ones (skulls and tusks) were cut with blocks of earth and transferred into the zone of the Archaeological Park Viminacium in large steel/boxes. Later on, they were exhibited within the new Mammoth Park.

## WHAT HAS BEEN DONE IN THE PERIOD OCTOBER 2003 – DECEMBER 2019

**On the site itself:**

Important archaeological sites have been protected and presented for visitors: 1) the memoria; 2) the northern gate of the legionary fortress; 3) the public baths; 4) the mausoleum at the eastern necropolis; 5) the amphitheatre with the city wall and the gate; 6) the aqueduct with facilities; and 7) brick kilns. The contemporary buildings for visitors and researchers were built: 1) toilets; 2) tavern with souvenir-shop; 3) Domus Scientiarum Viminacium; 4) the Mammoth Park; and 5) Limes Park with the Adventure Park.

Fig. 631

*Domvs Scientiarvm* – the greatest part of the whole object is completed, presented to the public and classified as one of the objects which are introduced to the visitors of the Archaeological Park of Viminacium.

The round-the-clock security service (12 watchmen) has been provided.

Viminacium centre employed 20 young people from local communities.

**For the touristic promotion has been made:**

Project of tourist marking from all directions to Viminacium.

Promotion materials have been printed in English, German, French and Italian.

Visiting to Viminacium is included in biking route Atlantic – Black Sea as point D210.

Large number of copies of the Roman gold and silver jewelry and brooches was made.

Copies of Roman vessels and oil-lamps were made.

A game titled "The Mystery of the Emperor's Death" was created. Second edition is in the shops at the moment (in German, English and Serbian language).

A DVD TV film „Viminacium lumen meum" was recorded (in English and Serbian).

A CD „Viminacium" was made (in German, English and Serbian).

**Archaeological excavations:**

Roman amphitheatre was excavated and partially also reconstructed, its ancient capacity was 7.300 spectators.

Roman aqueducts, 1.700 m in length have been excavated and moved to a new location in Archaeological Park of Viminacium.

*Castellum aquae* as one of the most important elements in water supply has been excavated and moved to a new location in Archaeological Park of Viminacium.

A paved Roman street from the 4$^{th}$ century was excavated.

The area around the legionary fortress rampart has been excavated, from the northern (*Porta Praetoria*) to the western gate (*Porta Principalis Sinistra*).

**Celebrations, concerts, laboratories at Viminacium:**

In June of 2003 presentation of the ancient burial in the Mausoleum.

In 2006 opening of Viminacium Archaeological Park.

In 2007 during project „Save the Earth", concert was held. The music was played by, "Van Gogh" and „Revised EKV". Concert was preceded by Roman festival with visitors and archeological team were dressed in Roman clothes.

In August of 2008 concert of French diva Emma Shapplin was organized.

In December of 2009 for the first time in new *Domvs* has been organized so called "Laboratories for everybody" („Scienza per tutti") in cooperation with the universities of Ancona and Bologna.

In September of 2009 the Festival of Wine, Fish and Tambura Players "Sparkles in the Glass" took place.

In October of 2009 the Concert of Studio Alektik was broadcasting directly through Internet.

In September of 2010 International Conference on Roman Pottery („*Rei Cretariae Romanae Favtores*") with scientists from all over the world was held.

In September 2011, the IX International UNESCO summit named „Contemporary art and reconciliation“ took place there, attended by numerous presidents and ministers from south-eastern Europe.

In October 2012 the international symposium of cultural heritage “Archaeological Heritage – its Role in Education, Presentation and Popularization of Science” took place.

In March 2013, as a part of the OpenArch project, with Viminacium being one of the partners, an experiment was conducted with planting grapevine in the ancient Roman manner.

In March 2013, as a part of the OpenArch project, with Viminacium being one of the partners, an experiment was conducted aiming to investigate ways of cremating in the Mala Kopašnica – Sase type graves. During the experiment, a pig was cremated.

In March 2013, as a part of the T-PAS project, with Viminacium being one of the partners, an international conference was held.

In April 2013, a conference was held as a part of the international project Danube Limes Brand, another one with Viminacium being one of the partners, with at least twenty of the most recognized archaeologists of the Roman Limes.

In May 2013, on the occassion of the 1700th anniversary of the Edict of Milan, the president of the Republic Tomislav Nikolić opened the exhibition in the Domus premises.

In May 2013, on the occassion of the 1700th anniversary of the Edict of Milan, the president of the Republic Tomislav Nikolić opened the reconstructed amphitheatre of Viminacium in which the opera “Aida” was performed – the orchestra, singers and performers of the Belgrade National Theater.

In June 2013 a concert of Maja Le Ru was held, with the “Simfonijeta” chamber orchestra was held.

In July 2013 Viminacium was presented in Washington.

In July 2013 a mobile photo-exhibition of the T-PAS project – Aquileia, Emona, Viminacium was opened.

In July and August 2013, “Children research campus in Viminacium” for ages 8 to14 years, was opened.

In September 2013 Viminacium was presented in New York.

In October 2013 Viminacium was presented in Chicago.

In October 2013 Viminacium was presented in Boston.

In October 2013, the second conference of the international project “Danube Limes Brand” was held, with many participants from abroad and from Serbia.

In November 2013, the annual conference of the employees of the Institute of Archaeology was held.

In February 2014 Viminacium was presented in London.

In May 2014 Viminacium was presented in San Francisco.

In May 2014 Viminacium was presented in Los Angeles.

In June 2014 – the official opening of the Mammoth Park within the Archaeological Park Viminacium.

In July 2014 – the Danube Limes Day took place, including the concert of the Teofilović brothers.

In September 2014 Viminacium was presented in the Serbian Embassy in the UN in New York.

In September 2014 Viminacium was presented in Budapest.

In September/October 2014 – within the international project OpenArch, Viminacium being one of the participants, an international symposium was held, entitled “The Impact of Dialogue with Visitors on AOAM Management”.

In December 2014 Viminacium was presented in Rome.

Fig. 632

In July 2015 Viminacium was presented in Valetta.
In September 2015 Viminacium was presented in Milan.
September – October 2015 Viminacium was presented in Montevideo.
October – December 2015 Viminacium was presented in Buenos Aires.
December 2015 – January 2016 Viminacium was presented in Asuncion.
February – March 2016 Viminacium was presented in Brasilia.
April – May 2016 Viminacium was presented in Santiago de Chile.
July – September 2016 Viminacium was presented in Lima.
October 2016 – Februrary 2017 – Viminacium was presented in La Paz.
February-March 2017 – Viminacium was presented in Santa Cruz.
July - August 2017 – Viminacium was presented in Prague.
September 2017 – an international symposium was held, entitled „Circulation of the Antique Coins in South-eastern Europe".
August 2018 – in Viminacium and in Belgrade, organized by both Serbia and the NSF (National Science Foundation USA), sponsored by the Ministry of Education, Science and Technological Development, an international workshop was held focused on co-operation on data sciences (US-Serbia & West Balkan Data Science Workshop).
September 2018 – Živa Award 2018 was given to Viminacium Archaeological Park in Prague as Special recognition for leadership.
September 2018 – Limes congress was held with several hundreds of scholars from all over the world.
In June 2019 – the theatre festival entitled "Viminacium fest – mitovi stari i novi" (Viminacium fest – Myths, old and new) was held.
September 2019 – a meeting of representatives from the Danubian countries took place in order to nominate borders of the Roman Empire – the Danube Limes in Serbia for the UNESCO World Heritage tentative list.

**Plans, projects:**

Viminacium is the leading archaeological site in the project „Itinerarium Romanum Serbiae" that is organized by Institute of Archaeology from Belgrade, Ministry of Education, Science and Technological Development and Ministry of Culture and Information.

From 2015, Viminacium has been on the UNESCO World Heritage tentative list. The site should be a part of the World Heritage List along with about thirty other sites from Serbia, all within the international serial heritage of the "Roman Imperial Limes" that includes several hundreds of sites from the Hadrian's and Antonine wall, over the Rhine and the Danube all the way to the Black Sea. Currently, a nomination dossier is being created, as well as necessary conditions for the protection and presentation of the sites, according to the international guidelines and recommendations for the cultural heritage preservation.



## VIMINACIUM– DIE HAUPTSTADT DER RÖMISCHEN PROVINZ OBERMOESIEN

Die Geschichte von ehemaliger Pracht und Untergang der römischen Stadt und Militärlager Viminacium zog Aufmerksamkeit auf sich, nicht nur in Serbien, sondern auch weltweit. Viminacium nimmt auf kultureller und historischer Szene eine wichtige Stelle ein, die ihm mit Recht gehört.

Die ehemalige römische Stadt und Militärlager Viminacium (mehr als 450 ha des breiteren und 220 ha des engeren Stadtterritoriums) liegt heute unter Feldern, während Objekte und Objektenfragmente über ackern gestreut sind. In den letzten drei Jahrzehnten des 20. Jh. wurden Nekropolen erforscht und dabei mehr als 14.000 Gräber entdeckt.

Ein multidisziplinäres Team nimmt an der Forschung der römischen Stadt und des Militärlagers Viminacium teil. Neben Archäologen sind auch Mathematiker, Elektroingenieure, Geophysiker, Geologen und Petrologen beteiligt, sowie Ferndetektionforscher und 3D Modellierungs- und Erkennungsforscher und Experten für künstliche Intelligenz. Ihr Wunsch ist, Plätze, heiligtümer, Theater und Pferderennbahn, Bäder, Straßen und Stadtviertel, die auf den Ackern ausgegraben wurden, zu einem Teil der Weltkulturerbe und Kulturerbe Serbiens zu machen, aber auch zu einem Symbol des Donautales.

Die Dörfer Kostolac und Drmno, die 13 km von Požarevac entfernt sind, liegen auf den Überbleibseln der antiken Stadt Viminacium, auf der ehemaligen Hauptstadt der Provinz Obermoesien, bzw. *Moesia Prima* in der Spätantike.

Aus historischen Quellen ist es bekannt, dass Viminacium ein wichtiges Militärzentrum war, in dem eine römische Legion (*Legio VII Claudia Pia Fidelis*) stationiert war. Mit Hilfe archäologischer Forschungen im letzten Viertel des 20. Jh. taucht es aus dürftigen historischen Quellen auf und stellt sich als eine Stadt dar, die in ihrer sechs Jahrhunderte langen Geschichte eine dynamische Entwicklung hatte und ein Ort war, auf dem sich nicht nur westliche und östliche Kulturen trafen, sondern auch römische Händler, die ihn gerne besuchten. Es scheint, dass die Wohlhabenheit dieser Stadt der Grund war, dass hier unterschiedliche künstlerischen Werkstätten entstanden, de-

**Fig. 633**

ren Güter auch ausserhalb der Provinzgränzen ihre Verbraucher fanden. Ausgerechnet die Künstler aus solchen Werkstätten hinterließen vielleicht die wichtigsten und schönsten fresko-bemalten Grabkammern der Spätantike.

Als wichtiges Militärzentrum und Hauptstadt einer römischen Provinz, entstand Viminacium auf dem ehemaligen Territorium des keltischen Stammes der Skoridsker.

Seine Größe und Bedeutung sind von mehreren Faktoren verursacht, vor welchen man vor allem ein reiches Hintergrund des Mlavatales erwähnen soll, aber auch eine äußerst günstige geographische Lage, sowohl im Verteidigungssystem des Reiches, als auch im Kommunikationsnetz und Handelsbeziehungen.

Am Ende des 19. und am Anfang des 20. Jh. führten M. Valtrović und M. Vasić am rechten Mlavaufer, auf der Fundstelle Čair, archäologische Ausgrabungen durch, die zeigten, dass das Lager einen rechteckigen Grundriss besaß und 442 x 385 m maß. Unweit von ihm befand sich die Zivielsiedlung.

Im 19. Jh. waren die Umrisse der antiken Stadt und des Militärlagers Viminacium nocht sichtbar: breite Straßen, einen rechten winkel bildend, Plätze, Theater, Bäder, Aquädukt, Stadtmauer und Türme.

In der ersten Hälfte des 2. Jh, zur Zeit Hadrians, wahrscheinlich im Jahr 117, erhielt die Siedlung den Status einer Stadt und hieß seitdem *Viminacium Aelium Hadrianum*.

Eine weitere Entwicklung Viminaciums wurde kurz wegen einer Pestepidemie zur Zeit Marcus Aurelius unterbrochen. archäologische Forschungen zeigten, dass sich die Pestepidemie im weiteren wirtschaftlichen Aufschwung Viminaciums nicht wiederspiegelt, da es festgestellt werden konnte, dass die Stadt schon in den ersten Jahrzehnten des 3. Jh. ihre volle Blüte erlebte.

Fast alle römische Imperatoren reisten durch Viminacium oder eine gewisse Zeit in der Stadt weilten. Von Imperatorenbesuchen hebt sich vor allem der Besuch Hadrians hervor, der in Viminacium zwei mal Jagden organisierte. Der Imperator Septimius Severus besuchte ebenso zweimal Viminacium, später besuchten die Stadt auch andere Imperatoren, wie Gordianus III, Philippus der Araber, Trebonianus Gallus, Hostilianus, Diokletianus, Konstantin d. Gr., Constantius I und Julianus. Wie es z.Z. bekannt ist, war Gratian der letzte imperator, der Viminacium besuchte.

Im 3. Jh, z.Z. des Imperators Gordian III, wurde Viminacium zu einer Colonia und erworb Münzprägerecht. Aus historischen Quellen ist es bekannt, dass im 284. in der Nähe von Viminacium eine entscheidende Schlacht statt fand, in der zwei römische Imperatoren, Diokletianus und Carinus, gegeneinander kämpften. Über diese Zeit zeugt eine Marmorbüste des Imperatorenvaters Carus, die im Nationalmuseum in Požarevac aufbewahrt wird. Im 4. Jh. war Viminacium ein wichtiger Episkopensitz. In der Mitte des 5. Jh. wurde die Stadt in Hunneneinfällen endgültig zerstört. Die Stadt wurde nie mehr erneuert, während die Militäranlage im 6. Jh. unter Justinianus wieder gebaut wurde.

## DOMVS SCIENTIARVM VIMINACIUM

**Was ist Domvs Scientiarvm Viminacivm?**

Das Wissenschaftlichs- und Forschungszentrum (*Domvs Scientiarvm*) in Viminacium wurde als ein Objekt mit einer mehrseitigen Rolle ausgedacht. Mehrmals kamen hier Elitenwissenschaftlicher, die unterschiedliche internationale Tagungen, Symposia, Konferenzen und Kongresse besuchten. In 2011. fand hier auch das IX regionale UNESCO Zusammentreffen “Moderne Kunst und Versöhnung” statt, das viele Presidente und Minister aus unterschiedlichen Ländern Südosteuropas besuchten. Die Wissenschaftler aus Serbien und anderen Ländern werden ihre Büros, Bibliotheken und Atrien für Forschungen, Arbeit mit Studenten, Sommerschulen und Kongresse benutzen, aber hier sollen auch Touristen unterbracht werden, die sich immer mehr für Viminacium interessieren.

*Domvs Scientiarvm* wird als römische *villa rustica* gedacht. Es hat zwei Niveaus: das obere, in dem sich Arbeits- und Unterkunftsräume befinden und ein unterirdisches Niveau, in dem sich ein Museum, Depots und Säle befinden.

Alle Räume auf dem oberen Niveau, Werkstätte, Labors, sowie Unterkunfts- und Arbeitsräume für Teammitglieder und Besucher, liegen um mehrere Atrien. Das Gebäude besteht aus einem Winkel für die Unterkunft der Archäologen, zwei für Gästeunterkunft und aus einem Winkel, in dem sich das Dokumentationszentrum befindet, eigentlich der Teil mit Werkstätten und Labors für das Expertenteam. Die Bibliothek mit Leserraum wurde ebenso beendet, der Presentationssaal sowie die Küche mit Speisesaal, während eine kleine Replika an römischen Thermen, die ungefähr so groß ist wie ein kleines Spa-Zentrum, immer noch gebaut wird. Hier befindet sich auch die Bibliothek mit Leserraum, Dokumentationszentrum, Küche mit Speisesaal und die Replika eines römischen öffentlichen Bades, die in ihrer Größe einem Spa-Zentrum entspricht.

Das untere Niveau ist teilweise isoliert, überwacht und einer strengen Klimakontrolle wegen Museumssammlungen und Depots. Der unterirdische Saal, dessen Boden mit Mosaiken verziert ist, sowie die Räume des künftigen Museums wurde völlig errichtet. Hier sind Fresken ausgestellt, die während Ausgrabungen auf den Nekropolen Viminaciums zutage kamen.

**Ökonomische Nachhaltigkeit des Archäologischen Parks und des Domus:**

Der Archäologische Park ist als ein selbstnachhaltiges Projekt gedacht, das von unterschiedlichen Resourcenministerien unterstützt wird, vor allem bei Organisierungen unterschiedlicher bedeutender Gelegenheiten. Einkommen kommt grundsätzlich von individuellen Besuchern und Souvenierverkauf, sowie von Gastgewerbe innerhalb des Parks. Auf der anderen Seite wurde Akzent auf Kongresse- und Zusammentreffenorganisierungen gelegt, Spa Wochenenden und attraktiven kurzfristigen Besuchen, die als eine gemeinsame Erfahrung die römische Lebensart anbieten. Eine solche spezifische Zulassung dem touristischen Angebot bringt Einkommen, mit denen weitere Forschung und Entwicklung des archäologischen Parks finanziert werden.

Domvs Scientiarvm stellt einen Höhepunkt des Angebotes in archäologischen Tourisums dar, mit einer einzigartigen Atmosphäre des antiken Roms, in dem man sein kann, was man will – Archäologe, Legionär oder sogar Kaiser. Das Angebot umfasst kostümierte Besuche, Degustation unterschiedlicher Kostbarkeiten, die nach antiken rezepten vorbereitet werden und Wohnen in einem Objekt, das nach römischer Vorbilder gebaut wird.

Seit 2006 besitzt Viminacium an der Donau eine Pontonbrücke, die Zugang für große Schiffe ermöglicht. In 2018. wurde Viminacium von 90.000 Touristen besucht, darunter 15.000 als Schiffreisende. In 2019.wird eine Zahl an 200.000 Touristen vorgesehen, die entlang der Donau Viminacium erreichen sollen, während entlang der Landeswege Viminacium von über 300.000 erreicht werden soll.

## MAMMUTE IN VIMINACIUM

**Mammut Park**

In Juni 2014 wurden alle bisher gefundene Mammute in ihr neues Zuhase innerhalb des Archäologischen Parks Viminacium eingezogen, gleichzeitig mit einem grossen Feier, nämlich dem millionten Geburtstag des Mammut-Weibchens Vika. Als Gäste waren hier der Präsident der Republik Serbien, der Botschafter der USA und andere wichtige Gäste anwesend. Das Skelett der Vika und noch fünf teilweise erhaltenen Mammuten werden in einem natürlichen Ambient ausgestellt, das die Klima, die Flora und die Fauna derjenigen Zeit widerspiegeln soll, in der sie gelebt haben. Alle gehören der Spezies des Steppenmammuts (*Mammuthus trogontherii*).

Fig. 634

Seitdem es in 2009. entdeckt wurde, stellte das Mammutweibchen Vika eine Sonderattraktion innerhalb des Archäologischen Parks Viminacium. Es wurde etwa 350 m östlich des Kaisermausoleums entdeckt und es stammt aus dem frühen Pleistozän (eine Million Jahre). Der Raum in dem es ausgegraben wurde liegt in dem Urbett des Flusses Morava, das enstadt, als das Pannonische Meer sich zurückgezogen hat. Es wird geschätzt, dass das Mammut ein Weibchen ist, etwa 60 Jahre alt als es starb und etwa 4,5 m groß, über 5 m lang und fast 10 t von Gewicht, als es noch lebte. Es gehörte einer äußerst seltenen Spezies. Bisher wurden weltweit insgesamt etwa zwanzig erhaltenen Mammutskelette entdeckt, überwiegend während des 19. Jh, aber kein Skelett wurde auf der Stelle erhalten, in völlig anatomischer Lage. Da das Skelett am Rand des Tagebaus entdeckt wurde, mit einem äußerst schwierigen Zugang und wagen Sicherheit, hatten dessen Entdecker eine einzigartige Herausförderung: es wurde zu einer sicheren Stelle im Mammutpark gebracht. Ein weiteres unmögliches Unternehmen fand in Viminacium statt. Das Übertragen der Vika auf eine sichere Stelle zog große Aufmerksamkeit an sich und dieses Unternehmen wurde von vielen Aufnahmeteams gefilmt. Glücklicherweise ist das Mammutweibchen heute in einem neuen, ausgewöhnlichen Ambient zugänglich, fast wie während des Pleistozäns, was eine Möglichkeit anbietet, die Zeit vor einer Million Jahre zu erleben und zwar direkt neben der antiken Fundstelle Viminacium.

In 2012, während Prospektionsarbeiten am Rand des „Drmno“ Tagebaus an östlichen Ränden Viminaciums, in Lössprofilen, wurden geschnittene Mammutknochen beobachtet. Sie wurden in einer Tiefe von etwa zwanzig Meter entdeckt und deswegen wurden fast 100.000 $m^3$ von Erde weggenommen, um ein Plateau für weitere Forschung zu förmen. Die hier durchgeführten Ausgrabungen brachten ein komplexes Ökosystem aus dem Pleistozän zu Tage, das auf den benachbarten Fluss fokusiert wurde, mit Überresten von mindestens drei bis fünf weiteren Mammuten und einer grossen Zahl an Hirsch-, Pferd, Buffaloknochen und Knochen weiterer Säugetiere aus dem Pleistozän. Als Unterschied zu perfekt erhaltenem Mammut (Vika), das in 2009 im Urbett der Morava entdeckt wurde, blieben die auf Nosak entdeckte Mammuten in der Steppe liegend und deren Überreste wurden von unterschiedlichen Tieren zerfleischt. Deswegen waren die Knochen über eine grosse Fläche zerstreut, von Wetterbedingungen beeinflusst, bevor sie mit Löss gedeckt wurden. Mit grossen Anstrengungen wurden alle Knochen versetzt, während die grössten und empfindlichsten (Schädel und Stoßzähne) in Erdblöcken geschnitten wurden und in grossen Stahlsärgen in die Zone des Archäologischen Parks Viminacium versetzt wurden, um später im neuen Paläontologischen Park ausgestellt zu werden.

## ABGESCHLOSSENE ARBEITEN (ZWISCHEN OKTOBER 2003. UND DECEMBER 2019.)

**Auf der Fundstelle:**

Die Konstruktion des “Abenteuerparks” in Viminacium wurde angefangen.

Neun grosse Objekte wurden gedeckt: 1) die paleochristliche Memorie, 2) das Nordtor des Militärlagers, 3) römische Thermen, 4) das Mausoleum, in dem höchstwahrscheinlich der römische Kaiser Hostilianus bestattet wurde und 5) das in 2009. ausgegrabene Mammutskelett, 6) *Domvs scientarvm*, 7) das Werkstattzentrum, 8) Limes Park und 9) Abenteuerpark.

*Domvs Scientiarvm* – der größte Teil des Gebäudes ist völlig errichtet, dem Publikum dargestellt und zu den Objekten gezählt, die während des Besuchs im archäologischen Park Viminacium unbedingt gezeigt werden.

Die Stelle wird 24 Stunden bewacht (12 Personen).

Die Fundstelle wird rundum bewacht.

Zwanzig junge Personen aus der Umgebung wurden angestellt.

**Für eine touristische Promotion Viminaciums wurde folgendes gemacht:**

Touristische Signalisaton aus aller Richtungen wurde gemacht.
Die Römerstadt wird als Anhaltspunk D210 in die Fahrradroute vom Atlantik bis zum Schwarzen Meer.
Viele Kopien des römischen Gold- und Silberschmucks sowie Fibeln wurden gefertigt.
Kopien römischer Gefäße und Öllampen wurden gefertigt.
Das Kinderspiel mit dem Titel „Geheimnis des Imperatorentodes" (Deutsch, Englisch, Serbisch) wird in seiner zweiten Edition ausgearbeitet
„Viminacium lumen meum" DVD wurde gefilmt (Englisch, Serbisch).
Auch eine CD „Viminacium" wurde gemacht (Deutsch, Englisch, Serbisch).

**Archäologische Forschungen:**

Das römische Amphitheater wurde ausgegraben und teilweise rekonstruiert, jetzt für 7.500 Zuschauer vorgesehen.
Der römische Aquädukt wurde in einer Länge von 1700 m ausgegraben und umgestellt.
Die Wasserleitung (*Castellum Aquae*) wurde ausgegraben und ebenso umgestellt.
Eine gepflasterte römische Straße aus dem 4. Jh. wurde ausgegraben.
Der Raum zwischen der Militärlagermauer vom nordlichen Tor (*Porta Praetoria*) bis zum westlichen Tor (*Porta Principalis Sinistra*) wurden ausgegraben.

**Feste, Konzerte und Labors auf Viminacium:**

Innerhalb der Weltmanifestation „Save the Earth" wurden in 2007. zwei Konzerte organisiert („Van Gogh" und „Revised EKV"). Vor dem Konzert fand ein römisches Fest statt, bei dem sowohl Besucher als auch Archäologen in Togen umgekleidet waren.

Im August 2008. wurde hier ein Konzert der weltbekannten Opersängerin Emma Shappen organisiert.

Im Dezember 2008. wurde zum ersten Mal in der Domus-Räumen ein „Labor für alle" („Szeinza per tutti"), als eine Zusammenarbeit mit den Universitäten Bologna und Ancona, organisiert.

Im September 2009. wurde ein Wein-, Fisch- und Tamburizzafest unter dem Namen „Funke im Glas" organisiert.

Im Oktober 2009. wurde im Domus ein Konzert des Studios Alektik organisiert, das direkt über das Internet übertragen wurde.

Im September 2010. wurde die Tagung über die römische Keramik *„Rei Cretariae Romanae Favtores"* organisiert.

Im September 2011. fand hier auch das IX regionale UNESCO Zusammentreffen „Moderne Kunst und Versöhnung" statt, das viele Presidente und Minister aus unterschiedlichen Ländern Südosteuropas besuchten.

Im Oktober 2012. die Tagung über die Kulturerbe "Archaeological Heritage – its Role in Education, Presentation and Popularization of Science".

Im März 2013, als Teil des Projektes OpenArch, zu dessen Partner auch Viminacium gehört, wurde ein Experiment durchgeführt und Weinrebe nach römischer Art gepflanzt.

Im März 2013, als Teil des Projektes OpenArch, zu dessen Partner auch Viminacium gehört, wurde ein Experiment durchgeführt mit dem Ziel, die Kremationen vom Mala Kopašnica – Sase Typ zu rekonstruieren. Dabei wurde ein Schwein kremiert.

Im März 2013, als Teil des internationalen T-PAS Projektes, zu dessen Partner auch Viminacium gehört, wurde eine internationale Konferenz organisiert.



Im April 2013, als Teil des internationalen Projektes Danube Limes Brand, ebenso mit Viminacium unter den Partnern, wurde eine weitere Konferenz organisiert, mit mindestens zwanzig berühmten Forschern des Donaulimes.

Im Mai 2013, innerhalb des 1700. Jubiläums des Milanediktes, hat der President der Republik Tomislav Nikolić, eine Ausstellung im Domus eröffnet.

Im Mai 2013, innerhalb des 1700. Jubiläums des Milanediktes, hat der President der Republik Tomislav Nikolić den rekonstruierten Teil des Viminaciumer Amphitheaters eröffnet und dabei wurde die Oper "Aida" ausgeführt – mit dem Orchester, Sängern und Künstlern aus dem Belgrader Nationaltheater, mit vielen VIPs als Gästen.

Im Juni 2013. ein Konzert von Maja Le Ru mit dem Kammerorchester "Simfonijeta" wurde im Atrium des Domus ausgeführt.

Im Juli 2013. wurde Viminacium in Washington vorgestellt.

Im Juli 2013 wurde die mobile Ausstellung des T-PAS Projektes – Aquileia, Emona, Viminacium eröffnet.

Im Juli und August. 2013 wurde die "Forschungsschule für Kinder in Viminacium" für Kinder zwischen 8 und14 Jahren eröffnet.

Im September 2013. wurde Viminacium in New York vorgestellt.

Im Oktober 2013. wurde Viminacium in Chicago vorgestellt.

Im Oktober 2013. wurde Viminacium in Boston vorgestellt.

Im Oktober 2013, fand die zweite Konferenz des internationalen Projektes "Danube Limes Brand" statt, mit vielen Teilnehmern aus dem In- und Ausland.

Im November 2013. wurde die jährliche Konferenz der Mitarbeiter des Archäologischen Instituts organisiert.

Im Februar 2014. wurde Viminacium in London vorgestellt.

Im Mai 2014. wurde Viminacium in San Francisco vorgestellt.

Im Mai 2014. wurde Viminacium in Los Angeles vorgestellt.

Im Juni 2014. ofizielle Eröffnung des Mammut Parks innerhalb des Archäologischen Parks Viminacium.

Im Juli 2014, Danube Limes Day wurde präsentiert, mit einem Konzert der Gebrüder Teofilović.

**Fig. 635**

Im September 2014. wurde Viminacium in der serbischen Botschaft bei der UN in New York vorgestellt.

Im September 2014. wurde Viminacium in Budapest vorgestellt.

Im September/Oktober 2014, innerhalb des internationalen Projektes OpenArch, dessen Teilnehmer auch Viminacium ist, wurde das internationale Symposium "The Impact of Dialogue with Visitors on AOAM Management" organisiert.

Im December 2014. wurde Viminacium in Rom vorgestellt.

Im Juli 2015. wurde Viminacium in Valeta vorgestellt.

Im September 2015. wurde Viminacium in Mailand vorgestellt.

September – October 2015. wurde Viminacium in Montevideo vorgestellt.

October – December 2015. wurde Viminacium in Buenos Aires vorgestellt.

Im December 2015 - Januar 2016. wurde Viminacium in Asuncion vorgestellt.

Februar – März 2016. wurde Viminacium in Brasilia vorgestellt.

April – Mai 2016. wurde Viminacium in Santiago de Chile vorgestellt.

Juli – September 2016. wurde Viminacium in Lima vorgestellt.

Im October 2016 – Februar 2017. wurde Viminacium in La Paz vorgestellt.

Im Februar-März 2017. wurdeViminacium in Santa Cruz vorgestellt.

Im Juli - August 2017. wurde Viminacium in Prag vorgestellt.

Im September 2017. wurde das Symposium „Circulation of the Antique Coins in South-eastern Europe" organisiert.

Im August 2018. wurde auf Viminacium und in Belgrad, als eine Zusammenarbeit Serbiens und der National Science Foundation USA, unterdem Ehrenschutz des Ausbildungs - Wissenschfts und Entwicklungs ministeriums die internationale Werkstatt organisiert, um Zusammenarbeit und Datawissenschften (US-Serbia & West Balkan Data Science Workshop).

September 2018. wurde in Prag die Živa Award 2018 gewonnen, für Special recognition for leadership.

September 2018. wurde Limeskongress organisiert, mit hunderten von Wissenschaftlern aus der ganzen Welt.

Im Juni 2019. fand das Filmfestival „Viminacium fest – mitovi stari i novi" (Viminacium fest – Mythen alt und neu) statt.

Im September 2019. fand ein Zusammentreffen der Verträter aller Donauländer statt, um die Grenze des Römischen Reiches (den Donaulimes) in Serbien für die UNESCO Liste der Kulturerbe zu setzen.

**Pläne und Projekte:**

Viminacium ist die führende Fundstelle innerhalb des Projektes „Itinerarium Romanum Serbiae", das vom Archäologischen Institut Belgrads, dem Wissenschaftsministerium und dem Kulturministerium geleitet wird.

Seit 2015. Befindet sich Viminacium auf einer preliminären UNESCO Liste für Weltkulturerbe. Die Fundstelle sollte sich mit etwa dreißeg weiteren Fundstellen Serbiens auf der Liste der „Grenze des Römerreiches" finden, mit mehreren hunderten weiterer Fundstellen vom Hadrians- und Antoniner Wall, vom Rhein bis zur Donau und zum Schwarzen Meer. Zur Zeit werden Nominierungsdateien gesammelt und Bedingungen für Schutz und Presentation auf höchsten Weltstandarden erstellt.



## VIMINACIUM – VILLE ET CAMP MILITAIRE ROMAINS DE LA PROVINCE HAUTE-MÉSIE

L'ancienne gloire puis la destruction de la cité romaine et du camp militaire de Viminacium ont attiré l'attention d'un public national et international. Viminacium est en train de prendre sur la scène culturelle et historique du monde une place que justifie son antique notoriété. L'aire de l'ancienne cité et camp militaire romains de Viminacium (plus de 450 ha pour l'ensemble du territoire de la ville et 220 ha quant au centre-ville) se trouve aujourd'hui sous des champs cultivés; les objets et fragments de la période romaine sont parsemés dans des sillons environnants. Durant les trois dernières décennies du 20ème siècle, des explorations ont eu lieu de la „cité des morts" et des nécropoles, donnant à ce jour lieu à la découverte de plus de 14.000 tombes. Une équipe multidisciplinaire composée d'experts renommés travaille sur le site. Ainsi le projet Viminacium rassemble-t-il, hormis les archéologues, des mathématiciens, électro-ingénieurs, géophysiciens, géologues, pétrologues, des experts en détection à distance, en représentation tridimensionnelle, reconnaissance des formes et en intelligence artificielle. Leur souhait est de faire sortir les places, les temples, théâtres et hippodrome, les thermes, les rues et les quartiers de la ville des champs qui les couvraient pendant des siècles, afin de les incorporer au patrimoine culturel local et mondial, et afin qu'ils deviennent un symbole de notoriété du bassin danubien.

Les localités de Stari Kostolac et Drmno, situées à 13 km de la ville de Požarevac se trouvent sur les restes de la cité antique de Viminacium, capitale de la province romaine de Mésie Supérieure, dénommée encore sous le Bas-Empire Moesia Prima. Les sources historiques nous renseignent Viminacium comme étant un camp militaire important, siège d'une légion romaine (*Legio* VII *Claudia Pia Fidelis*). Grâce aux fouilles archéologiques durant le dernier quart du 20ème siècle, Viminacium émerge progressivement d'arides témoignages historiques et se présente comme une ville qui, au cours de ses six siècles d'histoire, a connu un développement dynamique, servant non seulement de lieu de rencontre des cultures de l'Orient et de l'Occident. Il apparaît que le tissu économique de cette ville, dont les marchandises se vendaient

**Fig. 636**

également en dehors des frontières de la province, a fait que divers ateliers d'artisans ont vu le jour dans la région. Ces ateliers nous ont laissé durant le 4ème siècle après J.C. des fresques tombales parmi les plus marquantes du Bas-Empire.

Viminacium est un siège militaire important et une capitale de province érigée sur le territoire de la tribu celtique Scordisci. Plusieurs facteurs contribuent à sa taille et son importance, dont les terres fertiles de la vallée de la Mlava et une excellente situation géostratégique, tant dans le système de défense des frontières septentrionales de l'Empire que dans les réseaux de communication et commerciaux.

Vers la fin du 19ème et au début du 20ème siècle M. Valtrović et M. Vasić ont conduit sur la rive droite de la Mlava (localité Chair) des fouilles archéologiques qui ont montré que le camp militaire avait des fondations sous forme d'un carré long, dimensions 442 x 385 mètres, et que non loin de la ligne de fortification occidentale. Les contours de la cité antique (larges rues se croisant à l'angle droit, places, théâtres, thermes, réseau des canalisations, fortifications et tours) étaient encore visibles au 19ème siècle.

Viminacium a reçu le statut de ville au cours de la première moitié du 2ème siècle après J.C., sous le règne d'Hadrien, le plus probablement en l'an 117, sous le nom de *Viminacium Aelium Hadrianum*. La croissance de la ville a été temporairement interrompue par l'épidémie de la peste sous Marc-Aurèle, mais pas pour longtemps. Les fouilles archéologiques démontrent que la peste n'a pas eu une incidence néfaste sur le développement économique de Viminacium puisqu'il apparaît que la ville était en pleine croissance dès le début du 3ème siècle après J.C.

Presque tous les Empereurs romains ont visité Viminacium, voire y ont séjourné. Il convient de souligner les séjours d'Hadrien qui organise deux chasses à Viminacium, deux visites de Septime Sévère, puis les séjours de Gordien III, Philippe l'Arabe,Trébonien Galle, Hostilien, Dioclétien, Constantin le Grand, Constance Ier et Julien. Il semble que le dernier Empereur à avoir visité la ville était Gratien.

Sous Gordien III au 3ème siècle Viminacium devient colonie et se voit décerner le droit de battre monnaie. Les sources historiques nous renseignent que la bataille décisive pour le pouvoir entre les Empereurs Dioclétien et Carinus en 284 après J.C. a eu lieu près de Viminacium. Le portrait en marbre de Carus, père de Carin, conservé aux dépôts du musée de Požarevac, en est le témoignage. Au 4ème siècle, Viminacium est un siège épiscopal important. La ville a été détruite vers le milieu du 5ème siècle dans l'invasion des Hunes. La ville n'a plus jamais été reconstruite, mais la fortification militaire réapparaît sous Justinien au 6ème siècle après J.C.

## DOMVS SCIENTIARVM VIMINACIVM

**Qu'est-ce que le Domvs Scientiarvm Viminacivm ?**

Le centre de recherche scientifique *Domvs Scientiarum* à Viminacium a été conçu comme un lieu ayant une affectation multiple (colloques, conférences, ateliers et congrès internationaux). Les scientifiques venant de Serbie et d'autres pays pourront y utiliser les bureaux, les bibliothèques et les atriums pour leurs recherches, travail avec les étudiants, écoles d'été, et y organiser des congrès et des réunions thématiques, mais en même temps il sera utilisé pour l'hébergement des touristes qui montrent un intérêt croissant pour le séjour à Viminacium. *Domvs Scientiarvm* a été conçu sous la forme d'une *villa rustica* romaine. Il consiste en deux niveaux : le niveau supérieur – l'espace destiné au travail et au logement; et le niveau sous-terrain – le musée, les dépôts et les salles. Le niveau supérieur consiste en plusieurs atriums autour desquels se trouvent les ateliers, les laboratoires, et les locaux destinés au logement et au travail individuel de l'équipe des experts, ainsi qu'à l'hébergement des visiteurs. Il y a aussi une bibliothèque avec une salle de lecture, un centre de documentation, une cuisine-cantine, et une réplique des thermes romains pouvant servir d'un petit centre spa.

Le niveau sous-terrain est une zone partiellement isolée avec des mesures de sécurité renforcées et un contrôle strict de la climatisation à cause de la collection du musée et des dépôts. La salle souterraine décorée de mosaïques et locaux du futur musée sont complètement terminées, de même que les fresques antiques tardives trouvées aux nécropoles de Viminacium lors de fouilles archéologiques.

**Rentabilité économique du Parc archéologique et du Domvs:**

Le Parc archéologique a été conçu comme un projet autosuffisant, appuyé par les ministères compétents à l'occasion de l'organisation des événements importants. La base des revenus provient des visites individuelles et de la vente des souvenirs, ainsi que des services hôteliers dans le cadre du parc. D'autre part, on met l'accent sur l'organisation des congrès et des réunions thématiques, ensuite sur les week-ends spa et les séjours de courte durée dont l'attraction consiste en l'expérience singulière du style de vie romain. Cette approche spécifique de l'offre touristique apporte des revenus qui aideront à financer de nouvelles recherches et le développement du Parc archéologique.

Le *Domvs Scientiarvm* représente le plus haut degré de l'offre dans le tourisme archéologique, avec son ambiance unique de Rome antique, où le visiteur peut devenir quoi qu'il souhaite être: archéologue, légionnaire ou empereur. Cela inclut la possibilité de s'habiller en costumes romains, la dégustation de la nourriture préparée d'après les recettes antiques, et le séjour dans un bâtiment construit sur le modèle caractéristique romain.

Depuis 2006, Viminacium possède un ponton d'accostage permettant l'accès aux grands bateaux touristiques (navires de croisière). En 2018 Viminacium a été visité par 90.000 touristes, dont 15.000 sont arrivés par le Danube. Le long de la partie serbe du Danube, en 2019 on prévoit une affluence encore plus élevée de touristes arrivant par voie fluviale (plus de 200.000), et le nombre de visiteurs du site par voie continentale monterait à 300.000

## LES MAMMOUTHS À VIMINACIUM

**Parc des mammouths**

Pendant le mois de juinen 2014, tous les mammouths découverts jusqu'à présent ont «emménagé» dans leur nouveau logis, sous le toit du Parc archéologique de Viminacium. L'événement a été accompagné d'une grande fête à l'occasion du millionième anniversaire de Vika, la femelle mammouth, à laquelle ont assisté de nombreux invités, dont le président de Serbie, l'ambassadeur des États-Unis et d'autres officiels de renommée. Le squelette de Vika et les squelettes partiellement conservés d'autres cinq mammouths sont exposés dans un entourage naturel qui devrait évoquer le climat, la flore et la faune de leur époque. Ils appartiennent tous à l'espèce *Mammuthus trogontherii* (mammouth des steppes).

Depuis sa découverte en 2009, la femelle mammouth Vika représente une attraction spéciale dans le cadre du Parc archéologique de Viminacium. Elle a été trouvée à 350 m à l'est du Mausolée impérial, et elle date de l'époque géologique du pléistocène inférieur – un million d'années avant le présent. L'endroit de l'excavation se trouve dans le bassin de l'ancien delta de la rivière Morava qui s'était formée lors de l'assèchement de la mer de Pannonie. Au cours de l'excavation on a estimé que le mammouth était une femelle âgée d'environ 60 ans, mesurant environ 4,5 mètres de haut et plus de 5 mètres de long, et pesant (pendant son vivant) presque 10 tonnes. Elle appartenait à une espèce exceptionnellement rare. Jusqu'à présent, dans le monde entier, on a trouvé une vingtaine de squelettes de mammouth conservés (la plupart de ces trouvailles a eu lieu au 19$^{e}$ siècle), mais aucun sauf celui-ci n'a été conservé à l'endroit même où il a été découvert dans une position complètement anatomique. Étant donné que le squelette du mammouth se trouvait sur le bord même de la mine, que l'accès était difficile et que son intégrité était en danger, les chercheurs se sont trouvés devant un défi singulier, et ils ont décidé de le transporter à un endroit sûr : dans le Parc des mam-

Fig. 637

mouths. Viminacium a encore une fois été le lieu d'une « mission impossible ». Le transport de Vika a attiré beaucoup d'attention ; cette entreprise singulière a été suivie par de nombreuses équipes de télévision du monde entier. À la joie des visiteurs, le mammouth est aujourd'hui accessible dans un entourage nouveau et extraordinaire, pareil à celui de l'époque du pléistocène inférieur, ce qui permet à chacun la possibilité de vivre le passé éloigné d'un million d'années – juste à côté du site antique Viminacium.

En 2012, pendant l'observation des travaux à la mine à ciel ouvert Drmno sur les bords de l'est du site Viminacium, on a remarqué la coupe des os massifs de mammouth dans les profils de lœss. Les os ont été découverts à la profondeur d'environ vingt mètres. Suite à d'amples travaux, on a écarté presque 100.000 $m^3$ de terre afin de former un plateau pour des recherches systématiques. Les excavations effectuées sur cette surface ont révélé un écosystème complexe du pléistocène, focalisé sur la rivière voisine. On y a trouvé au moins trois, peut-être même cinq spécimens de mammouth, et un grand nombre d'os de cerfs, chevaux, bisons et autres mammifères du pléistocène. Contrairement au squelette exceptionnellement conservé du mammouth Vika, découvert dans la vase de l'ancien delta de la Morava en 2009, les mammouths de Nosko étaient restés dans la steppe après leur mort, et les parties de leurs corps avaient ensuite été dépecés par des animaux nécrophages, si bien que leurs os avaient été dispersés sur un vaste territoire et avaient subi les effets des phénomènes atmosphériques avant d'êtres recouverts par le lœss. Tous les os trouvés ont été déplacés par les chercheurs avec un grand effort ; les os les plus grands et les plus fragiles (crânes et défenses) ont été découpés avec des blocs de terre et ensuite transférés, dans de grandes caisses en acier, dans la zone du Parc archéologique de Viminacium, où ils sont maintenant exposés dans le nouveau parc paléontologique.

## TRAVAUX ACCOMPLIS PENDANT LA PÉRIODE OCTOBRE 2003 – DECEMBRE 2019

**Sur le site même**

Couverture de neuf bâtiments et ouverture aux visiteurs : 1) mémoire paléochrétienne, 2) porte nord du camp militaire, 3) thermes romaines, 4) mausolée où, selon toute probabilité, serait inhumé l'empereur Hostilien, 5) squelette de mammouth, déterré en 2009. 6) Domvs Scientiarvm 7) Centre d'artisanat 8) Parc Limes et 9) Parc d'aventure.

Acquisition du service de surveillance 24 heures sur 24 (12 gardiens).

Organisation de la vidéosurveillance sur le site.

Embauchage de 20 jeunes gens de la région.

**Activités concernant la promotion touristique de Viminacium**

Réalisation du Projet de signalisation touristique depuis toutes les directions routières vers Viminacium.

La visite à Viminacium a été incluse dans l'itinéraire cycliste Atlantique – Mer Noire comme point D210.

Fabrication de plusieurs copies de bijoux romains en or et en argent.

Fabrication de copies d'ustensiles romains.

Fabrication de copies de lampes romaines.

Fabrication de copies de fibules romaines.

Fabrication du jeu pour enfants „Mystère de la mort de l'empereur“ (en allemand, en anglais et en serbe). La deuxième édition est déjà en vente.

Réalisation du DVD avec le film télévisé „Viminacium lumen meum“ (en anglais et en serbe).
Réalisation du CD-ROM „Viminacium“ (en allemand, en anglais et en serbe).

**Recherches archéologiques**

Exploration, et partiellement reconstruction de l'amphithéâtre romain ayant 7.500 places pour les spectateurs.
Exploration, et déplacement à un autre endroit au sein du parc archéologique, de l'aqueduc romain d'une longueur de 1700 m.
Exploration, et déplacement à un autre endroit au sein du parc archéologique, du Castellum Aquae, une construction servant à la distribution d'eau.
Exploration d'une rue romaine avec le dallage du IV siècle.
Exploration la zone autour des remparts du camp militaire, du nord (*Porta Praetoria*) à la porte ouest (*Porta Principalis Sinistra*).

**Spectacles, concerts, laboratoires à Viminacium**

En 2007, dans le cadre de la manifestation internationale „Save the Earth“, le concert du groupe „Van Gogh“ suivi du concert „Revised EKV“ ont eu lieu. Ils ont été précédés par un festival romain au cours duquel les visiteurs, ainsi que l'équipe archéologique, étaient vêtus d'habits romains.

En août 2008 on a organisé le concert de la cantatrice de renommée internationale Emma Shapplin.

En décembre 2008, pour la première fois, on a organisé dans le Domvs Scientiarvm „La science pour tous“ („Scienza per tutti“) en collaboration avec les universités d'Ancône et de Bologne.

En septembre 2009 a eu lieu le festival du vin, du poisson et des mandolines dénommé „Étincelles dans le verre“.

En octobre 2009 dans le Domvs a eu lieu le concert du Studio Alektik, transmis en direct par internet pour la première fois.

En mars 2013, dans le cadre du projet international OpenArch, dont un des participants est le projet Viminacium, on a effectué une expérience, en plantant la vigne de la manière utilisée à l'époque romaine.

En mars 2013, dans le cadre du projet international OpenArch, dont un des participants est le projet Viminacium, on a effectué une expérience avec l'objectif de découvrir la méthode d'incinération des défunts dans les tombes du type „Mala Kopašnica – Sase“. Dans cette expérience on a utilisé un cochon.

En mars 2013, dans le cadre du projet international T-PAS, dont un des participants est le projet Viminacium, on a organisé une conférence internationale.

En avril 2013 a été organisé une réunion au sujet du projet international Danube Limes Brand (dont un des participants est aussi le projet Viminacium), qui a rassemblé une vingtaine d'experts les plus éminents du domaine de l'archéologie du limes romain.

En mai 2013, à l'occasion de la célébration du 1700ème anniversaire de l'Édit de Milan, le président de la République de Serbie, Tomislav Nikolić, a inauguré l'exposition organisée dans le Domus.

En mai 2013, à l'occasion de la célébration du 1700ème anniversaire de l'Édit de Milan, le président de la République de Serbie, Tomislav Nikolić, a solennellement inauguré l'amphithéâtre reconstruit, dans lequel a ensuite eu lieu l'opéra „Aïda“ interprétée par l'orchestre, les chanteurs et les artistes du Théâtre National de Belgrade, avec des invités éminents.

En juin 2013 a eu lieu le concert de Maya Le Roux-Obradović avec l'orchestre de musique de chambre „Sinfonijetta“ dans l'atrium du Domus.

Juillet 2013: présentation de Viminacium à Washington.

Juillet 2013: inauguration de l'exposition itinérante de photos au sein du projet T-PAS: Aquilée, Emona, Viminacium.

Fig. 638

Juillet et août 2013: organisation du „Camping scientifique pour enfants“ à Viminacium pour les enfants de 8 à 14 ans.

Septembre 2013: présentation de Viminacium à New York.

Octobre 2013: présentation de Viminacium à Chicago.

Octobre 2013: présentation de Viminacium à Boston.

En octobre 2013 a été organisée la deuxième réunion au sujet du projet international Danube Limes Brand, avec de nombreux participants de Serbie et de l'étranger.

Novembre 2013: réunion annuelle des chercheurs de l'Institut archéologique de Belgrade.

Février 2014: présentation de Viminacium à Londres.

Mai 2014: présentation de Viminacium à San Francisco.

Mai 2014: présentation de Viminacium à Los Angeles.

Juin 2014: cérémonie d'ouverture du Parc des mammouths dans le cadre du Parc archéologique de Viminacium.

Juillet 2014: fête de „Danube Limes Day“ et le concert des frères Teofilović à cette occasion.

Septembre 2014: présentation de Viminacium à l'ambassade de Serbie auprès des Nations unies à New York.

Septembre 2014: présentation de Viminacium à Budapest.

Septembre/Octobre 2014: symposium international „The Impact of Dialogue with Visitors on – AOAM Management“ dans le cadre du projet internationalOpen Arch, dont un des participants est le projet Viminacium.

Décembre 2014: présentation de Viminacium à Rome.

Juillet 2015 – Présentation de Viminacium à La Valette.

Septembre 2015 – présentation de Viminacium à Milan.

Septembre-Octobre 2015 – présentation de Viminacium à Montevideo.

Octobre-Décembre 2015 – présentation de Viminacium à Buenos Aires.

Décembre 2015 – Janvier 2016 – présentation de Viminacium à Asuncion.

Février-Mars 2016 – présentation de Viminacium à Brasilia.

Avril-Mai 2016 – présentation de Viminacium à Santiago de Chile.

Juillet- Septembre 2016 – présentation de Viminacium à Lima.

Octobre 2016 - Février 2017 – présentation de Viminacium à La Paz.

Février-Mars 2017 – présentation de Viminacium à Santa Cruz.

Juillet- Août 2017 – présentation de Viminacium à Prague.

Septembre 2017 – symposium international „La circulation des pièces de monnaie antiques dans le sud-est de l'Europe“.

Août 2018 – Un atelier international sur la coopération dans le domaine de la science des données États-Unis-Serbie et Balkans occidentaux (US-Serbia&West Balkan Data Science Workshop) s'est tenu à Viminacium et à Belgrade, organisé par la Serbie et la NSF (National Science Foundation USA) et parrainé par le ministère de l'Éducation, des Sciences et du Développement technologique.

Septembre 2018 – Prix Živa pour la gestion des lieux culturelles et historiques (Živa Award 2018 special recognition for leadership) à Prague.

Septembre 2018 – Le 24ème congrès du Limes s'est tenu avec plusieurs centaines de participants du monde entier.



Juin 2019: Le Festival de théâtre “Viminacium fest – mythes anciens et modernes”.

Septembre 2019 – Réunion des pays danubiens à l’occasion de la proposition d’inscription des frontières de l’Empire romain – Limes Danubien en Serbie sur à la Liste du patrimoine mondial de l’UNESCO.

**Projets à venir :**

Viminacium est le site le plus important dans le projet *„Itinerarium Romanum Serbiae“* dirigé par l’Institut archéologique de Belgrade, Ministère de l’éducation, de la science et du développement technologique et Ministère de la culture et de l’information.

Depuis 2015, Viminacium figure sur la liste préliminaire du patrimoine mondial de l’UNESCO. Le site devrait figurer sur la liste avec une trentaine d’autres sites de Serbie faisant partie du feuilleton international “Les frontières de l’Empire romain” avec des centaines de sites dans la région, du mur d’Hadrien et d’Antonin, en passant par le Rhin et le Danube, jusqu’à la mer Noire. Le dossier de candidature est en cours de rédaction et la création des conditions pour la protection et la présentation aux normes mondiales les plus strictes.

**Fig. 639**

Fig. 640



## VIMINACIUM – LA CAPITALE DELLA PROVINCIA ROMANA MESIA SUPERIORE

La storia dell'antico splendore e il crollo della città romana e dell'accampamento militare di Viminacium ha attirato l'attenzione non solo del pubblico nazionale ma anche di quello internazionale, che si augurano con impazienza che Viminacium assuma nel quadro culturale e storico internazionale l'importanza che giustamente gli appartiene. La località della città romana dell'epoca e dell'accampamento militare di Viminacium (più di 450 ettari del territorio urbano più vasto e 220 ettari di quello più ristretto) è situata oggigiorno al di sotto della terra coltivata, mentre reperti e frammenti delle testimonianze del periodo romano sono dispersi nei solchi del terreno arabile.

Nell'ultimo trentennio del XX secolo in questa località erano stati eseguiti gli scavi della Città dei Morti, ovvero della necropoli. A tutt'oggi questi lavori hanno portato alla luce più di 14.000 tombe. Le ricerche della città romana e dell'accampamento militare sono state condotte da una equipe interdisciplinare composta da esperti qualificati in aree le più svariate. Infatti il Progetto Viminacium, oltre agli archeologi, vede impegnati anche matematici, ingegneri elettrotecnici, geofisici, geologi, petrologi, ricercatori nel campo della detenzione a distanza, della modellatura 3D e dell'identificazione delle forme, esperti nel campo dell'intelligenza artificiale. II loro desiderio è quello di far emergere di nuovo dai solchi del terreno, in cui hanno riposato per secoli piazze e templi, l'ippodromo, i bagni, le vie e i quartieri dell'antica città e farli diventare non solo parte del patrimonio culturale nazionale e internazionale, ma anche un segno distintivo dell'area danubiana.

I paesini di Stari Kostolac e Drmno, situati a 13 km di distanza da Požarevac, giacciono sui resti della antica città di Viminacium, la capitale della provincia romana *Moesia Superior*, cioè della provincia di *Moesia Prima* come fu chiamata nella tarda antichità. E ben noto dalle fonti storiche che Viminacium era sede militare di particolare rilievo in cui era situato l'accampamento di una legione romana (*Legio* VII *Claudia Pia Fidelis*). In seguito agli scavi archeologici degli ultimi 25 anni del XX secolo, Viminacium era emerso pian piano dalle sue rare testimonianze storiche, delineandosi come

**Fig. 641**

una città che, nel corso della propria storia lunga sei secoli, aveva avuto uno sviluppo dinamico, costituendo non soltanto il punto di incontro delle culture dell'Est e dell'Ovest, ma anche il luogo di soggiorno preferito dai mercanti dell'Impero Romano. Sembra che il benessere di questa città, la cui merce trovava acquirenti anche fuori dai confini della sua provincia, fungesse da base anche per una moltitudine di officine artistiche presenti nel territorio. Proprio quelle officine cresciute nel IV secolo ci hanno lasciato in eredità alcune delle opere più importanti, come le tombe dipinte con affreschi del periodo tardo antico.

Viminacium, come sede militare di rilievo e capitale di una provincia romana, sorse sul territorio della tribù celtica degli Scordisci. La sua grandezza e importanza furono la conseguenza di diverse circostanze, tra le quali va certamente sottolineato il ricco retroterra della valle del fiume Mlava, ma anche un posizionamento geografico estremamente vantaggioso, sia per il sistema di difesa dei confini settentrionali dell'impero, sia per lo sviluppo della reteviaria e di quella commerciVerso la fine del XIX e l'inizio del XX secolo, sulla sponda destra della Mlava (località Chair), M. Valtrović e M. Vasić avevano iniziato gli scavi archeologici dai quali si era potuto dimostrare che l'accampamento aveva le fondamenta a pianta rettangolari con dimensioni 442 x 385 metri e che era in vicinanza delle sue mura occidentali. In effetti, ancora nel secolo XIX si intravedevano i tratti della città antica di Viminacium e dell'accampamento militare: larghe vie che si intersecano ad angolo retto, piazze, teatri, bagni, acquedotto, mura e torri della città.

Questo insediamento ottenne lo status di città nella prima metà del II secolo, nell'epoca del governo di Adriano, probabilmente nell'anno 117 quando ottenne lo status di Municipio ed il nome di *Viminacium Aelium Hadrianum*. Lo sviluppo ulteriore di Viminacium fu interrotto parzialmente nell'epoca di Marco Aurelio da una epidemia di peste, ma solo per un breve periodo. Gli scavi archeologici dimostrarono che la suddetta epidemia non influì sulla prosperità economica di Viminacium, risultando evidente che già nei primi anni del III secolo la città era al culmine del proprio sviluppo.

Praticamente non vi fu alcun Imperatore romano che non passasse per Viminacium o che non vi soggiornasse per un periodo più o meno lungo. Con riferimento alle visite degli Imperatori romani vanno menzionati: il soggiorno di Adriano che in questa località organizzò per due volte le battute di caccia; quello dell'imperatore romano Settimio Severo che venne due volte in visita; i diversi soggiorni di Imperatori tra i quali: GordianoIII, Filippo l'Arabo, Treboniano Gallo, Ostiliano, Diocleziano, Costantino il Grande, CostanzoI e Giuliano. Per quello che si conosce, Graziano fu l'ultimo imperatore a visitare Viminacium.

Nel III secolo, nell'epoca di Gordiano III, Viminacium diventò una colonia e ottenne il diritto di battere moneta. Le fonti storiche ci dicono che nei dintorni di Viminacium si svolse la battaglia decisiva per il dominio su quei territori tra i due Imperatori romani, Diocleziano e Carino. Ètestimonianza di quegli eventi anche il ritratto in marmo del padre di Carino, Caro, custodito oggi presso il Museo di Požarevac.

Nel IV secolo Viminacium fu una importante sede vescovile. La città fu definitivamente distrutta a metàdel V secolo, a seguito della invasione degli Unni. La città non venne mai più ricostruita, mentre la sede militare fu rinnovata nel VI secolo nell'epoca dell'Imperatore Giustiniano.

## DOMVS SCIENTIARVM VIMINACIVM

**Che cosa è Domvs Scientiarvm Viminacivm?**

Il centro di ricerca scientifica (*Domvs Scientiarvm*) a Viminaciumè proiettato come un'oggetto con il scopo multiplo (simposi, conferenze, workshop e congressi internazionali) che quest' anno ha ospitato l'élite scientifica, l'anno scorso era l'ospite del XI UNESCO summit regionale nominato "L'arte contemporanea e la conciliazione" in cui erano presenti i numerosi presidenti e i ministri dei paesi dell' Europa sudorientale.

Quest' oggetto unico è concepito in modo che gli scienziati della Serbia e del mondo usufruiscano dei suoi studi, le biblioteche e gli atri spazi per la ricerca, il lavoro con gli studenti, le scuole estive, la organizzazione dei congressi e dei raduni tematici, e nello stesso tempo anche come l'alloggio per i turisti che in un numero sempre maggiore mostrano interesse per il soggiorno a Viminacium.

Fig. 642

Il Centro è costruito in forma della villa romana rustica. Ha due livelli: alto, in cui si trova lo spazio per il lavoro e la sistemazione, e il livello sotterraneo in cui si trovano il museo, i magazzini e le sale.

Il livello superiore comprende la fila degli atri attorno cui si trovano le officine, i laboratori, e anche le stanze per l'alloggio e lavoro individuale di team degli esperti e l'alloggio per i visitatori. L'oggetto comprende: un'ala per l'alloggio di team archeologico, due per l'alloggio di ospiti e una in cui si trova il centro di documentazione, cioè la parte con le officine e i laboratori per il lavoro di team esperto. Inclusa e completata è la biblioteca con la sala di lettura, la sala per le presentazioni, la cucina con la sala pranzo, mentre la costruzione della replica delle terme romane con la possibilità' di una spa piccolo è ancora in corso.

Il livello basso è parzialmente una zona isolata con la sicurezza aumentata, con il controllo di clima rigoroso a causa della collezione del museo e il magazzino. La sala sotterranea decorata con il mosaico e le camere del museo futuro sono state finite completamente, e sono esposti gli affreschi della tarda antichità trovati nelle necropoli di Viminacium durante gli scavi archeologici.

**La redditività economica del parco archeologico e del Domus**

Il parco archeologico è concepito come un progetto sostenibile, supportato dai ministeri dipartimentali durante l'organizzazione di eventi significativi. Il reddito sostanzialmente viene dai visitatori individuali e le vendite dei souvenir, anche dai servizi di ristorazione entro il parco. D'altra parte, l'accento è posto sulla organizzazione dei congressi e i raduni tematici, i weekend spa e le pause brevi piacevoli che offrono come un'esperienza straordinaria il modo della vita romana durante i soggiorni organizzati e tematici di breve durata. Questo tipo di accesso specifico all'offerta turistica porta il reddito da cui le ricerche ulteriori e lo sviluppo del parco archeologico saranno finanziati.

Domvs Scientiarvm rappresenta il picco dell'offerta del turismo archeologico, con l'atmosfera unica di Roma antica, in cui un visitatore può essere qualunque cosa vuole - l'archeologo, il legionario o l'imperatore. L'offerta comprende il soggiorno secondo ai costumi romani, la degustazione del cibo preparato secondo le ricette antiche e il soggiorno nell'oggetto costruito sul modello tipicamente romano.

Dall'anno 2006 Viminacium possiede l'accesso pontone sul Danubio che permette l'accesso alle grandi navi turistiche – crociere. Nell'anno 2018 i 90.000 turisti hanno visitato Viminacium da cui 15.000 siano arrivati sul Danubio. Tra parte serba del Danubio nell'anno 2019 si prevede anche afflusso dei turisti più grande sull'fiume, (più di 200.000), e dalla terra la località sarebbe visitata da 300.000 persone.

## I MAMMUT A VIMINACIUM

**Il parco di mammut**

Nell' giugno del 2014 tutti i mammut scoperti finora si sono stati trasportati nella loro casa nuova, sotto il tetto del parco archeologico di Viminacium e con una celebrazione grande, il milionesimo compleanno del mammut Vika, a cui erano presenti gli ospiti numerosi tra cui anche il presidente della Serbia, l'ambasciatore degli Stati Uniti e gli altri funzionari prominenti. Lo scheletro di Vika e ancora 5 mammut parzialmente conservati sono mostrati in un ambiente naturale che dovrebbe ricostruire il clima, la flora e fauna, l'era in cui vivevano. Tutti appartengono a genere di mammut di steppa (*Mammuthus trogontherii*).

Da quando è scoperta nel 2009 il mammut Vika rappresentava l'attrazione special entro il parco archeologico Viminacium. È scoperta 350 m ad est del Mausoleo imperiale, e era del basso Pleistocene – l'era geologica (un di milione di anni fa). Lo spazio dove è stata scavata era nel bacino della (ante?) delta del fiume Morava che si formava quando Il Mar Pannonico si restringeva. A quel momento è stato stimato che il mammut femmina era circa 60 anni vecchia, alta circa 4.5

metri, lunga più di 5 metri, e nella vita pesava circa 10 tonnellate. Apparteneva ad un genere particolarmente raro. Finora nel mondo i venti scheletri conservati di mammut sono stati scoperti e principalmente durante il XIX secolo, ma nessun di quelli non è conservato sul posto dove è stato trovato ed in una posizione completamente anatomica. Considerando che lo scheletro del mammut era sul proprio bordo dello scavo, che l'accesso era molto difficile, e la sicurezza a rischio, i suoi ricercatori hanno affrontato la sfida unica: l'hanno spostata in un posto sicuro nel Parco di mammut. Ancora un'altra sfida impossibile è successa a Viminacium. Cioè, lo spostamento di Vika ha attirato la grande attenzione e quest' unica impresa - la seguivano le stazioni televisivi diversi di tutto il mondo. Per la gioia dei visitatori, il mammut è disponibile in un'ambiente nuovo ed insolito proprio come nell'era del basso Pleistocene che li offre una possibilità di sentire il tempo di un milione anni fa e accanto proprio alla località antica di Viminacium.

Nell'anno 2012 durante il controllo dei lavori dello scavo superficiale „Drmno "lungo i bordi orientali di Viminacium, ai profili di legno sono individuati gli ossi enormi di mammut. Sono scoperti a profondità di venti metri e con i lavori estesi di terra, quasi 100.000 m3 della terra sono stati rimossi per formare l'altopiano per le ricerche sistematiche. Gli scavi fatti in questa località hanno scoperto un ecosistema complessa del Pleistocene concentrata sul fiume vicino, con almeno al tre dal cinque mammut indipendenti e il numero grande degli ossi di cervi, cavalli, bisonti ed altri mammiferi del Pleistocene. A differenza del mammut perfettamente conservato (Vika), scoperto nel fango di (ante?) delta della Morava nell'anno 2009 i mammut di Nosko erano rimasti nella steppa, dopo la sua morte, per cui gli avvoltoi dispargevano le membra del suo corpo e così le ossa erano disparsi e esposti alle condizioni atmosferiche prima che l'erba li ha coperti. Con enorme sforzo tutti le ossa sono state trasferite, e le più grande e delicate (il teschio e la zanna) sono stati tagliati con i blocchi della terra e nelle casse grande d'acciaio trasferiti in zona del parco archeologico di Viminacium dove poi sono esposti al parco paleontologico nuovo.

## COMPLETATO NEL PERIODO L'OTTOBRE 2003 - DICEMBRE 2019

**Nella propria località:**

Nove località sono state coperte dalle strutture e aperti per i visitatori: 1) la memoria paleocristiana, 2) il cancello settentrionale del campo militare, 3) i bagni romani, 4) il mausoleo in cui l'imperatore romano Ostiliano è stato estremamente probabile sepolto, 5) il Parco di mammut, 6) *Domvs Scientiarvm, 7)* il centro di mestieri.7) Centro artigianale 8) Parco Limes 9) Parco avventura.

*Domvs Scientiarvm-* la parte più grande dello Centro è completamente finita, presentata al pubblico e inclusa in uno dei Centri che la gente visita durante la visita al parco archeologico di Viminacium.

Il servizio di guardia attivo 24 ore (12 guardiani).

Nella località è installato il monitoraggio 24 ore su 24.

In Viminacium sono impiegati 20 giovani dalla comunità locale.

**Per la promozione turistica di Viminacium è stato completato:**

Il progetto della segnalazione turistica da tutte le direzioni verso Viminacium.

La visita a Viminacium è inclusa nel percorso in bicicletta L'Atlantico-il Mar Nero come il punto D210.

Il numero più grande delle copie dei gioielli romani d'oro e di argento.

Le copie dei contenitori romani.

Fig. 643

Le copie delle lampe romane.
Le copie delle fibule romane.
Il gioco per i bambini „Il mistero della morte dell'imperatore "(in tedesco, inglese e serbo) e c' è già la seconda edizione nella vendita.
Il DVD TV film„Viminacium lumen meum" (in inglese, serbo).
Il CD Viminacium (tedesco, inglese, serbo).

**Le ricerche archeologiche:**
È stato completamente ricercato e parzialmente ricostruito un anfiteatro romano con i 7.500 posti a sedere.
Sono ricercati e rimessi alla località nuova entro il Parco archeologico, gli acquedotti romani lunghi 1700 metri.
È ricercato e rimesso alla località nuova entro il Parco archeologico, l'oggetto per l'alimentazione idraulica (*Castellum Aquae*).
È ricercata la strada romana con la mattonella del IV secolo.
Esplorazione dell'area attorno alle mura del campo militare, da nord (*Porta Praetoria*) fino alla porta ovest (*Porta Principalis Sinistra*).

**Le celebrazioni, i concerti, i raduni scientifici, i laboratori in Viminacium:**
Nell'anno 2007 entro la manifestazione di mondo 'Save the Earth ", è stato tenuto il concerto del gruppo „Van Gogh "e „Rivised EKV ". Il festival romano precedeva il concerto durante cui i visitatori insieme con il team archeologico erano vestiti alle toghe romane.

Nell' Agosto 2008 è stato organizzato il concerto della diva di opera di mondo Emma Shapplin.

Nell' Dicembre 2008 per la prima volta nello spazio nuovo di Domvs cosiddetta „Scienza per tutti" è stata organizzata in collaborazione con le università di Ancona e Bologna.

Nell' Settembre 2009 è stato tenuto il festival di vino, pesce e tamburello cosiddetto „La scintilla nel bicchiere ".

Nell' Ottobre 2009 è stato tenuto il concerto di Studio Alectic che è stato trasmesso per la prima volta tramite Internet direttamente.

Nell' Settembre 2010 è stato organizzato il simposio internazionale della ceramica antica „Rei CretariaeRomanaeFavtores "con i partecipanti da tutto il mondo.

Nell' Settembre 2011 è stato tenuto il IX UNESCO summit regionale detto ¨L'arte contemporanea e la conciliazione",erano presenti i numerosi presidenti e ministri dei paesi dell'Europa sudorientale.

Nell' Ottobre 2012 è stato tenuto il simposio internazionale dell'eredità culturale „L'eredità archeologica-il suo ruolo nell' istruzione, nella presentazione e nella diffusione di scienza".

Nell' Marzo 2013 entro il progetto internazionale OpenArch il cui partecipante era il progetto Viminacium, l'esperimento è stato condotto - la semina della pianta rampicante in modo in cui era fatto nell'era romana.

Nell' Marzo 2013 entro il progetto internazionale OpenArch il cui partecipante era il progetto Viminacium, l'esperimento è stato condotto lo scopo di cui era scoprire il modo in cui i defunti erano bruciati sulle tombe tipo di Mala Kopašnica – Sase. Per l'esperimento è stato usato un cadavere suino.

Nell' Marzo 2013 entro il progetto internazionale T-PAS il cui partecipante era il progetto Viminacium, è stata tenuta. la conferenza internazionale.

Nell' Aprile 2013 il raduno riguardo al progetto internazionale Danube Limes Brand è stato organizzato, ancora uno tra i cui partecipante era il progetto Viminacium in cui più dei 20 esperti più eminenti del campo dell'archeologia di limes romano si sono radunati.

Nell' Maggio 2013 riguardo alla celebrazione dei 1700 anni dell'Editto di Milano, il presidente della repubblica TomislavNikolić ha aperto la mostra entro lo spazio di Domus.

Nell' Maggio 2013 riguardo alla celebrazione dei 1700 anni dell'Editto di Milano, il presidente della repubblica TomislavNikolić ha solennemente aperto l'anfiteatro ricostruito in cui poi l'opera Aida è stata eseguita-l'orchestra, i cantanti e gli artisti del Teatro Nazionale di Belgrado con gli ospiti eminenti.

Nell' Giugno 2013 – il concerto di Maja Le Ru con l'orchestra da camera sinfonietta nell'atrio di Domus.

Nell' luglio 2013 – la rappresentazione di Viminacium a Washington.

Nell' luglio 2013 – l'apertura della mostra viaggiante di fotografia-il progetto T-PAS-Akvileia, Emona, Viminacium.

Nell' luglio e agosto 2013 – è stato organizzato il campo "Il campo scientifico per i bambini a Viminacium per i bambini di 8 a 14 anni ".

Settembre 2013 – la rappresentazione di Viminacium a New York.

Ottobre 2013 – la rappresentazione di Viminacium a Chicago.

Ottobre 2013 – la rappresentazione di Viminacium a Boston.

In ottobre 2013 – è stato organizzato il secondo raduno riguardo al progetto internazionaleDanube Limes Brand con i partecipanti diversi del paese e dell'estero.

Novembre 2013 – il raduno annuale dei ricercatori dell' Istituto archeologico.

Febbraio 2013 – la rappresentazione di Viminacium a Londra.

Maggio 2014 – la rappresentazione di Viminacium a San Francisco.

Maggio 2014 – la rappresentazione di Viminacium a Los Angeles.

Giugno 2014 – il parco di mammut è stato solennemente aperto entro il Parco archeologico di Viminacium.

Luglio 2014 – è stato tenuto Danube Limes Day entro cui il concerto dei fratelli Teofilović.

Settembre 2014 – la rappresentazione di Viminacium nell'ambasciata della Serbia presso l'UN a New York.

Settembre 2014 – la rappresentazione di Viminacium a Budapest.

Settembre/ottobre 2014 – entro il progetto internazionale OpenArch il cui parteciperà il progetto Viminacium il simposio internazionale è stato tenuto "The Impact of Dialogue with Visitors on – AOAM Management".

Dicembre 2014 – la rappresentazione di Viminacium a Roma.

Luglio 2015 – la rappresentazione di Viminacium a Valeta.

Settembre 2015 – la rappresentazione di Viminacium a Milano.

Settembre – Ottobre 2015 -la rappresentazione di Viminacium a Montevideo.

Ottobre – Dicembre 2015 -la rappresentazione di Viminacium a Buenos Aires.

Dicembre 2015 – Gennaio 2016 – la rappresentazione di Viminacium a Asuncion.

Febbraio – Marzo 2016 - la rappresentazione di Viminacium a Brasilia.

Aprile – Maggio 2016 - la rappresentazione di Viminacium a Santiago de Cile.

Luglio – Settembre 2016 - la rappresentazione di Viminacium a Lima.

Ottobre 2016 - Febbraio 2017 – la rappresentazione di Viminacium a La Paz.

Febbraio – Marzo 2017 – la rappresentazione di Viminacium a Santa Cruz.



Luglio – Agosto 2017 – la rappresentazione di Viminacium a Praga.

Settembre 2017 – Simposio internazionale "La circolazione di monete antiche nell'Europa sudorientale".

Agosto 2018 – Un workshop internazionale per la cooperazione in scienze dei dati USA-Serbia e dei Balcani occidentali (US-Serbia&WestBalkan Data Science Workshop)si è tenuto a Viminacium ea Belgrado, organizzato da Serbia e NSF (National Science Foundation USA) e sotto l'egida del Ministero per l'educazione,la scienza e lo sviluppo tecnologico.

Settembre 2018 – Premio Živa per la gestione dei luoghi culturali e storici (Živa Award 2018 Special Recognition for Leadership) a Praga.

Settembre 2018 – Il Congresso Limes si è svolto con centinaia di partecipanti da tutto il mondo.

Furono esplorati e trasferiti in una nuova posizione all'interno del Parco.

Archeologico, Acquedotti romani con impianto di approvvigionamento idrico (Castellum Aquae).

Giugno 2019 – Festival del teatro "Viminacium fest – miti vecchi e nuovi".

Settembre 2019 – Incontro dei paesi danubiani in occasione della nomina dei Confini Impero romano – Danubio Limes in Serbia nella lista mondiale dell'UNESCO patrimonio.

**Il programma, i progetti**

Viminacium è la località principale nel progetto „Itinerarium Romanum Serbiae" che è condotto dall'Istituto archeologico di Belgrado, Ministero per l'educazione,la scienza e lo sviluppo tecnologico e Ministero della cultura.

Dal 2015, Viminacium è nella lista preliminare dell'UNESCO patrimonio culturale mondiale. Il sito dovrebbe essere elencato con altro trenta località dalla Serbia come parte del serial internazionale "Confini dell'Impero Romano" con centinaia di località nella zona da allora Le mura di Adriano e Antonino, attraverso il Reno e il Danubio fino al Mar Nero. U il file delle candidature è in fase di elaborazione e le condizioni per la protezione e presentazione ai più alti standard mondiali.

**Fig. 644**

Fig. 645



## VIMINACIUM – LA CAPITAL DE LA PROVÍNCIA ROMANA DE LA MOESIA SUPERIOR

El cuento acerca del esplendor y declive de la ciudad romana y campamento militar de Viminacium ha atraído la atención del público tanto nacional como internacional des de hace mucho tiempo. Viminacium está empezando a tomar su legítimo puesto en el escenario cultural e histórico global. El área ocupada por esta antigua ciudad y campamento militar romano –que cubre un área de unas 450 hectáreas de las amplias 220 hectáreas urbanas de la región de la ciudad- se encuentra actualmente debajo de terreno cultivado por arado, con artefactos y fragmentos de objetos de la era romana esparcidos a lo largo de todos sus surcos. La necrópolis (lugar de enterramientos) de Viminacium, explorada en las tres últimas décadas del siglo XX, ha proporcionado más de 14.000 tumbas hasta el momento la exploración de la ciudad romana y campamento militar es encabezada por un equipo pluridisciplinar compuesto por expertos de renombre de varios campos. A parte de arqueólogos, el proyecto Viminacium ha congregado geofísicos, matemáticos, ingenieros eléctricos, geólogos, petrólogos e investigadores de la teledetección, modelaje 3D y reconocimiento de forma, así como de inteligencia artificial. Su objetivo es conseguir desenterrar los foros y los templos, los teatros y el hipódromo, los banyos, las calles y los barrios de los campos bajo los cuales han estado yaciendo por siglos con tal de hacerlos formar parte de la herencia cultural de nuestro mundo, a la vez que se quiere convertirlos en un símbolo reconocible de la región del Danubio.

Los pueblos de Stari Kostolac y Drmno, a 13 quilómetros de Požarevac, se asientan sobre los restos de la antigua ciudad de Viminacium, la capital de la antigua provincia romana de la *Moesia Superior*, conocida como *Moesia Prima* en la tarda antigüedad. Las fuentes históricas dicen que Vimiancium fue un fuerte militar muy significativo, donde la legión romana *Legio VII Claudia Pia Fidelis* fue estacionada. Por medio de excavaciones arqueológicas, que se han intensificado a lo largo del último cuarto del siglo XX, la ciudad ha ido saliendo a la luz paulatinamente, pasando de referencias históricas escasas para rebelarse como un sitio de desarrollo dinámico durante sus

**Fig. 646**

seis siglos de historia, un sitio de encuentro para las culturas del este y oeste, con floreciente artesanía y arte, un sitio donde los mercaderes de todo el conjunto del Imperio Romano venían para intercambiar sus bienes. Parece que fue la bien desarrollada economía de esta ciudad -los productos de la cual encontraban sus compradores incluso fuera de su provincia de origen- lo que dio un gran empuje a la gran variedad de artesanías y talleres artísticos que aparecieron en esta área.

Y es precisamente en estos talleres que algunas de las tumbas decoradas en fresco más importantes de la tarda antigüedad se produjeron, en el transcurso del siglo IV.

Un importante centro militar y capital de provincia romana, Viminacium fue construida en el territorio perteneciente a la tribu celta de los *Escordiscos.* Debía su tamaño y significación al rico hinterland del valle del río Mlava, así como a su excepcional y favorable posición geográfica, ambos dentro del sistema de defensa imperial de los límites norteños y de la red de comercio y circulación –tanto por tierra como fluvial- del mismo. Las investigaciones arqueológicas de Viminacium se han prolongado por más de una centuria, M. Valtrović y M. Vasić dirigieron excavaciones en las riberas derechas del rio Mlava, en el emplazamiento de Čair, revelando la base rectangular del campamento -442x385 metros- así como un gran asentamiento civil no muy lejos de la rampa oeste.

Sus contornos ya podían ser discernidos en el siglo XIX: amplias avenidas que se inter seccionaban en ángulos rectos, foro romano, teatros, baños, acueductos y rampas. El asentamiento ganó el estatus de municipio (ciudad) en la primera mitad del siglo II, probablemente en el 117 d.C., durante el reinado del emperador Adriano, recibiendo el nombre de Viminacium Aelium Hadrianum. La subsecuente crecida de Viminacium fue interrumpida, aunque de manera breve, por una plaga epidémica durante el reinado de Marco Aurelio. Aun así, ya en los primeros años del siglo III la ciudad estaba de nuevo en plena expansión. Cierto número de emperadores romanos o bien pasaron pro Viminacium o bien permanecieron en ella por largos periodos. Adriano organizó juegos de caza en dos ocasiones diferentes. El emperador Septimio Severo también visitó la ciudad en dos ocasiones. Los emperadores Gordiano III, Felipe el Árabe, Treboniano Galo, Hostiliano, Diocleciano, Constantino el Grande, Constancio I y Julio también la visitaron. Hasta donde se sabe, Graciano fue el último emperador que pisó la ciudad. En el siglo III, durante el reinado de Gordiano III, Viminacium se convirtió en colonia y obtuvo el derecho de acuñar monedas. Las fuentes históricas señalan que una batalla decisiva para la supremacía tuvo lugar en Viminacium, enfrontando a los emperadores Diocleciano i Carino en el 284 d.C. El retrato del padre de Carino, Caro emplazado en el Museo de Požarevac atestigua este episodio. En el siglo IV, Viminacium era una sede episcopal cristiana de importancia. La ciudad fue definitivamente arrasada a mitad del siglo V durante la invasión de los hunos, después de la que no fue reconstruida con la excepción del fuerte militar durante el reinado de Justiniano en el siglo VI.

## LA DOMVS SCIENTIARVM VIMINACIUM

**¿Qué es la Domvs Scientiarvm Viminacivm?**

El centro científico y de investigación (*Domus scientiarum*) de Viminacium se concibió con el objetivo de ser multiuso (simposios, conferencias, talleres y congresos internacionales). En el año 2011, la IX cumbre internacional de la UNESCO, llamada "*Modern art and reconciliation*", tuvo lugar ahí también con presencia de numerosos presidentes y ministros del sur-este europeo.

El centro científico y de investigación (*Domus scientiarum*) ha sido ideado para acoger un equipamiento pluridisciplinar. A parte del hecho que científicos no tan solo de toda Serbia sino también del extranjero usarán sus estudios, biblioteca, atrios para investigación, talleres para estudiantes, escuelas de verano y organización de congresos, su uso también contempla el alojamiento de turistas, los cuales ya muestran un creciente interés por visitar Viminacium.

El edificio ha sido diseñado con la forma de una *villa rustica* romana. Tiene dos niveles: el superior, que contiene locales de trabajo y alojamiento, y el inferior con el museo, almacenes i salones de conferencia. El nivel superior consiste en un grupo de atrios alrededor de los cuales se organizan talleres, laboratorios, estudios y salas para acomodar tanto a equipos de profesionales como a visitantes. A su lado se encuentra la biblioteca, que incluye una sala de lectura, el centro documental, la cocina y comedor y una réplica de las *thermae* romanas, que es usada como un pequeño spa que aún se encuentra bajo construcción.

El objetivo consiste en: una parte se destina al alojamiento del equipo de arqueólogos, dos partes al alojamiento de huéspedes y una en la que hay un centro documental, i. e. aparte con talleres y laboratorios usados por equipos de expertos. La librería con la sala de lectura está también acabada, un salón de presentaciones, una cocina con comedor, mientras que las termas romanas con capacidad de un pequeño spa aún se encuentran bajo construcción.

El nivel inferior consiste en una zona parcialmente aislada de seguridad más elevada y control climático superior tal y como corresponde a una zona de colección museística y almacenaje. El salón subterráneo decorado con un mosaico y equipado con elementos de museo está completamente terminado. Frescos que datan de la tarda antigüedad descubiertos durante las excavaciones arqueológicas de los cementerios de Viminacium también se exponen.

**Sostenibilidad económica del Parque Arqueológico y la Domus:**

El Parque Arqueológico fue ideado como un proyecto auto sostenible, mantenido por los ministerios de recursos cuando se organizan inventos de importancia. El capital proviene principalmente de visitantes particulares y la venta de suvenires, como también del servicio de catering que el mismo parque ofrece. Por otra parte, el enfoque primario es la organización de congresos y encuentros temáticos, semanas de spa y atractivas vacaciones de corta duración, las cuales ofrecen una experiencia especial de experimentar el estilo de vida romano. Este tipo de enfoque centrado en la oferta turística aporta ganancias que deberían patrocinar futuras investigaciones arqueológicas y el desarrollo del Parque Arqueológico.

*Domvs Scientiarvm* representa el punto más destacado de nuestro turismo arqueológico, con su atmosfera única de la antigua Roma, donde el visitante puede ser aquello que desea –un arqueólogo, legionario o emperador. Esta oferta incluye trajes romanos, una cata de comida romana preparada según antiguas recetas y servida en recipientes que siguen el modelo romano.

Des de 2006, Viminacium posee un puerto en el Danubio, lo que permite el acceso de grandes cruceros fluviales. En el 2018, unos 90.000 visitantes vinieron a Viminacium, 15.000 de los cuales llegaron per vía fluvial a través del Danubio. En 2019, se prevé la llegada de un número aún mayor de turistas –superior a los 200.000- a través del rio, mientras que por tierra se esperan otros 300.000.

## MAMUTS EN VIMINACIUM

**Parque del Mamut**

En junio de 2014 todos los mamuts descubiertos hasta ese momento "se mudaron" a una parte del Parque Arqueológico de Viminacium diseñado especialmente para ellos, seguido de un gran festival –de hecho, el cumpleaños un millón del mamut Vika- en el que hicieron acto de presencia numerosos huéspedes tales como el presidente de la República de Serbia y el embajador de los EEUU entre otros. El esqueleto de Vika y esqueletos parcialmente conservados de otros cinco mamuts se exhiben en su medio natural con el objetivo de mostrar el clima, la flora y la fauna de la era en la que vivieron. Todos ellos son miembros de la especie de mamuts de las estepas (*Mammuthus trogontherii*).

Fig. 647

Des de su descubrimiento en 2009, el mamut Vika se ha convertido en una atracción especial dentro del Parque Arqueológico de Viminacium. Fue descubierto a unos 350 metros del mausoleo imperial, dentro de estratos del Pleistoceno temprano –un periodo geológico de un millón de años. El área en el que fue descubierto se encuentra dentro del antiguo delta del rio Morava, que se formó a medida que el mar de la Panonia reculaba. Exactamente en este momento, un mamut hembra de unos sesenta años, 4,5 metros de altura, 5 metros de largo y alrededor de 10 toneladas de peso, vivió. Pertenecía a una especie extremadamente rara. Hasta ahora, en todo el mundo, unos veinte esqueletos de mamut han sido descubiertos, mayoritariamente durante el siglo XIX, peor ninguno de ellos se ha preservado en el lugar en el que fue descubierto en posición anatómica completamente conservada. Debido a que el esqueleto de Vika que encontraba en el filo de una zanja minera de extrema dificultad de acceso y opciones de seguridad limitada, sus descubridores se enfrontaban a un nuevo y único desafío: trasladaron el esqueleto a una localización más segura, dentro del Parque del Mamut. Otro acto casi imposible tuvo lugar en Viminacum. De hecho, el traslado del esqueleto de Vika atrajo mucha atención y este acto único fue filmado por diferentes equipos de alrededor del mundo. Afortunadamente para los votantes, los restos de mamut son ahora accesibles en un nuevo e inusual ambiente que imita la era del Pleistoceno temprano-ofreciéndoles la posibilidad de experimentar la atmosfera de unos cuantos millones de años atrás, todo ello al lado del yacimiento romano de Viminacium.

En el 2012, siguiendo con la excavación de la zanja minera “Drmno” en el extremo este de Viminacium, se hallaron grandes cortes con huesos de mamut. Se descubrieron a una profundidad de unos veinte metros, haciendo necesario el traslado de casi 100.000 $m^3$ de tierra de la que se componía el altiplano con tal de llevar a cabo una excavación sistemática de protección. La investigación que se dirigió en este sector revelo un complejo ecosistema del Pleistoceno, que pivotaba entorno el rio, y compuesto por, como mínimo, de tres a cinco mamuts i un gran número de ciervos, caballos, bisontes, y huesos de otros mamíferos pleistocenos. De manera opuesta al buen estado de conservación del mamut Vika, descubierto en 2009en los limos del antiguo delta del Morava, los mamuts del yacimiento Nosko se encontraban yaciendo en la estepas, desgarrados por diferentes carnívoros, de manera que sus huesos se encontraban dispersos a lo largo de una amplia área y expuestos a diferentes condiciones atmosféricas y climáticas antes de ser cubiertos por loess (un depósito gris amarillento ligeramente compactado de sedimentos arrastrados por el viento de los cuales se producen depósitos extensos). Mediante grandes esfuerzos por parte de nuestros equipos, todos los huesos fueron extraídos, salvo los de mayor tamaño (cráneos y colmillos), que fueron cortados en bloques de tierra y transferidos a la zona del Parque Arqueológico dentro de grandes cajas de acero. Posteriormente, fueron exhibidos dentro del Nuevo Parque Paleontológico.

## ¿QUÈ SE HA HECHO DURANTE EL PERIODO DE OCTUBRE DE 2003 A DICIEMBRE DE 2019?

**En el mismo yacimiento:**

Nueve importantes yacimientos se han abierto a los visitantes: 1) el centro memorial Paleocristiano, 2) la puerta norte del campamento militar, 3) los baños termales romanos, 4) el mausoleo donde el emperador Hostiliano fue enterrado, 5) el esqueleto del mamut hallado y excavado en 2009, 6) Domvs Scientiarvm, 7). Centro de Artesanía (talleres), 8) Limes Park y 9) Parque de Aventura.

*Domvs Scientiarvm* – la mayor parte del conjunto del proyecto ha sido ya completada, presentada al público y calificada como uno de los objetos que son siempre presentados a los visitantes del Parque Arqueológico de Viminacium.

Se ha contratado un servicio de seguridad 24/7 (12 vigilantes).

El yacimiento se ha protegido por un servicio de video-vigilancia 24/7.

Viminacium da empleo a 20 jóvenes de las comunidades locales.

Fig. 648

**Con tal de promover el turismo se ha:**

Proyecto para señalizar al turista los accesos a Viminacium en proceso.

La visita a Viminacium se ha incluido en la ruta ciclística Atlántico-Mar negro como punto D210.

Se han realizado grandes números de copias de joyería romana en oro y plata.

Copias de vajilla romana.

Copias de linternas romanas.

Copias de fíbulas romanas.

Se creó un juego de mesa llamado "El misterio de la muerte del Emperador". Su segunda edición ya se encuentra en tiendas (disponible en alemán, inglés i serbio).

Un filme en DVD, *Viminacium lumen meum,* fue filmado (en serbio e inglés).

Un CD, "*Viminacium*", también se grabó (en alemán, inglés i serbio).

**Excavaciones arqueológicas:**

El anfiteatro romano, con capacidad para 7,500 espectadores, fue excavado y parcialmente reconstruido.

Los acueductos romanos, de 1,700 m de lardo, se han excavado y trasladado a un nuevo emplazamiento dentro del Parque Arqueológico de Viminacium.

El *Castellum aquae,* uno de los más importantes elementos para el aprovisionamiento de agua, se ha excavado y trasladado a un nuevo emplazamiento dentro del Parque Arqueológico de Viminacium.

Una calle pavimentada del siglo IV ha sido excavada.

Explorar la zona en torno a las murallas del campo militar, en el norte (*Porta Praetoria*) a la puerta oeste (*Porta Principalis Sinistra*).

**Celebraciones, conciertos y laboratorios en Viminacium:**

En 2007, en paralelo con el proyecto "Salvar a la Tierra", se celebró un concierto, con música de los grupos "Van Gogh" y "Revised EKV". El concierto fue precedido por un festival romano donde tanto los visitantes como el equipo arqueológico se vistieron con trajes romanos.

En agosto de 2008 un concierto protagonizado por la diva francesa Emma Shapplin fue organizado.

En diciembre de 2009 se organizó por primera vez en la nueva *Domvs* los llamados "Ciencia para todos" ("Scienza per tutti") en colaboración con las universidades de Ancona y Bolonga.

En septiembre de 2009 el festival del Vino, Pescado y los Tambura Players "Sparkles in the Glass" tuvo lugar en la *Domvs.*

En octubre de 2009 el concierto de Studio Alektik fue grabado directamente desde internet.

En septiembre de 2010 la Conferencia Internacional de Poesía Romana (*Rei Cretariae Romanae Favtores*) se celebró en Viminacium.

En septiembre de 2011 el IX International UNESCO Summit, llamado "Modern art and reconciliation" se celebró aquí, haciendo acto de presencia en el varios presidentes y ministros del sud-este europeo.

En octubre de 2012 tuvo lugar el simposio internacional de patrimonio cultural "Archaeological Heritage – its Role in Education, Presentation and Popularization of Science".

En marzo de 2013, como parte del proyecto OpenArch donde Viminacium es uno de los participantes, un experimento fue dirigido consistiendo en la plantación de vides al antiguo modo romano.

En marzo de 2013, como parte del proyecto OpenArch donde Viminacium es uno de los participantes, un experimento fue dirigido con el objetivo de investigar los modos de cremación de los tipos de tumba de Mala Kopašnica – Sase. Durante este experimento, un cerdo fue incinerado.

En marzo de 2013, como parte del proyecto T-PAS donde Viminacium es uno de los participantes, una conferencia internacional fue celebrada.

En abril de 2013 una conferencia tuvo lugar como parte del proyecto internacional Danube Limes Brand, donde Viminacium es también uno de los participantes; en esta atendieron unos de los veinte arqueólogos más destacado del limes romano.

En mayo de 2013, en motivo del aniversario 1700 del Edicto de Milán, el presidente de la república Tomislav Nikolić abrió la exposición de la Domus.

En mayo de 2013, en motivo del aniversario 1700 del Edicto de Milán, el presidente de la república Tomislav Nikolić inauguró la reconstrucción del anfiteatro de Viminacium, momento en que la ópera Aida fue interpretada - la orquesta, cantantes e intérpretes del Teatro Nacional de Belgrado con muchos VIPS.

En junio de 2013 el concierto de Maja Le Ru fue celebrado, con la orquesta de cámara "Simfonijeta" tocando en el atrio de la Domus.

En julio de 2013 Viminacium se presentó en Washington.

En julio de 2013 una exhibición fotografía móvil del T-PAS PROJECT– Aquileia, Emona, Viminacium se abrió.

En julio y agosto de 2013 "Children research campus in Viminacium" para niños de edades comprendidas entro los 8 y los 14 años se abrió.

En septiembre de 2013 Viminacium se presentó en Nueva York.

En octubre de 2013 Viminacium se presentó en Chicago.

En octubre de 2013 Viminacium se presentó en Boston.

En octubre de 2013 la segunda conferencia internacional del proyecto "Danube Limes Brand" se celebró, asistiendo profesionales tanto del extranjero como de Serbia.

En noviembre de 2013 la conferencia anual de los empleados del Instituto Arqueológico de Belgrado se celebró.

En febrero de 2014 Viminacium se presentó en Londres.

En mayo de 2014 Viminacium se presentó en San Francisco.

En mayo de 2014 Viminacium se presentó en Los Ángeles.

En junio de 2014 la inauguración oficial del Parque del Mamut dentro del Parque Arqueológico de Viminacium tuvo lugar.

En julio de 2014 se celebró el Día del Limes del Danubio, incluyendo un concierto de los hermanos Teofilović.

En septiembre de 2014 Viminacium se presentó en la embajada serbia de la ONU en Nueva York.

En septiembre de 2014 Viminacium se presentó en Budapest.

En septiembre y octubre de 2014, dentro del proyecto internacional OpenArch en el cual participa Viminacium, se celebró un simposio internacional titulado"The Impact of Dialogue with Visitors on AOAM Management".

En diciembre de 2014 Viminacium se presentó en Roma.

En julio de 2015 Viminacium se presentó en la Valeta.

En septiembre de 2015 Viminacium se presentó en Milán.

En septiembre–octubre de 2015 Viminacium se presentó en Montevideo.

En octubre–diciembre de 2015 Viminacium se presentó en Buenos Aires.

En diciembre de 2015 – enero de 2016 Vimiancium se presentó en Asunción.

En febrero–marzo de 2016 Viminacium se presentó en Brasilia.

En abril–mayo de 2016 Viminacium se presentó en Santiago de Chile.



En julio–septiembre de 2016 Viminacium se presentó en Lima.

En octubre de 2016–febrero de 2017 Vimiancium se presentó en La Paz.

En febrero–marzo de 2017 Viminacium se presentó en Santa Cruz.

En julio-agosto de 2017 Viminacium se presentó en la Praga.

En septiembre de 2017 – Simposio internacional "La circulación de monedas antiguas en el sureste de Europa".

En agosto de 2018: se realizó en Viminacium y Belgrado un taller internacional sobre cooperación en el campo de la ciencia de datos de Estados Unidos, Serbia y los Balcanes Occidentales (US-Serbia&West Balkan Data Science Workshop) patrocinada por el Ministerio de Educación, ciencia y desarrollo tecnológico.

En septiembre de 2018: Premio Živa para la gestión de lugares culturales e históricos (Živa Award 2018 special recognition for leadership) en Praga.

En septiembre de 2018: se realizó el Congreso de Limes con varios cientos de participantes de todo el mundo.

Los acueductos romanos con una instalación de suministro de agua (Castellum Aquae) fueron investigados, estudiados y trasladados a una nueva localidad dentro del Parque Arqueológico,

Junio de 2019 – Festival de Teatro "Viminacium Fest – Mitos antiguos y nuevos".

Septiembre de 2019 - Reunión de países del Danubio sobre la nominación de "Fronteras del Imperio Romano - Limes del Danubio en Serbia" en la Lista del Patrimonio Mundial de la UNESCO.

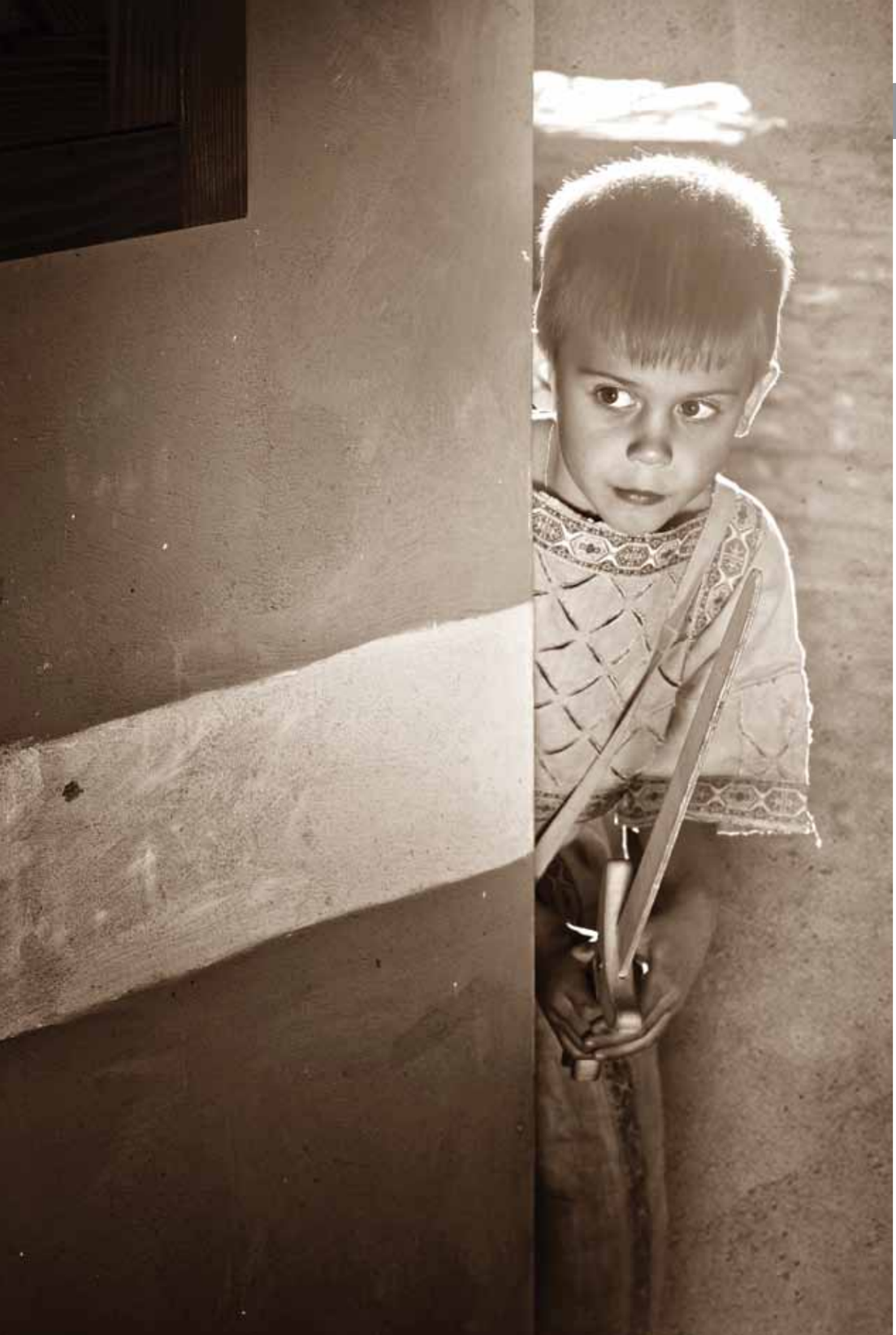
**Planes, proyectos:**

Viminacium es el yacimiento líder en el proyecto "Itinerarium Romanum Serbiae" organizado desde el Instituto Arqueológico de Belgrado, Ministerio de Educación, Ciencia y Desarrollo Tecnológico y Ministerio de Cultura e Información.

Desde 2015, Viminacium está en la Lista Preliminar del Patrimonio Mundial de la UNESCO. Este yacimiento arqueológico debería estar en esta lista con otras treinta localidades de Serbia que forman parte del bien internacional "Fronteras del Imperio Romano" – junto con varios centenares de otras localidades presents en el área que va desde los muros de Adriano y Antonino, a través de los ríos Rin y Danubio, hasta el Mar Negro. Se está redactando un archivo de nominación creándose así las condiciones de protección y presentación que cumplirán con los estándares mundiales más altos.

**Fig. 649**

Fig. 650





# ВИМИНАЦИЈУМ – ГЛАВНИ ГРАД РИМСКЕ ПРОВИНЦИЈЕ ГОРЊЕ МЕЗИЈЕ

Прича о некадашњем сјају и пропасти римског града и војног логора Виминацијума већ дуго заокупља пажњу и наше и светске јавности. Виминацијум почиње да заузима место на светској културно-историјској сцени које му са правом припада. Данас се простор некадашњег римског града и војног логора Виминацијума (више од 450 хектара шире градске и 220 хектара уже градске територије) налази испод обрадивих површина, док су предмети из римског периода расути по њивама. Током последње три деценије XX века ископаван је такозвани град мртвих или некропола Виминацијума на којој је откривено више од 14.000 гробова. На истраживању римског града и војног логора ради интердисциплинарни тим састављен од изузетних стручњака из различитих области. Пројекат Виминацијум, поред археолога окупља геофизичаре, математичаре, електроинжењере, геологе, петрологе, истраживаче који се баве даљинском детекцијом, 3Д моделовањем и препознавањем облика, али и вештачком интелигенцијом. Њихова је жеља да тргови и храмови, позоришта, хиподром, купатила, улице и четврти града изроне из оранице у којима су вековима таворили и постану део светске и наше културне баштине, али и симбол препознатљивости области низ Дунав. Села Стари Костолац и Дрмно, само 13 км удаљена од Пожаревца, леже на остацима античког града Виминацијума, главног града римске провинције Горње Мезије или, у касној антици провинције Прве Мезије. Из историјских извора сазнајемо да је Виминацијум био важно војно упориште у којем је била стационирана римска легија (*Legio VII Claudia Pia Fidelis*). Након археолошких ископавања у последњој четвртини XX века полако израња из штурих историјских сведочанстава и представља се као град који је у својој историји, дугој шест векова, имао динамичан развој и био место на којем су се сусретале културе Истока и Запада. Богатство овог града чија је роба налазила купце и ван граница матичне провинције,

**Fig. 651**

било је основа да на овом простору заживе и разноврсне уметничке радионице. Управо ће нам мајстори или боље, уметници из њих, оставити можда најзначајније и најлепше фреско-осликане гробнице касноантичког периода.

Виминацијум, као значајно војно седиште и главни град римске провинције, поникао је на територији келтског племена Скордиска.

Његова величина и значај последица су неколико чињеница, од којих су најважније богато залеђе у долини Млаве и изузетно повољан географски положај, како у систему одбране северних граница Царства тако и у сплету комуникација и трговинском промету.

Крајем XIX и почетком XX века, М. Валтровић и М. Васић су на десној обали Млаве, на локалитету Чаир, обавили археолошка истраживања која су показала да је логор имао правоугаону основу димензија 442 x 385 метара и да се недалеко од његових западних бедема налазило велико цивилно насеље.

У XIX веку још су се назирали обриси античког града и војног логора Виминацијума: широке улице које се секу под правим углом, тргови, позоришта, купатила, водовод, градски бедеми и куле.

Насеље је добило градски статус у првој половини II века, у време Хадријанове владавине, највероватније 117. године када добија и име *Viminacium Aelium Hadrianum*.

Даљи успон Виминацијума, делимично и само на кратко, прекинут је епидемијом куге за време Марка Аурелија. Археолошка истраживања показују да се епидемија куге није одразила на економски просперитет Виминацијума, јер је већ у првим годинама III века град био у пуном процвату.

Готово да није било римског императора који није прошао кроз Виминацијум или у њему боравио дуже или краће време. Од посета римских императора треба поменути Хадријана који на Виминацијуму два пута организује лов. У два маха га је посетио римски император Септимије Север, а касније су у њему боравили и други императори: Гордијан III, Филип Арабљанин, Требонијан Гал, Хостилијан, Диоклецијан, Константин Велики, Констанције I и Јулијан. Колико је познато, Грацијан је био последњи император који је посетио Виминацијум. У III веку, у време Гордијана III, град је постао колонија и стекао право ковања новца. Из историјских извора је познато да се 284. године, у непосредној близини Виминацијума, одиграла пресудна битка за превласт над овим просторима између двојице римских императора, Диоклецијана и Карина. О овом времену сведочи и мермерни портрет Кариновог оца Кара, који се чува у музеју у Пожаревцу. У IV веку Виминацијум је био значајно епископско седиште. Град је дефинитивно разорен средином V века у најезди Хуна и никада више није био обновљен. Обновљен је само као војно упориште у VI веку за време владавине Јустинијана.

## DOMUS SCIENTIARUM VIMINACIUM

Захтеви заштите историјских грађевина, осим извођења различитих метода конзервације, често укључују и испуњавање принципа одрживог развоја и енергетске ефикасности који се иначе постављају пред савремене грађевине, све у циљу њиховог уклапања у токове савременог живота. Што се тиче археолошких налазишта на којима већина остатака грађевина не може добити употребну функцију, могућности ових процеса су много суженије, а за боравак различитих посетилаца неопходно је изградити и нове, савремене структуре. Осим тога, захтеви савремене археолошке науке и брзина истраживања коју доноси савремено доба, подразумевају мултидисциплинарни приступ. Он не обухвата више традиционалне методе истраживања, боравак у градским и универзитетским библиотекама након тога, и обраду материјала у лабораторијама удаљеним од места истраживања, већ и сарадњу са различитим природним наукама и употребу савремених технологија на самим налазиштима. Данас је веома важно да се на овим местима, која су често удаљена од великих градских центара, налазе технички опремљене просторије за смештај и рад научника различитих занимања. То се по-

себно односи на она археолошка налазишта на којима се ископавања врше континуално током дужег временског периода и на којима постоји потреба за убрзаним истраживањима. Ово је управо случај са Виминацијумом, на којем истраживања трају током целе године, уз непрестани рад на заштитним ископавањима којима се спасавају остаци грађевина и антички предмети угрожени напредовањем рударске и електроиндустрије. Тако је од 2008. године важан просторни сегмент Виминацијума постала једна савремена грађевина, односно Археолошки научно-истраживачки центар, назван Domvs Scientiarvm Viminacivm, наменски изграђен за претходно наведене потребе овог археолошког налазишта, али и потребе великог броја посетилаца Археолошког парка Виминацијум.

Грађевина Domvs Scientiarvm Viminacivm је смештена ван уже зоне римског града и легијског логора, у близини презентованог дела источне некрополе Виминацијума, односно Маузолеја, који је почетна тачка за посетиоце парка и једна врста његовог симбола. На простору Виминацијума данас нема много презентованих остатака античке архитектуре, а услед вишевековног разграђивања античког града презентоване структуре су често очуване само у темељним зонама. Пре изградње грађевине *Domvs Scientiarvm Viminacivm*, једина изграђена целина унутар простора сеоских поља је био комплекс термоелектране „Костолац Б". У таквом амбијенту је требало изградити савремену грађевину, која ће и поред постојеће индустријске структуре, постати једна врста акцента у простору, али не дозволити да њени просторни елементи доминирају над античким остацима Виминацијума. Својом „мирном и ненаметљивом диспозицијом", на ободу археолошког парка, грађевина Domvs Scientiarvm Viminacivm се уклопила у слику дела стишке равнице испод које лежи до данас неистражена античка архитектура.

Археолошки научно-истраживачки центар поседује смештајне капацитете за истраживаче и студенте, као и ентузијасте заинтересоване за учествовање у истраживањима; истраживачке капацитете са канцеларијама, лабораторијама, радионицама, рачунарским центром и специјализованом библиотеком; музејске капацитете са изложбеним салама и депоима; конференцијске капацитете са салама за предавања и окупљања; услужне капацитете са кухињом, трпезаријом и кафеом; и рекреативне капацитете у виду мањег спа-центра. Грађевина је такође отворена за посете туриста у оквиру редовног обиласка Археолошког парка Виминацијум, са ограниченим приступом одређеним зонама.

Грађевина је пројектована као скуп простора у којима различите групе корисника могу обављати истраживања и проводити слободно време, а у непосредној близини једног римског града чија су ископавања у току. Њен облик асоцира на облик римске виле, уз постојање девет затворених функционалних сегмената и пет унутрашњих дворишта у виду перистила. Грађевина покрива зону од 67,80 x 65,45 m, а њени ободни зидови уоквирују површину од скоро 4.000 m². Њена корисна површина је око 3.500 m², а просторије су подељене у три основна нивоа, два подземна и један надземни – даље каскадно разуђен пратећи пад природног терена, а који је у јединствену целину повезан централним тремом са колонадом, пројектованим по узору на антички перистил. Велико унутрашње двориште – централни перистил са стубовима на постаментима, оријентисан ка централном тимпанону, поплочан је опеком, а његова фонтана асоцира на римски имплувијум, украшена мозаиком са представама Нептуна и митолошких животиња. Уз улаз у грађевину се налазе зоне обезбеђења и канцеларије, као и сервисне просторије са кухињом. Трпезарија, чију понуду чине и оброци припремљени према римским рецептима (*Culina Romana*) послуживани у репликама римских посуда, има 220 места за седење, кафе и галерију опремљену репликама римског намештаја у виду триклинијума. Грађевина је пројектована за смештај 135 особа, а поседује хотелске и хостелске смештајне јединице, као и апартмане. Део грађевине уз сам улаз нуди смештај у виду хостела, намењен студентима, у простору два мања озелењена перистил се налазе смештајне јединице за истраживаче који раде на ископавању Виминацијума током целе године, док је смештајни простор уз највећи озелењени перистил, са осамнаест јединица, намењен гостујућим истраживачима и посетиоцима. Простор уз четврти перистил са зеленим двориштем је радна зона са лабораторијама и радионицама за геофизику, антропологију, биоархеологију, обраду керамике и металних предмета, као и канцеларијски рад на подацима добијеним уз помоћ нових технологија, уз примену фотограметрије, тродимензионалног скенирања и моделирања. Специјализована библиотека као

Fig. 652

део научно-истраживачког простора поседује литературу из области археологије, историје, архитектуре и уметности, односно више од 3,500 монографија и 1,500 серијских публикација, са неколико легата научника из Србије чији је рад дао изузетан допринос наведеним пољима истраживања. Овде се налази и галерија са читаоницом, као и јединствена сала за предавања. Укупна површина научно-истраживачких просторија у грађевини је 480 m², са додатним простором за депое од 370 m². Рекреативни део грађевине је посебан амбијент опремљен уз асоцијације на римске терме, са зидовима декорисаним мозаицима,[48] а поседује два базена и турско купатило са свим потребним услужним просторима. Зелене површине унутар грађевине заузимају нешто више од 200 m², док је централни перистил површине 420 m².

Најбољи вид презентације предмета пронађених током истраживања неког археолошког налазишта је формирање музеја управо у његовој непосредној близини, с обзиром на то да се једино тако може директно упознати контекст у коме су предмети настали, или у коме су коришћени. Управо из овог разлога, у оквиру самог Археолошког парка Виминацијум, основан је Музеј Виминацијума, укупне изложбене површине од 630 m². Замишљен као интегрални део грађевине Domvs Scientiarvm Viminacivm од њеног настанка, данас је овај простор јединствени амбијент испуњен историјским и савременим уметничким делима. Изложбене сале виминацијумског музеја су распоређене на три нивоа, уз постојање посебне сигурности и контроле климатских услова. Првом, надземном нивоу се приступа директно из централног перистила, а његов простор се користи за потребе савремених презентационих поставки уз употребу виртуелне археологије и приказивање резултата тренутних истраживања Виминацијума, као што су модели глава антрополошких типова који су овде живели у антици. Међутим, овде је и један изузетан експонат, односно скулптура Контантина Великог, настала као рад савременог уметника након победе на уметничком конкурсу одржаном 2013. године у склопу обележавања доношења Миланског едикта.[49] Постављена у апсиду просторије, ова монументална скулптура је постала симбол самог музеја. Преко отвора у поду првог изложбеног нивоа, одмах се сагледава и следећи ниво – први подземни ниво, односно његов централни експонат, импресивна макета римског Виминацијума, настала као дугогодишњи рад уметника.[50] Приступом само нивоу, посетиоци добијају прилику да виде и оригиналне зидне слике које потичу из гробова и гробница Виминацијума, као и једну едикулу. Кроз застакљене отворе у једном од зидова овог нивоа пружа се поглед на најнижи изложбени ниво, односно централну салу музеја и њен мозаички под са представом Христовог монограма. На овом нивоу се налази изложбени простор за предмете пронађене током ископавања Виминацијума, из кога се даље приступа поменутој сали површине 135 m², са изложеним бронзаним главама осамнаест римских императора рођених на територији данашње Србије, делима савремених уметника.[51] У нишама сале се налазе камени саркофази пронађени током ископавања некропола Виминацијума. Висина сале од 4,40 m додатно је наглашена касетама таванице покривене мозаицима у плавој боји са мотивима златних звезда, баш као и зидовима чији пиластри формирани мозаичком декорацијом дају утисак ношења таванице као небеског свода.[52] Сала је уједно и централни простор за предавања у грађевини, и може угостити 150 посетилаца. Изложбена рампа којој се приступа из сале представља простор у којем су приказане зидне слике пронађене у античким грађевинама Виминацијума, а међу њима се издвајају оне које потичу са зида арене амфитеатра, украшене мотивима крзна дивљих животиња. С обзиром на то да је истражен изузетно мали број римских амфитеатара у свету чији су зидови били украшени сликарством, овај део поставке виминацијумског музеја је један од њених најинтересантнијих сегмената.

[48] Мозаике су израдили уметници Мирослав Лазовић, редовни професор Факултета примењених уметности Универзитета у Београду, и Биљана Велиновић, доцент Факултета савремених уметности у Београду, њихови сарадници и студенти.

[49] Скулптура је дело уметника Вука Ђуричковића.

[50] Макету је израдио уметник Драгомир Петровић, редовни професор Факулета примењених уметности Универзитета у Београду.

[51] Бронзане главе су дела уметника Соње Петровић и Вука Ђуричковића.

[52] Мозаике су израдили уметници Мирослав Лазовић, редовни професор Факултета примењених уметности Универзитета у Београду, и Биљана Велиновић, доцент Факултета савремених уметности у Београду, њихови сарадници и студенти.

Domvs Scientiarvm Viminacivm је грађевина која се састоји од неколико различитих функционалних крила која су међусобно повезана и обликована да чине јединствену структуру – технолошки опремљен савремени центар, али у амбијенту античке грађевине. Владајући елемент композиције ове структуре је перистил, веома привлачан кроз целокупну историју архитектуре, али и данас. На овај начин, грађевина је окренута као својој унутрашњости, стварају се интимни дворишни амбијенти, погодни за рад и одмор, али међусобно повезани и лако приступачни из централног простора грађевине. Грађевина је пројектована уз претежну употребу традиционалних материјала везаних за античку архитектуру Виминацијума. Зелени рамски шкриљац, као основни камен архитектуре римског Виминацијума, употребљен је за зидање постамената перистила и облагање спољних зидова, а опека, локални производ овог римског града, у грађевини је постала основни материјал за поплочавање. Грађевина доноси унутрашње просторе са детаљима насталим по узору на римску архитектуру, формиране уз помоћ мотива перистила и кровове покривене репликама римских тегула и имбрекса. Зидови перистила су декорисани по узору на зидове римских кућа, без фигуралних композиција, уз помоћ једноставних подела на бојена зидна поља. У циљу испуњавања функционалних захтева корисника простора, као и различитих прописа везаних за начине евакуације, грађевина има четири улаза, односно излаза за посетиоце. Велики простор за паркирање површине 3.750 m² и са деведесет осам места за паркирање, налази се уз поменуту изложбену рампу која је уједно и евакуациони излаз из подземног дела грађевине. Уређен терен око грађевине, укупне површине око 9.000 m², обухвата зелене површине са великим бројем садница дрвећа, као и пешачке стазе поплочане опеком.

Од 2008. године до данас, у грађевини Domvs Scientiarvm Viminacivm је одржан велики број научних скупова, основне и средње школе из околине организују овде часове историје, а већ неколико година уназад место је одржавања летњих школа у организацији Центра за промоцију науке. Изложбени простор Музеја Виминацијума је током 2013. године угостио велику националну археолошку изложбу у склопу прославе 1.700 година од доношења Миланског едикта, под именом „Константин Велики и

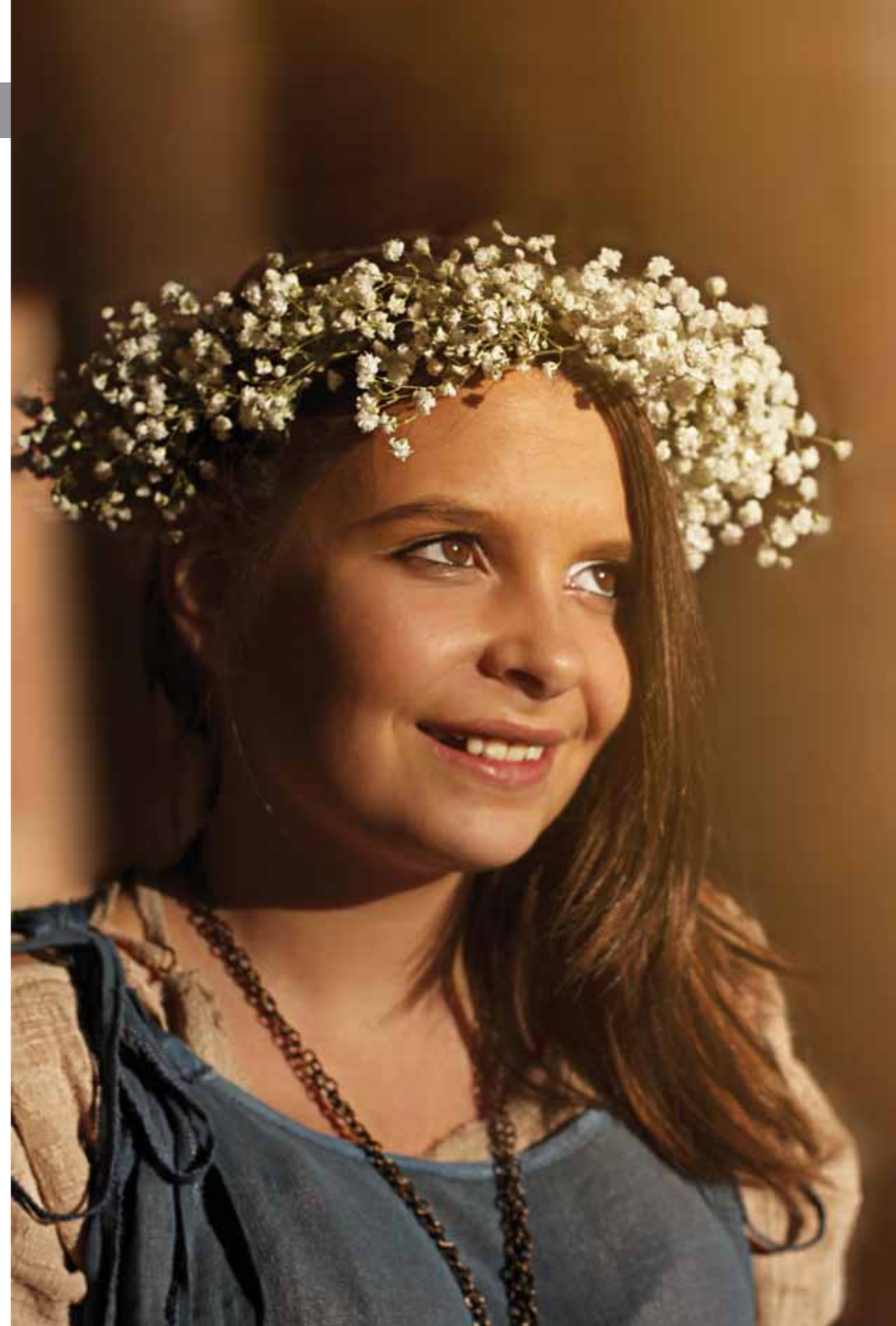


**Fig. 653**

Милански едикт 313: Рађање хришћанства у римским провинцијама на тлу Србије“. Током септембра 2018. године, у салама грађевине су одржавана предавања научника који су били део Лимес конгреса, једног од најважнијих светских археолошких скупова, чији је домаћин био управо Археолошки парк Виминацијум. С друге стране, грађевина Domvs Scientiarvm Viminacivm угошћава и друге врсте скупова, као што је девети Самит шефова држава југоисточне Европе, под окриљем Унеска, одржан у септембру 2011. године, док је у простору централног перистила одржан велики број концерата и различитих културно-уметничких догађаја. Такође, кроз честа туристичка дешавања којима се оживљава римска историја, посетилац, уз помоћ реплика римске војне опреме и костима, може бити „легионар или чак император“.

Одржавањем различитих догађаја у грађевини Domus Scientiarum Viminacium, археолошко налазиште Виминацијум је још више афирмисано у домаћим и иностраним научним круговима, али и у областима популарне културе. Ова грађевина је данас једно изузетно место са непроцењивом важношћу за заштиту, истраживање и туристички развој археолошког налазишта Виминацијума. Угошћавањем великог броја посетилаца, организацијом научних и тематских скупова, уз остале садржаје Археолошког парка Виминацијум, ова грађевина помаже у обезбеђивању финансијских средстава за улагање у будућа истраживања Виминацијума и развој туристичких садржаја, а заједно са комплексом Лимес Парка, омогућила је отварање великог броја радних места за припаднике локалних заједница.

Domus Scientiarum Viminacium је један од важних чинилаца континуитета, аутентичности и интегритета археолошког налазишта Виминацијум. У последње две деценије, током којих трају савремена презентација и популаризација Виминацијума, његови истраживачи су добили велики број прилика да покажу домаћој и међународној научној заједници свој рад и представе благо овог импресивног римског града и легионарског утврђења. Управо је грађевина археолошког-научно истраживачког центра оно место које им је пружило адекватан простор и услове за наведене активности. Ова грађевина, смештена у специфичан амбијент међусобно повезаних сеоских поља, моћне индустрије и археолошких остатака, привукла је велики број посетилаца који би желели да завире у тајне истраживања. Њихове позитивне реакције, које уследе након отварања монументалне капије грађевине и погледа на централни перистил, показатељ су великог значаја интерпретације културно-историјског наслеђа коју пружа Археолошки парк Виминацијум.

## ЛИМЕС ПАРК У ОКВИРУ АРХЕОЛОШКОГ ПАРКА ВИМИНАЦИЈУМ

Према *Просторном плану подручја посебне намене археолошког налазишта Виминацијум* један део Археолошког парка Виминацијум смештен у некада периферној зони античког града Виминацијума, опредељен је као зона туристичке и научне презентације (комерцијални и други садржаји у функцији археолошког налазишта). У складу са наведеним зонирањем и садржајима одређеним за овај део археолошког парка, започето је и његово уређење, па се овде данас налази *Лимес парк*, јединствени комплекс са смештајним, образовним, услужним, конференцијским, изложбеним и рекреативним капацитетима, уз презентоване римске грађевине.

Овај комплекс настао 2018. године чине грађевине и отворени простори пројектовани уз асоцијацију на римске војне логоре и насеља, а за смештај и различите активности, затим спортско-рекреативни капацитети „Авантура парка“ и „Легионарског полигона“, као и римске грађевине измештене са простора напредовања површинског копа угља „Дрмно“ и комплекса термоелектране „Костолац Б“. Са изградњом *Лимес парка*, Виминацијум данас може да прими око пет стотина посетилаца уз вишедневни смештај. У септембру 2018. године је управо на Виминацијуму одржан Лимес конгрес, а бројни научници су били смештени у *Лимес парку*, док су предавања одржавана у салама овог комплекса. Изградња *Лимес парка* је донела запослење

Fig. 654

великом броју припадника локалне заједнице, а број посетилаца је повећан. Међу посетиоцима је велики број деце која овај простор користе за једнодневне излете, рекреативне наставе и екскурзије, уче традиционалне вештине и занатство, упознају античку пољопривреду и живот римских легионара, али и развијају тимски дух кроз спорт и рекреацију. Осим што су погодно место за организовање свих врста научних скупова, услужни и конференцијски капацитети *Лимес парка* са спортско-рекреативним садржајима омиљено су место окупљања пословних компанија и организација у Србији (*team building*).

Асоцијација на римске војне логоре употребљена у пројектовању комплекса грађевина за смештај, обедовање и предавања *Лимес парка*, укупне нето површине од око 4.500 m², подразумевала је постојање правоугаоне основе комплекса са ровом који га окружује, улазне капије са кулама, централну грађевину, као и смештајне капацитете налик на војничке бараке. Бројеви повезани са организацијом римске војске су такође били важни. Тако свака барака има осам соба са шест кревета, односно чини целину од четрдесет осам кревета, док цео комплекс има десет барака, тј. 480 кревета, што је у вези са бројевима војника у оквиру једне легије, тј. чињеницом да је у једном периоду Римског царства легија бројала око 4.800 војника, односно десет кохорти по 480 војника, а њих су чиниле по шест центурија са по осамдесет војника. Ипак, у *Лимес парку* није посвећена пажња само легији која је стално боравила у Виминацијуму (*Legio VII Clavdia PF*), већ и другим римским легијама. Свака барака је добила име по једној од њих (*Legio VII Avgvsta, Legio I Italica, Legio XIII Gemina, Legio III Gallica, Legio I Adivtrix. Legio II Adivtrix, Legio V Macedonica, Legio IIII Scythica, Legio IIII Flavia Felix*). Опремање смештајних јединица за шест посетилаца је обухватило дрвене кревете на спрат, налик војничким, а испред сваке бараке налази се застава легије по којој је добила име.

Обликовање, употребљени материјали, али и унутрашње и спољашње опремање грађевина и отворених простора такође су у складу са наведеном асоцијацијом. Грађевине за смештај су приземни објекти са тремовима, издужене основе, са двоводним крововима, док централна грађевина као место припреме оброка, обедовања и предавања има разуђену форму и сложене кровове са улазним тремовима за окупљање. У спољној обради зидова црвена боја фасаде наглашава асоцијацију на римске грађевине. Сокла је изведена од локалног камена, односно зеленог шкриљца из оближњег Рама, од кога је изграђен највећи број до сада истражених грађевина античког Виминацијума. Опеке су присутне у тремовима и отвореним просторима централне грађевине као материјал за поплочање, а највећи део овог материјала је такође локалног карактера, односно произведен је ручно у породичној радионици оближњег села Пољана (Cotto Rustico). Након римског Виминацијума, као великог производног центра опеке, она је остала традиционални производ пожаревачког краја, богатог опекарским сировинама, али, нажалост, њена ручна производња као традиционални занат полако замире. Током истраживања римских опекарских пећи из Сирмијума, архитекта, др Мирослав Јеремић (1943-2016) је као аналогије користио управо сеоске пећи из околине Пожаревца, уз указивање на њихове међусобне сличности у изгледу и конструкцији.

Стаза од камена која води до улазне капије *војног логора* (која је осим што садржи административне функције важне за рад комплекса, уједно и видиковац за мале *легионаре*), уоквирена је низом камених саркофага пронађених током ископавања Виминацијума, што представља почетак формирања лапидаријума који ће бити проширен на оближњи простор, и у коме ће бити изложени фрагменти архитектонске декорације и надгробни споменици, а уз планиране пешачке комуникације које повезују различите садржаје *Лимес парка*.

Што се тиче римских грађевина у комплексу, овде се налазе једна вила, измештен аквадукт са припадајућим грађевинама водоснабдевања, као и опекарски центар са пећима. Постојање *Лимес парка* у Археолошком парку Виминацијум доноси једну важну компоненту у процес очувања културног наслеђа Виминацијума и његове околине, односно уводи у њега скретање пажње на често занемарено нематеријално наслеђе једног краја, у које спада и традиционална израде опеке. Један од видова презентације ове вековне делатности је и организација радионице за израду опекарских производа, активности која се планира у блиској будућности у *Лимес парку*. Овоме у прилог иде и постојање центра са опекарским пећима, у којем је могуће и

Fig. 655

извести једну од практичних демонстрација сегмената овог процеса везаних са сушење и печење опеке. Будућа презентација измештеног аквадукта који је, нажалост, претпрео два пресељења услед угрожености од стране рада површинског копа, обухватиће израду реплике римског воденог точка уз презентоване остатке гравитационих канала и припадајућих грађевина. Археолошким истраживањима Виминацијума показано је и постојање бунара у двориштима вила у сврху водоснабдевања, али и градских кућа, што води до размишљања о технологијама подизања воде које су могле бити коришћене. Замишљено је да водени точак у *Лимес парку* буде налик ономе који је на основу остатака пронађених ископавањима античког Лондинијума (*Londinium*), израђен за потребе изложбе Музеја Лондона (Museum of London). Истраживачи Виминацијума су ступили у контакт са члановима тима који је израдио ову атракцију и који се бави реконструкцијама историјских дрвених конструкција (McCurdy & Co. Ltd.), а на обострано задовољство. Осим могућности реконструкције воденог точка, постоји и идеја реконструкције канала аквадукта уз употребу воде, што је већ изведено на археолошком налазишту римског утврђења Виндоланда (*Vindolanda*) поред Хадријановог зида, чије је снабдевање водом вршено из надземних извора, али и бунара.

Експлоатација претходно поменутог зеленог шкриљца, на простору данашњег села Рам на Дунаву, као резултат је у античко доба давала цепане фрагменте за зидане грађевине, али и велике блокове неправилног облика којима су поплочаване градске улице. Пренос блокова велике тежине из каменолома у транспортна средства, највероватније лађе које су Дунавом преносиле различиту робу, и њихово касније постављање на улице су захтевали постојање разрађене технологије која је обухватала и постојање једне врсте дизалице за подизање камена. Израда њене реплике је замишљена као део презентације римског грађевинарства Виминацијума, а планирано је да се постави у близини аквадукта и воденог точка, где би се ова технологија могла и приказати приликом одређених догађаја.

Планирани садржаји *Лимес парка* ће приближити посетиоцима нематеријално наслеђе везано за функције постојећих римских грађевина у комплексу и технологије водоснабдевања и грађевинарства, али и за различите гране земљорадње. Добро је позната плодност стишке равнице, која је још у доба Римљана допринела развоју пољопривредних имања у околини Виминацијума, о чему сведоче истражене виле. На двема гредама које са западне и источне стране чине границе Стига током векова је постојао велики број винограда. Нажалост, и ова вековна делатност полако замире на овом простору, па је винограда све мање. Прва активност у Археолошком парку Виминацијум везана за виноградарство је спроведена 2013. године када је извршен експеримент садње винове лозе путем римске праксе. „Римски врт“ у непосредној близини аквадукта је планиран као јединствени простор површине око 75 ари у облику врта једне римске виле, са парцелама засађеним виновом лозом, воћем, поврћем, лековитим и украсним биљкама, уз виноградарску кућицу, зимску башту, шумарке и стазе за шетњу. Истраживачи Виминацијума су обавили потрагу за садницама оних биљака које су према историјским записима биле најзаступљеније у доба Римљана. До данас је простор врта испланиран, израђене су стазе и формиране парцеле, а садња биљака је у току – поново кроз процесе експерименталне археологије, односно уз употребу реплика римског пољопривредног алата, античких мера простора и препорука за садњу одређених врста биљака.

Спортско-рекреативни садржаји *Лимес парка* представљају целину површине око 2,2 ha оивичену „Легионарским полигоном“, односно стазом за трчање са препрекама. Унутар простора је формиран „Авантура парк“, тј. висински – ропинг полигон, док су нови садржаји простора планирани у виду трим стазе и монтажно-демонтажних терена за различите спортове. „Легионарски полигон“ је посебно осмишљена стаза по узору на специјалистичке војне пешадијске полигоне. Тема полигона је Римско царство, а препреке носе имена римских императора који су рођени на територији данашње Србије. Састоји се из петнаест посебно пројектованих препрека од дрвета, конопаца, земље, воде и сламе, које су постављене на стази дужине око 500 m и ширине 10 m. Препреке се прелазе индивидуално или групно, пењући се, пузећи, клизајући се, провлачећи се, њишући се, прескачући, употребом снаге руку и ногу. Циљ полигона је подстицање и тестирање спретности, као и мотивација учесника да играју као тим. “Авантура парк” се састоји од торња

Fig. 656

висине 9,7 m, великог броја препрека постављених у три различите висинске зоне, као и жице за брзи прелаз (zip line) у дужини од 110 m. Препреке су дизајниране уз помоћ мотива који асоцирају на римску војску.

Широка градска зона античког Виминацијума је још увек угрожена будућим радовима површинског копа „Дрмно", и сигурно је да постоји велики број античких грађевина које ће морати да прођу кроз процес измештања са својих оригиналних локација у заштићен простор Археолошког парка Виминацијум. Атракције као што су водени точак и процес подизања камених блокова, заједно са остацима аквадукта, оближњим римским вилама, измештеним опекарским пећима и римским вртом део су планиране презентације историје античког Виминацијума у оквиру *Лимес парка*. Овде посетиоци и данас кроз различите радионице уживају у оживљеној историји, уче елементе античког занатства и грађевинарства, пољопривреде и технологије. Заједно са смештајним и спортско-рекреативним капацитетима комплекса, овај део простора Археолошког парка Виминацијум данас привлачи велики број деце, младих и одраслих кроз спортско-рекреативне, пословне, забавне и едукативне активности.

## ПАРК МАМУТА У ОКВИРУ АРХЕОЛОШКОГ ПАРКА ВИМИНАЦИЈУМ

Први скелет мамута надомак Археолошког парка Виминацијум пронађен је у лето 2009. године, радом рударске механизације у површинском копу угља „Дрмно". Након конзервације на самом месту проналаска, током неколико наредних година скелет степског мамута, врсте *Mammuthus trogontherii,* био је заштићен привременом конструкцијом.

И поред свести археолога и палеонтолога о томе да функционисање првог суседа Археолошког парка Виминацијум, грандиозног површинског копа, једног дана неће више бити могуће уз опстанак скелета *in situ*, све време су разматране могућности његове сталне презентације у оквиру овог индустријског амбијента. Са изненадним проналаском остатака скелета, односно појединачних костију још неколико мамута исте врсте у копу 2012. године, и нове бриге коју су они донели, а у смислу њихове заштите, као изводљиво и презентационо привлачно решење наметнуло се измештање свих до тада пронађених скелета у један простор, а са сврхом њихове обједињене заштите и презентације. Скелети пронађени 2012. године су убрзо измештени на сигурну локацију у оквиру Археолошког парка Виминацијум, док је скоро савршено очувани скелет из 2009. године, у пролеће 2014. године, током грађевинско-технолошког подухвата пренет у једном блоку на простор смештен уз саму границу заштићеног подручја археолошког налазишта Виминацијум, односно уз коначну ивицу напредовања површинског копа, намењен будућој савременој презентацији свих скелета.

Измештање скелета пронађеног 2009. године је изведено израдом недеформабилне платформе димензија 400 x 600 x 100 cm испод слојева земље на којима је скелет лежао, уз поступак подбушивања, након чега је употребом механизације овај јединствени саркофаг пренет у већ припремљен простор. Пројектовање простора за излагање мамута је прошло кроз више фаза, а понуђено је неколико идејних решења. Усвојено је оно које је успело да нови просторни елемент Виминацијума, потпуно различит од постојећих, интегрише у археолошки парк, без стварања конкуренције презентованим римским грађевинама и без доминације над осталим вредностима подручја, што је с обзиром на важност ових палеонтолошких налаза и могућност њиховог монументалног излагања, могло постати стварност. Решење је подразумевало излагање свих скелета унутар земљаног ископа изнад кога би била изведена заштитна конструкција чија би завршетак био незнатно изнад висине садашњег тла, и која би тако заштитила, али и сакрила изложбени простор у односу на околни терен. Након изградње конструкције изведени су додатни поступци конзервације скелета, док су кости других праисторијских животиња пронађених приликом ископавања скелета мамута остале заштићене у депоима Археолошког парка Виминацијум. Њихова презентација представља нови изазов у дизајну постојећег изложбеног простора који управу парка чека у будућности.

Fig. 657



Заштитна конструкција, изведена употребом лучних носача од лепљеног ламелираног дрвета распона 22 m изнад земљаног ископа, укупне је ширине 31,5 m и дужине 40 m. Ствара унутрашњи простор чија висина испод лукова износи 4,7 m, затварајући укупну изложбену површину од око 1.200 m², док је изнад ње изведен зелени проходан кров, преко кога природна светлост допире у простор током дана и осветљава га. Простор је задржао своје зидове и под од земље, односно изворни изглед земљаног ископа. Као подземни простор носи асоцијацију на традиционалну подземну експлоатацију угља на територији села Костолац, која је у оближњем окну трајала у XIX и XX веку. Осим употребе старих железничких прагова из површинског копа „Дрмно“ за потребе осигурања мањих земљаних косина, сам улаз у простор је пројектантски решен као портал налик улазу у рударско окно подземног рудника, а коме се приступа путем кроз амбијент налик природном кањону. Око изложбеног простора са заштитном конструкцијом, уређен је простор са зеленилом у виду дендролошке збирке у којој се налази и Гинко билоба *(Gingko biloba),* дрво старо више стотина милиона година, и дечјим игралиштем са централном фигуром дрвеног мамута у природној величини. Сви поменути садржаји данас заједно чине Парк мамута у оквиру Археолошког парка Виминацијума, који се простире на површини од око 10.000 m².

Ради делимичног повратка аутентичности контекста у коме су скелети пронађени, а која је морала бити изгубљена самим измештањем, са скелетима су пренети и слојеви тла испод њих, а сам изложбени амбијент је материјализован донетим геолошким слојевима из непосредне близине места налаза скелета. Приликом измештања скелета пронађеног 2009. године очуване су позиције свих његових костију, а током његовог постављања у будући изложбени простор било је важно очувати оријентацију идентичну оној у којој је пронађен. Постављање свих скелета у ниво испод данашњег тла их је приказао у просторном контексту наизглед веома временски удаљеном од данашњег и на тај начин допринео стварању осећаја постојања једне друге врсте аутентичности изложбеног простора код посетилаца.

**Fig. 658**

Као један од просторних сегмената Археолошког парка Виминацијум, Парк мамута пружа интегрисану заштиту и презентацију геолошког и палеонтолошког наслеђа кроз његову интерпретацију. У њему су, путем одабраног начина излагања скелета мамута, приказани неки од елемената важних за разумевање живота ових животиња код посетилаца. Начин презентације представља синтезу музејског и *in situ* излагања. Изложбени простор је једна врста музејске целине, с обзиром на то да су скелети измештањем постали музејски експонати, али материјализација ентеријера и третман скелета нас приближавају *in situ* презентацији која „смањује потребу за додатним садржајима и вештачким стварањем доживљаја", углавном неопходним у музејском излагању.

Површински коп „Дрмно" је врло значајан палеонтолошки локалитет, али је активност експлоатације угља ради производње електричне енергије на овом простору учинила опстанак скелета мамута у самом копу неодрживим у 2014. години, што је случај и данас са самим геолошким слојевима копа који представљају вредно геолошко наслеђе. И поред тога, требало би размислити о некој могућности делимичног очувања овог природног наслеђа данашње стишке равнице уз реку Дунав, препознати га као важан сегмент у плановима развоја површинске експлоатације у оквиру Костолачког угљеног басена, и учинити да се у неком облику сачува и презентује научницима и туристима, заједно са изузетно значајним културним наслеђем овог предела.

## НАЈВАЖНИЈИ РЕЗУЛТАТИ ПРОЈЕКТА ОКТОБАР 2003 - ДЕЦЕМБАР 2019

**Локалитет**

Важни археолошки локалитети су заштићени и представљени посетиоцима: 1) меморија; 2) северна капија војног логора; 3) јавно купатило; 4) маузолеј источне некрополе; 5) амфитеатар са бедемом и капијом града; 6) аквадукт са пратећим објектима; 7) опекарске пећи. Изграђени су савремени објекти за посетиоце и истраживаче: 1) тоалети; 2) таверна са сувенирницом; 3) Археолошки научно-истраживачки центар (Domus Scientiarum Viminacium); 4) Парк мамута; и 5) Лимес парк са Авантура парком.

*Domvs Scientiarvm* – већи део објекта у потпуности је завршен, представљен јавности и уврштен у један од објеката који се обавезно обилазе приликом посете археолошком парку Виминацијум.

Обезбеђена је двадесетчетворочасовна чуварска служба (12 чувара) и уведен двадесетчетворочасовни видео надзор.

На Виминацијуму је запослено 20 младих људи из околних места.

**Туристичка промоција**

Изведен је пројекат туристичке сигнализације из свих путних праваца ка Виминацијуму.

Посета Виминацијуму уврштена је у бициклистичку руту Атлантик – Црно море као пункт Д210.

Израђен је већи број копија римског златног и сребрног накита и фибула.

Израђене су копије римских посуда и лампи.

Осмишљена је игрица за децу „Мистерија императорове смрти" (на немачком, енглеском и српском језику) и у продаји је већ друго издање.

Снимљен је телевизијски филм „*Viminacium lumen meum*" (енглески, српски језик).

Израђен је мултимедијални CD Виминацијум (немачки, енглески, српски).

**Важна археолошка ископавања:**

Истражен је и делимично реконструисан римски амфитеатар са 7.300 места за седење.

Истражени су и премештени на нову локацију у оквиру археолошког парка, римски акведукти у дужини 1700 метара.

Истражен је и премештен на нову локацију у оквиру археолошког парка, објекат за водоснабдевање (*Castellum Aquae*).

Истражена је римска улица са поплочањем из IV века.

Истражен је простор око бедема легијског логора и то од северне (*Porta Praetoria*) до западне капије (*Porta Principalis Sinistra*).

**Свечаности, концерти, научни скупови, лабораторије на Виминацијуму:**

У јуну 2003. године презентација начина сахрањивања у Маузолеју.

У октобру 2006. године отворен Археолошки парк Виминацијум.

У јулу 2007. године у оквиру светске манифестације „Save the Earth", одржан је концерт групе „Van Gogh" и „Revised EKV". Концерту је претходио римски фестивал у току кога су посетиоци заједно са археолошком екипом били обучени у римске одоре.

У августу 2008. године организован је концерт светске оперске диве Еме Шаплен (Emma Shapplin).

У децембру 2008. године први пут у новим просторијама *Domvs*-а организована је тзв. „Наука за све" („Scienza per tutti") у сарадњи са универзитетима у Анкони и Болоњи.

У септембру 2009. године одржана је фестивал вина, рибе и тамбураша под називом „Искре у чаши".

У октобру 2009. године одржан је концерт Студија Алектик који је први пут директно преношен преко Интернета.

У септембру 2010. године одржан је међународни симпозијум о античкој керамици „Rei Cretariae Romanae Favtores" са учесницима из целог света.

У септембру 2011. године одржан је IX регионални самит UNESCO под називом „Савремена уметност и помирење" коме су присуствовали бројни председници и министри земаља југоисточне Европе.

У октобру 2012. године одржан је међународни симпозијум о културном наслеђу "Archaeological Heritage – its Role in Education, Presentation and Popularization of Science".

У марту 2013. године у оквиру међународног пројекта OpenArch чији је учесник пројекат Виминацијум, направљен је експеримент – сађење винове лозе на начин како је то рађено у римско доба.

У марту 2013. године у оквиру међународног пројекта OpenArch чији је учесник пројекат Виминацијум, направљен је експеримент чији је циљ био сазнати начин на који су спаљивани покојници у гробовима типа Мала Копашница – Сасе. За експеримент је искоришћена свиња.

У марту 2013. године у оквиру међународног пројекта T-PAS чији је учесник пројекат Виминацијум, одржана је међународна конференција.

У априлу 2013. године организован је скуп поводом међународног пројекта Danube Limes Brand, још једног међу чијим учесницима је пројект Виминацијум, на коме се окупило преко 20 најеминентнијих стручњака из области археологије римског лимеса.

У мају 2013. године поводом прославе 1700 година од Миланског едикта, председник Републике Томислав Николић, отворио је изложбу у просторијама *Domvs*-а.

У мају 2013. године поводом прославе 1700 година од Миланског едикта, председник Републике Томислав Николић свечано је отворио реконструисани амфитеатар у којем је потом изведена опера Аида – оркестар, певачи и уметници Народног позоришта из Београда са еминентим гостима.

У јуну 2013. године одржан је концерт концерт Маје Ле Ру са камерним оркестром Симфонијета.

Fig. 659

У јулу 2013. године организовано је представљање Виминацијума у Вашингтону.

У јулу 2013. године отворена је путујућа изложба фотографија – пројекат T-PAS – Аквилеја, Емона, Виминацијум.

У јулу и августу 2013. организован је „Дечји научни камп у Виминацијуму за децу узраста од 8 до 14 година.

У септембру 2013. године Виминацијум је представљен у Њујорку.

У октобру 2013. године Виминацијум је представљен у Чикагу.

У октобру 2013. године Виминацијум је представљен у Бостону.

У октобру 2013. године организован је други скуп поводом међународног пројекта Danube Limes Brand са многобројним учесницима из земље и иностранства.

У новембру 2013. године одржан је годишњи скуп истраживача Археолошког института.

У фебруару 2014. године Виминацијум је представљен у Лондону.

У мају 2014. године Виминацијум је представљен у Сан Франциску.

У мају 2014. године Виминацијум је представљен у Лос Анђелесу.

У јуну 2014. године свечано је отворен Парк мамута у оквиру Археолошког парка Виминацијум.

У јулу 2014. године одржан је Danube Limes Day, а у оквиру њега концерт браће Теофиловић.

У септембру 2014. године Виминацијум је представљен у амбасади Србије при UN у Њујорку.

У септембру 2014. године Виминацијум је представљен у Будимпешти.

У септембру/октобру 2014. године у оквиру међународног пројекта OpenArch чији је учесник пројекат Виминацијум одржан је међународни симпозијум "The Impact of Dialogue with Visitors on AOAM Management".

У децембру 2014. године Виминацијум је представљен у Риму.

У јулу 2015. године Виминацијум је представљен у Валети.

У септембру 2015. године Виминацијум је представљен у Милану.

У периоду септембар – октобар 2015. године Виминацијум је представљен у Монтевидеу.

У периоду октобар – децембар 2015. године Виминацијум је представљен у Буенос Ајресу.

У периоду децембар 2015. – јануар 2016. године Виминацијум је представљен у Асунсиону.

У периоду фебруар – март 2016. године Виминацијум је представљен у Бразилији.

У периоду април – мај 2016. године Виминацијум је представљен у Сантијагу де Чиле.

У периоду јул – септембар 2016. године Виминацијум је представљен у Лими.

У периоду октобар 2016. – фебруар 2017. године Виминацијум је представљен у Ла Пазу.

У периоду фебруар – март 2017. године Виминацијум је представљен у Санта Крузу.

У периоду јул – август 2017. године Виминацијум је представљен у Прагу.

У септембру 2017. године одржан је међународни симпозијум „Circulation of the Antique Coins in South-eastern Europe".

У августу 2018. године на Виминацијуму и у Београду, у организацији Србије и НСФ-а (National Science Foundation USA) и под покровитељством Министарства просвете, науке и технолошког развоја, одржана међународна радионица за сарадњу у науци о подацима (US-Serbia & West Balkan Data Science Workshop).

У септембру 2018. године Вимнацијуму је додељена награда Жива (Živa Award 2018) за руковођење културно-историјским местом (Special recognition for leadership) у Прагу

У септембру 2018. године одржан је 24. Лимес конгрес са неколико стотина учесника из целог света.

У јуну 2019. године одржан је позоришни фестивал „Виминацијум фест – митови стари и нови“

У септембру 2019. године одржан је састанак подунавских земаља поводом номинације Граница Римског царства – Дунавског Лимеса у Србији на Унескову Листу светске баштине.

**Планови и пројекти**

Виминацијум је водећи локалитет у пројекту „Itinerarium Romanum Serbiae” који воде Археолошки институт из Београда, Министарство просвете, науке и технолошког развоја и Министарство културе и информисања.

Од 2015. године Виминацијум се налази на прелиминарној Листи Унескове светске културне баштине. Локалитет би требало да се нађе на листи са још око тридесетак локалитета из Србије у склопу међународног серијског добра „Границе Римског царства“ у склопу кога се налази више стотина локалитета на простору од Хадријановог и Антониновог зида, преко Рајне и Дунава све до Црног мора. У току су израда номинационог досијеа и стварање услова за заштиту и презентацију локалитета према међународним смерницама и препорукама за очување културног наслеђа.


**Fig. 660**

## VIMINACIUM – CHRONOLOGY

**0 year** – The Romans reached the Danube.

**The first decades of the 1st century A.D.** – The legionary fortress of Viminacium was most probably built during the first decades of the 1st century A.D.

**Trajan** – Trajan's stay in Viminacium in the winter of A.D. 98/99.

**Hadrian** – A civilian settlement developed next to the castrum, becoming the administrative, trading and industrial centre of the province. The town continued its development and soon acquired the status of a *municipium (Municipium Aelium Viminacium)* during the reign of the emperor Hadrian. Hadrian visited Viminacium twice.

**Ptolemy's *Geography*** – The first geographical reference to Viminacium is found in Ptolemy's *Geography.*

**Marcus Aurelius** – An epidemic of the plague in Viminacium during the reign of Marcus Aurelius lasted for only a short time and Viminacium swiftly recovered as a town. Marko Aurelius sent two letters to Delphi during the war on the Danube in 175.

**Septimius Severus** – During the reign of Septimius Severus, the Danubian provinces experienced a period of economic prosperity. Viminacium was the seat of the Imperial procurator, the legatus of *Legio VII Claudia*, and developed into an important military, political, economic and trade centre on the Danube Limes. The lively trade that took place here, as well as the recruitment for the *Legio VII Claudia*, led to the settlement of people from various parts of the Empire. Most of the epigraphic monuments in Viminacium date from the time of Septimius Severus, speaking about the existence of wealthy citizen class and economic prosperity. In addition to tombstones, there were more official monuments (inscriptions on altars and temples and other votive monuments), which were erected very rarely in the previous period. Prosperity is also reflected in the archaeological finds of this period, as well as in the more frequent luxurious styles of burial in a sarcophagi of wealthier people. Septimius Severus visited Viminacium on two occasions. The first time was in A.D. 196, when he was preparing for the clash with Claudius Albinus and when, in this city, he proclaimed Caracalla as Caesar and named him Antoninus (*Historia Augusta, vita Severi*, 10, 3). The next visit was in A.D. 202 when the Emperor, returning from the East, inspected the troops in Moesia and Pannonia, and the canabae in Viminacium were reconstructed on this occasion.

**Caracala** – proclaimed as caesar in Viminacium.

**Gordianus III** – The town underwent a period of exceptionally dynamic development from the second half of the 2nd century A.D. to the middle of the 4th century A.D. At the beginning of the reign of Gordianus III (A.D. 238–244), the town obtained the status of a colony of Roman citizens *(Colonia Viminacium)*. At the same time Viminacium obtained the right to mint provincial coinage. The production of the mint lasted 16 years (A.D. 239–256). As Viminacium had been the main centre of the defence of this part of the frontier, its mint occasionally struck silver imperial coins too, from Philip I to Gallienus. It is known that some of the usurpers struck their coins there too. Among them, Pacatian, who was proclaimed emperor by the Moesian legions in A.D. 248 and who had Viminacium as his capital during his short reign, deserves to be mentioned. A specific feature of the Viminacium provincial coins is that the time of minting was marked by the letters "an" (no.) and the corresponding Roman number from I to XV on the reverse side. These markings denote the local era, which does not correspond to the Roman official year. The official beginning of production was probably on October 21st, 239 A.D. (one of the jubilees of Gordianus III), which represented the beginning of a local era. The mint operated for sixteen years, from 239/240 to 254/255. Its work was interrupted twice, in 248/249 (AN X) and in 253/254 (AN XV). As yet, the reasons for these interruptions are not clear. Economic reasons could have been a cause, but also difficulties with ore supplies. It is possible that

the interruption in AN X was influenced by Pacatianus' usurpation, who minted antoniniani for his soldiers in Viminacium. Similar to this, the interruption in AN XV, during the reign of Valerian I, is ascribed to the minting of antoniniani for military needs and the war against the Sassanians. The closing of the Viminacium mint took place during the reign of Gallienus (253–268), who closed down nearly all the local mints in the Empire. The minting of bronze and bronze alloy coins was transferred to the imperial mints. During its operation, the mint produced three nominals, referred to colloquially by numismatists as the large (VB), the medium (SB) and the small (MB) bronze, the antique names of which were sestertius, dupondius and as. Those nominals were minted for fourteen emperors and their family members: Gordian III, Philip I, Otacilia Severa, Philip II, Trajan Decius, Herennia Ertuscilla, Herennius Etruscus, Hostilian, Trebonianus Gallus, Volusian, Aemilian, Valerian I, Mariniana and Gallienus. Also, several multiples are known that were minted for Hostilian, Trebonianus Gallus and Volusian, as well as for Valerian I and Gallienus. Heavier pieces, thicker and with a bigger diameter were minted for Gordian III, displaying all the features of medallions. The text on the obverse of the Viminacium coins includes the names of the above mentioned emperors and members of their families in nominative and dative. The dative form is characteristic of the 12$^{th}$ year of the local era. Depending on the nominal, imperial heads have laurel wreaths or radial crowns ("large" and "small" bronzes depict laurel wreaths, while "middle" bronzes depict radial crowns). Caesars are depicted bareheaded, while empresses usually wear diadems, except Mariniana who, being a *diva*, was covered with a veil. Reverse legends are always the same and contain the abbreviated name of the province and the city in which the coins were minted: P M S COL VIM (*Provincia Moesia Superior Colonia Viminacium*). A reverse motif which occurred every year was a standing female figure, usually interpreted as a personification of the city of Viminacium or the province of Upper Moesia. Next to the personification's right leg there is the image of a bull and next to the left one, a lion – symbols of the *Legio* VII *Claudia* and IV *Flavia*, both of which were stationed in Upper Moesia, in Viminacium and Singidunum.

**The local era of the Viminacium mint:**

ANNO I – 239/240 A.D., struck for Gordian III

ANNO II – 240/241 A.D., struck for Gordian III

ANNO III – 241/242 A.D., struck for Gordian III

ANNO IIII – 242/243 A.D., struck for Gordian III

ANNO V – 243/244 A.D., struck for Gordian III, Philip I and Philip II

ANNO VI – 244/245 A.D., struck for Philip I, Otacilia Severa and Philip II

ANNO VII – 245/246 A.D., struck for Philip Philip I, Otacilia Severa and Philip II

ANNO VIII – 246/247 A.D., struck for Philip I, Otacilia Severa and Philip II

ANNO VIIII – 247/248 A.D., struck for Philip I, Otacilia Severa and Philip II

ANNO X – 248/249 A.D., break in operation

ANNO XI – 249/250 A.D., struck for Philip II, Trajan Decius and Herennia Etruscilla

ANNO XII – 250/251 A.D., struck for Trajan Decius, Herennia Etruscilla, Herennius Etruscus, Hostilian, Trebonius Gallus and Volusian

ANNO XIII – 251/252 A.D., struck for Herennia Etruscilla, Herennius Etruscus, Hostilian, Trebonius Gallus and Volusian

ANNO XIIII – 252/253 A.D., struck for Trebonius Gallus, Aemilian and Valerian

ANNO XV – 253/254 A.D., break in operation

ANNO XVI – 254/255 A.D., struck for Valerian I, Mariniana and Gallienus

The secondary imperial mint in Viminacium was, most likely, established during the reign of Philip I (244–249) and was especially developed during the reign of Trajan Decius (249–251). It operated until the very end of the common reign of Valerian I and Gallienus (257). Pacatianus' antoniniani were also minted here, as he usurped the crown in the Danube provinces (in 248). The mint of antoniniani in Viminacium did not operate with continuity, since it represented a secondary mint for occasional series and covered the needs of the army stationed along the Danube. Undoubtedly, during the single year of usurpation by Pacatianus, in the capital of the province Upper Moesia, the provincial mint of bronze coins was turned into a mint of antoniniani. This is clearly reflected in the lack of year X of the provincial minting and in the presence of antoniniani minted in the name of Pacatianus. The silver mint also issued two ephemeral series in the name of Philip II. During the reign of Trajan Decius, until the end of 250 and due to the war by this emperor against the Goths in Lower Moesia and Thrace, its production was enlarged. The antoniniani mint also operated after the provincial mint was closed (in 255), until 257, in order to secure payment for the army in the provinces along the middle and lower Danube valley.

**Pacatian** – During the 3rd century, the town was at the centre of a power struggle. Pacatian used the town as his capital during his usurpation, from April 248 to April–May A.D. 249.

**Trajan Decius** – The Viminacium troops supported Trajan Decius in the civil wars.

**Hostilian** – Hostilian stayed in Viminacium from January to November 251 A.D. Viminacium played a significant role in 251 A.D., during the stay of Trebonianus Gallus and Volusian, and then Herennia Etruscilla and Hostilian, who died of plague in the town.

**Ingenuus** – Viminacium was connected to an unsuccessful usurpation when Ingenuus tried (in A.D. 258-259) to overthrow the imperial throne of Gallienus. Before the rebellion, Ingenuus was the procurator of the united provinces of Upper Moesia and Lower Pannonia, also residing in Viminacium, and was finally defeated by Gallienus in a battle near Osijek (Mursa) in late 258 or early 259. The Upper Moesian legions remained loyal to Gallienus, and the *Legio VII Claudia*, whose legionary camp was in Viminacium, was awarded the honorary title *Pia Fidelis*, as evidenced by Gallienus' coin minted in Milan (Mediolanum) in 258.

**Gallienus** – The revolt was quelled, and it seems that Gallienus brutally punished the citizens of Viminacium too. Viminacium lost all of its rights on this occasion and was maybe burned and destroyed completely.

**Carinus** – Viminacium was, for the last time, involved in the civil war between Diocletian and Carinus. The decisive battle took place in the vicinity of Viminacium or Margum.

**Diocletian** – The Diocletian's decrees (*subscriptio*), as well as his visit to Viminacium, took place in the periods of August 8 – September 1 293 A.D., and September 26 – October 1 294 A.D.

**Constantine I** – Constantine's first visit to Viminacium was on May 25th, 321 A.D. and his second visit happened on August, 4th, in 334. Due to the unstable political situation, Constantine stayed from 317 to 321 A.D. in Pannonia Secunda, Moesia Prima, Dacia Ripensis and Moesia Secunda. The city was an important meeting place at the end of July – beginning of August in A.D. 337 between Athanasius of Alexandria, on his return from exile in Trier and Emperor Constantius II, who led military operations against the Sarmatians at that time. On 9th September 337, three of Constantine's sons, Constantine II, Constantius II and Con-

stans, held a meeting in Viminacium declaring themselves augusti. Constans received the administration of Illyria, Italy and Africa. In 337 or 338, Constans met with St. Athanasius in Viminacium, who was on his way to Alexandria from exile in Trier. On the occasion of these events, the proclamation of augustus, and/or the meeting with St. Athanasius, Constans ordered, in the New Year of 340, a ring of allegiance to Emperor Constans ("fidelity ring"), found at Viminacium, to be made.

**Constantius II** – Constantius II visited Viminacium twice – in A.D. 337 and in 358.

**Constantine II** – Constantine II issued a law in Viminacium, on June 12th 338 (Cod. Theod. X 10. 4).

**Amantius** – The bishop *Amantius*, signee of the acts of the Synod of Serdica in 343, probably represented by one of his priests, *presbyterus Maximus*, was, together with the majority of the bishops from Illyricum, against the main Arian representatives in the Balkans.

**Cyriacus** – Bishop Cyriacus, mentioned in 356 in *Atanasius Epistola contra Arianos,* was possibly on the Episcopal seat of Viminacium, even though this is not precisely stated in the source.

**Iovian** – Another *subscriptio*is connected to Iovian's trip to the Orient and a visit to Viminacium on November 27th, 363 A.D.

**Episcopate in Viminacium** – Viminacium was the residence of one of the four episcopates in Moesia, in A.D. 365.

**Gratian** – Gratian was the last Roman emperor to visit Viminacium, in either A.D. 381 or 382.

**Pope Celestine I** – An unnamed bishop of Viminacium from the first half of the 5th century was mentioned in one letter to Pope Celestine I (424).

**The Huns –** The Huns conquered Viminacium in A.D. 441. The town was completely destroyed in A.D. 441–443 when the Huns, led by Attila, demolished all towns and forts along the Danubian limes. Its final destruction took place during the Avarian-Slavic invasion. The town was never again restored.

The eastern part of the Empire was already, from the second quarter of the 5th century, faced with the growing threat from the Huns, who were advancing towards the Danube frontier. The gravity of the newly emerged situation is evidenced by the fact that Theodosius II, from 430, had to pay the Huns an annual tribute which, in the years that followed, only ever increased. Nevertheless, it appears that the Huns were intent on destroying the Danube Limes in order to facilitate their incursions into the Roman territory. Thus, in A.D. 441, at a time when the Eastern Empire's army was engaged on the other side, they raided across the Danube frontier. In this invasion, Pontes, Viminacium, Margum and Sirmium fell. The incursion was not confined to A.D. 441, but hostilities continued until A.D. 443, by which time Pontes (for the second time), Naissus, Serdica and Ratiaria had been destroyed.

**Justinian** - After its destruction in A.D. 441, Viminacium was restored as a military camp for a short period of time during Justinians's reconstruction of forts. In Justinian's Novel XI, from 535, we find that the city fell under the jurisdiction of the Archbishopric of Justiniana Prima. At this time, as Procopius informs us, the renewed Episcopate was raised in the range of Metropolitanate.

**The Avars** – The Avars easily conquered Viminacium in A.D. 584.

**Teophilus Simocata** –Viminacium was mentioned for the last time by Teophilus Simocata during the first few decades of the 7th century.

## GLOSSARY

**ALEXANDER**, of Lycopolis in Egypt. Lived in the second half of the 3rd century. After converting to Christianity, he became a bishop. His work is very important for understanding Gnosticism on the basis of his preserved paper against the learning of the Manicheans, written before his conversion to Christianity.

**AMANTIN** (L. *Amantinus),* bishop of Viminacium, confirmed by Hierocles. He was invited to the Council of Serdica, but did not participate. However, one of his priests (*per presbyterium Maximum*) was present. It is still questionable whether immediately before or after Amantin became bishop Cyriacus, the one who was described by St Athanasius in the book *Epistola contra Arianos*, in 356, as *Cyriacos Mysiae.*

**AMBROSE** (L. *Ambrosius*), c. 340–397, a Latin ecclesiastic writer, born most probably in Trier. He was initially a senior Roman public servant, and became bishop in Milan (*Mediolanum*) in 374. He opposed Arianism. His known works are *De officiis ministrorum* and 12 preserved hymns. The ecclesiastic music that he wrote is still known as Ambrosian music. Historicaly significant are the letters that he had sent to the emperors Valentian II and Theodosius I. As a bishop, he baptised the famous Augustine. He is also honoured as the founder of the cult of the Virgin.

**AMIAN MARCELIN** (L. *Amianus Marcelinus*), Roman historian. Lived in the second half of the 4th century A.D. By origin, a Greek from Antioch on the Orontes, he participated in most of the wars of that period as an officer. He wrote 31 volumes on the history of Rome from Nerva (A.D. 96) to the second half of the 4th century. Unfortunately, only 18 volumes remained preserved. He had a neutral attitude towards Christianity.

**AMPHILOCHIUS** (Gr. *Αμφίλοχος*), Greek rhetor from Cappadocia. Lived in the 4th century and was the bishop of Iconium and the region of Lycaonia. He was converted to Christianity by his cousin Gregory of Nasians. Out of his works, 8 sermons, theological songs and a pamphlet against the apotactic sect have been preserved.

**AMPHITHEATRE** (L. *Amphitheatrum*), a construction typical of Roman architecture – a double theatre. An oval building with rising tiers of seats (*cavea*) around an open space called the arena, assigned primarily to gladiator fights. Smaller amphitheatres in some legionary camps were built of wood, while important towns had stone structures, or structures built of stone and wood. Some amphitheatres within the walls of the bastion were used during sieges as centres of last defence in Late Antiquity.

**ANASTASIOS SINAITES** lived in the second half of the 6th century and died in the first decade of the 7th. A monk from Mount Sinai, he travelled around Egypt and Syria, organising lively debates against heresy. His principal work is the book *Travels – a manual for fighting heresy,* mainly against monophysitism.

**ANONIMUS VELESII**. Two Latin fragments are connected to him, the first one from the 4th century, of pagan character, and the other one from the 6th century, of Christian, antiarianist character. The first fragment covers the time of Constantine (293–337), and the second the time of Odoacer (474–526).

**ANTEPENDIUM** (nl. *antependium*) scenarios with curtains which have a function of an interior and also represent one of symbols of sublime nature; determines an optical impression of the room and its parts.

**ANTIOCH** (Gr. *Αντιόχεια),* one of the three most important cities in the eastern part of the Roman Empire, and the capital of the Roman province of Syria. Established in 300 B.C. by Seleucus I. The seat of one of the five early Christian eparchies, and well known for the Antioch School, which had a leading role in the churches of Syria and Palestine.

**APOLLINARIOS** (or APOLLINARIS), c. 310–390, from Laodicea in Syria. Became bishop around 360. At the Ecclesiastic Council of Constantinople he was condemned for preaching that Christ adopted a human body and soul, but not the human spirit. He wrote comments on the Old and New Testament and apologetic papers, but most of his works were destroyed. Only one rendition of 150 psalms has been preserved.

**APULEIUS** (*Apuleius*), 2nd century, from North Africa (*Madaura*). He wrote the only completely preserved Latin novel, Metamorphosis (*Metamorphoses*).

**AQUA VITA** (L. *aqua vitae*) the water of life; holy water; plays an important role in Christianity, in which water possesses a godly power for cleaning all sins; as well as in Christian churches, stone vessels filled with holy and blessed water were also found in Babylonian temples.

**AQUEDUCT** (L. *Aquaeductus*), water supply system characteristic of Roman architecture. It consists of built conduits, plumb tubes, sediment basins and water towers (*castellum aquae*).

**AQUILEIA**, town in Northern Italy. The process of Romanisation spread from Aquileia to the north and east of the Roman Empire.

**ARBOR VITA** (L. *arbor vitae*) the tree of life; it was situated in the middle of the Garden of Eden, together with the tree of comprehension good and evil. For Christianity, the idea of a tree which gives immortality is bound with a cross (which was made of wood) on which Christ himself was crucified.

**ARCOSOLIUM** (L. *arcus*, arch, *solium*, tomb coffin made of stone); usually describes a well made old Christian tomb in catacombs, with an arch.

**ARCUS MAIOR** (L. *arcus*, arch, *maior*, main); originally an arch above the altar and a favourite place for the oldest church iconographies; triumph arch; main, front, wall, sometimes a semi round arch on buildings.

**ARIANISM**, a doctrine in Christian theology propagated by Arius of Alexandria during the 3rd and 4th centuries A.D. It was based on the belief that Jesus Christ is a man, not equal to God the Father, contrary to the belief of the Holy Trinity, which dominates in Christianity today. The Council of Nicaea, in 325, condemned Arianism as heresy. The fight against Arianism lasted until the 8th century, as many barbarian tribes (primarily Vandals, Ostrogoths, Visigoths, Burgundi and Langobards) were Chistianised according to the Arianist doctrine. On the other hand, resistance to the Nicaean decision was given by some Roman emperors too, primarily Constantius II, who was an ardent adept of the Arianist teaching.

**ASKLEPIOS**, the Greek god of medicine. In Roman mythology he is called Aesculapius. Most often his symbol is a stick with a wound snake, but sometimes one can find a cock, dog, goat, fir-cone, bay-wreath or phial too.

**ATRIUM**, the central yard in the middle of a Roman house, usually with a peristyle, with walls around, providing privacy for the family. From the atrium one enters into all rooms of the house. In the middle stands a basin (l. *impluvium*) for the collection of rainwater from the roof. The Atrium is also the space where the house altar is most often located (l. *lararium*).

**AUGUSTINE** (L. *Aurelius Augustinus*), 354–430, the most significant Latin ecclesiastic writer, born in Taragosta (Anaba today), Numidia. In his early years he had an eventful life, even engaged in Manichaeanism for some time, then in neo-Platonism. He was baptised by Bishop Ambrose in Milan in 387. Of his numerous theological and philosophical treaties the significant ones are *De doctrina Christiana, Confessiones, De Trinitate, De civitate Dei,* and *Siloloquia.* His style is heavily influenced by the ancient teaching and knowledge of ancient rhetoric.

**AURELIUS VICTOR**, Roman writer and public servant from the 4th century, originating from North Africa. He is the author of the renowned history of emperors (*Caesares*) from Augustus to Constantius, up to 360. There are two editions concerning the period before Augustus (*Origo gentis Romanae*) and after Constantius (*Epitome de Caesaribus*), but he did not write them.

**AUXILIA**, auxiliary units of the Roman army. They were recruited from the population of the Roman provinces who did not enjoy Roman civil rights. After completing military service, the veterans obtained Roman civil rights, which was confirmed by special certificates. Units, called cohorts, were created with 500 (*cohors quinqenaria*) or 1,000 (*cohors milliaria*) soldiers. They were mostly cavalry units, and seldom units consisting of archers or soldiers with slings. As units of lower quality they were paid much less than the legionaries.

**BEŠKA**, Archaeological site, a roman cemetery in the province *Pannonia Inferior*, in late antiquity province *Pannonia Secunda.*

**CALIGA** (L. *caliga*, a boot); a type of soldiers' boot, *caligati milites* or just *caligati* describes simple soldiers (*Suetonius*).

**CANTHARUS** a two handled vessel in the shape of a basket.

**CARBATINA** (L. *carbatina*) a type of shoe made of leather and worn by soldiers.

**CATACOMB** (nl. *catacumbae*); *ad catacumbas* originally described an early Christian graveyard placed outside Rome at the *Via Appia* road, now the so called "di San Sebastiano" area; underground corridors are sometimes kilometres long and in them, the first Christians were buried; the most famous catacombs are in Rome (*Commodilla, Domitilla, S. Calisto, Priscilla*), Naples, Jerusalem and Syracuse.

**CAUTERIUM** (Gr. L. *cauterium*) a small tool used to paint on wooden planks in the encaustic technique.

**CARACALLA'S EDICT** (L. *Constitutio Antoniniana*), the document adopted in 212, by which Emperor Caracalla (*Marcus Aurelius Antoninus*) assigned Roman civil rights to all free citizens of the Empire. It is one of the most significant legal acts from the imperial period.

**CARNUNTUM**, Roman legionary fortress and town, today Petronel, near Vienna.

**CASSIUS DIO COCCEIANUS**, c. 150–235, born in Nicaea, Bithynia, a senior civil servant in Rome. Wrote the history of Rome in 80 volumes, from the founding of Rome to A.D. 229. Unfortunately, only fragments of his works have been preserved.

**CASTELLUM**, a smaller military camp with a garrison housing auxiliary troops.

**CASTRUM**, a Roman legionary fortress. Legionary fortress were built according to a predetermined plan. Their base is rectangular, but their size varied depending on the terrain and the number of units in the garrison. In the period of the early Empire, it was common to have two legions in one fortress. After the rebellion of troops along the Rhine Limes, Emperor Domitian forbade the practise of several units as a garrison in one fortress, aiming to decrease the possibility of mutiny by the soldiers. On all four sides of the ramparts were gates: *porta praetoria* and *porta decumana* (located in the middle of the shorter sides of the camp), *porta principalis sinistra* and *porta principalis dextra* (located on the longer sides of the fortress, at 1/3 of the length of the rampart, seen from the *porta praetoria*) Two streets (*cardo* and *decumanus*), connecting the gates, intersected in front of the *principium* (command post). Beside the *principium*, the fortress had the *praetorium*, hospital (*valetudinarium*), barracks for legionaries, stables etc.

**CAESAREA**, town and port in ancient Palestine, built by Herod the Great.

**CLAVUS** (L. *clavus*); a garment decoration, usually on a tunica.

**CLEMENS** (*Clemens*) from Alexandria, 2nd century, the first Christian scientist. Only the following of his works remain: Warning, Paidagogos, Tepihe (*Στρωματες*).

**CLIPEUS** (L. *clipeus*, usually *clipeum*, also *imago clipeata*); medallion, a bust carved or modelled in a circle.

**CODEX THEODOSIANUS** (*Codex Theodosianus*); a collection of general constitutions published in 438. Parts of this work were already written during the reign of Constantine the Great.

**CONSTANCE** (L. *Tomis*) the capital of the province Scythia Minor (*Scythia minor*).

**CONVERSUS** (L. *conversus*) convert, a person who converted from one faith to another.

**CORINTHUS** (L. *Corinthus*) the capital of the province of Achaia (*Achaia*).

**CORNELIUS TACITUS** (c. 55–116/120), the greatest Roman historian. Originating from a family of renown, he held high positions in his career as a civil servant. He was praetor in 88, and consul in 97. Under Emperor Trajan he was proconsul of the Roman province of Asia. His works were published in A.D. 97, only after the death of Domitian. His main works are *Historiae*, describing events from A.D. 69 to 96, preserved, unfortunately, for the first two years only, and *Annales ab excessu divi Augusti.* This work was written in Tacitus' old age and covers the period A.D. 14–68.

**DALMATIA**, Roman province. The name was given by the Flavians. Before that period it was called *Superior Provincia Illyricum.*

**DACIA**, a barbarian kingdom, later a Roman province, north of the Danube, opposite Moesia, covering roughly the area of present day Romania. It reached its peak under King Decebalus by the end of the 1st – beginning of the 2nd century A.D., when the pressure of the Dacians on the Roman Danubian provinces became unbearable. Domitian and Trajan waged great wars against them. Trajan finally conquered Dacia in 107 and turned it into a Roman province. Dacia was very rich in ores, primarily gold. However, a crisis during the 3rd century weakened the Roman defence in this area and, at the beginning of the eighth decade of the 3rd century, the Romans retreated from Dacia, leaving it again to the barbarians.

**DIONYSUS** (Greek *Διννισος*) or Bacchus, God of vegetation, fertility and the renewal of nature. His favourite plant is ivy; Dionysus' holy animals are the panther and lion, very rarely also the peacock.

**ECCLESIA CELESTIS** (L. *ecclesia caelestis*) Heavenly church.

**ECCLESIA MILITANS** (L. *ecclesia militans*) fighting, militant, earthly church.

**EDICT OF MILAN**, the document issued jointly by Constantine I the Great and Licinius as *Augusti* in 313. By this decision, freedom of religion was allowed and Christianity became equal to other religions. Persecution of Christians was banned and their seized property had to be returned.

**ENCAUSTICS** (Gr. to heat or burn in); painting technique of the Greeks and Romans, in which colour was mixed with melted wax and used for painting on wooden boards.

**EPIPHANY** showing, revealing and hiding of the eternal secret; in the East, this word is used for the appearance of the first morning light; in Roman times, it was used to describe the appearance of God and the coming of the emperor to a province; in Christianity, a holiday is named with this word, which is celebrated at the 6th of January.

**EPITOME IULIANI** Abridged Latin translation of Iustinian's novels from 535–555, made by Julian (*Iulian*), a law professor in Constantinople. This text is extremely important for the understanding of legislation in the 6th century.

**EUCHARIST** (Gr. *eukharistia*, acknowledgment, gratitude); the holiest act in the Christian cult as the eternal element of God and the people. Although it did not undergo larger changes during the centuries, in the early Christian period it was celebrated only during the night between Saturday and Sunday at a very special place. In the 3rd century it was practiced outside the hall, and after the Milan Edict it was carried to the sick in a special box, called an *arca* or *arcula* (little chest).

**EUNAPIOS**, writer from Sardes, who lived in the 4th and first half of the 5th century (c. 345–420). His historical works exist in fragments only and represent a continuation of the writings of the historian Dexippos, namely from 270 to 404.

**EUSEBIOS** (*Eusebios*) a bishop from Caesarea (from about 260 to 339), Greek church writer; the author of the first history of the Christian church. He wrote ten books in which he gathered rich material. He especially quotes a large number of early Christian ideologies.

**EUTROPIUS**, lived in the 4th century and was a senior civil servant at the court of Emperor Valens (364–378), with the title of *Magister Memoriae.* He wrote a short Roman history, from Romulus to Emperor Jovian, 364. This small book contains the history of wars only and is much liked and often translated.

**GEM** (l. *gemma*), processed semi-precious stone (onyx, sardonyx, agate, chalcedony etc) implanted in jewellery made of precious metals. They often contain various relief carved representations of people, animals, divinities, or scenes from mythology. If this representation is convex, the gem is called a cameo, and if it is concave, an intaglio.

**GARLAND** (Gr. *στεφος*, l. *corona*) a wreath made of leaves and flowers; marks consecration, holiness and honour.

**HERA** (Gr. *Ηρα*); one of the oldest Greek deities; the mistress of heaven and protector of marriage (*Gamelia*), house, town (*Akraia*) and the whole earth. Animals dedicated to her are the cow, peacock and cuckoo.

**HIEROCLES**, Byzantine grammarian who lived in the 6th century A.D. According to official documents, he made a geographical list of provinces of the whole Empire in 535 and called it *Synekdemos.* In his work, he lists 64 provinces and 923, i.e. 935 towns.

**HIERONYMUS**, c. 348–420, Latin ecclesiastic teacher from Stridon in Dalmatia. His most important work is the translation of the Bible, as well as the book *De viris illustribus*, the first Christian history of literature.

**HILARIUS**, Latin Christian writer, born in Poitiers (*Pictavium*), the most significant opponent to Arianism and the first dogmatic in the West. He lived in the 4th century, and his most important work is *De Trinitate.*

**HISAR** (L. *Diocletianopolis*) one of the bigger towns in the province of Thrace (see Thrace).

**HYPOCAUSTUM**, the system of floor heating. The floor in the building is raised on pillars, separated from the ground. Stoves outside the building heat the air which then circulates between pillars, entering the building through holes in the floor and tubes in the walls.

**ILLYRICUM** an administrative region which, after the reforms of Diocletian, consisted of three dioceses: Illyricum, Thrace and Moesia. Illyricum consisted of the following provinces: Dalmatia the First, Pannonia the First, Pannonia the Second, Valeria, coastal Noricum, Southern Noricum; the diocese of Thrace: Moesia the Second, Thrace, Scythia Minor, Hemimont, Europe and Rhodopes; the diocese of Moesia: Moesia the First, coastal Dacia, Southern Dacia, New Ephirus, Old Epirus, Macedonia the First, Macedonia salutaris, Praevalitana, Dardania, Achaia, Thessaly and Crete.

**IMBREX** (L. *imbrex*); tile; the ending of roof tiles; *angusti imbrice tecti*, low roof made of tiles.

**IULIUS FIRMICUS MATERNUS**, Latin writer from the 4th century, born in Syracuse. He is the author of a book on astrology (*Mathesis*), and a treatise *De errore profanarum religionum.* In this work he directly asks the Roman Emperors Domitian and Trajan to eliminate Heathenism.

**IUNO** (L. *Iuno*); main goddess in Roman mythology; the goddess of the Moon, protector of marriage and fertility. Her holy animals are the peacock, goose, snake and goat.

**JOSEPH FLAVIUS** (*Flavius Josephus*) 37 to 95, Jewish historian. Beside his autobiography, his following works remain preserved: The Jewish War and The Jewish Archaeology (Jewish Antiquities).

**JULIAN THE RENEGADE** (L. *Flavius Claudius Iulianus*), Roman emperor, 361–363. Because of his persecution of Christians, the church named him the Renegade (*Apostata*). He renounced Christianity and introduced the official Greco-Roman religion imbued with neo-Platonism. He wrote in Greek, and his treaties and letters have been preserved. His known works are *Symposion* and *Against Christianity*.

**KONSTANȚA** (L. *Tomis*), capital of the Scythia Minor province.

**LACTANTIUS** (*Lactantius*), Latin church writer. He came from North Africa. He was a teacher of Constantine's son Crispus. His main work is Religious Instruction (*Divinae institutiones*).

**LEGION** (L. *legio*) the largest military unit in the Roman army, consisting of elite heavy infantry (5,000–6,500 soldiers) for frontal assaults and a small unit of c. 300 cavalrymen for scouting and chasing the defeated enemy. Recruitment, as a rule, was exclusively among Roman citizens, and professional service lasted several decades. Citizens without civil rights served in auxiliary units. In the late Roman period, legions were only a shadow of the previous force as their strength was reduced to 1,000–2,000 soldiers only.

**LIMES** (L. *Limes Romanus*), the frontier of the Roman Empire with a whole set of legionary fortress (*castra*), smaller forts (*castella*), and observation towers (*specula*). All fortifications were connected by roads (*via militaris*) built and maintained by the legions.

**LOCULUS** (L. *locus*, place); long grave compartments or niches placed in several rows, one above the other in catacombs or memoriae; the fronts of the niches were closed with bricks or a stone plate, on which the name of the deceased was carved.

**MANUSCRIPT FROM LUCCA** (Lucca MS), painter's handbook from the 8th century, relying on older antique handbooks.

**MARTIALIS** (*Martialis*), from about 40 to 102, born in Bylbis in Spain. The most significant Latin epigram writer. He lived in Rome for a long time.

**MEDUSA**, Chthonian being, originating from Greek mythology. One of three snake-haired sisters, whose terrifying look turned the beholder to stone. Medusa was killed by Perseus who gave hear head to the goddess Athena who put it on her armour or shield. Her head represents a lucky charm for the bearer and should turn away evil forces and reject foes. The iconography later changed, so instead of an ugly repulsive woman in ancient Greek mythology, she was turned into a beautiful woman in Roman art, with stylised snakes as hair, and her figure is often found on jewellery.

**MEMORIA** (L. *memoria*, *memento*, to be remembered) a memorial building in and around which the deceased were buried. It was sometimes a cult place.

**MITHRAISM**, cult of the god Mithras, started in the eastern provinces and rapidly spread in throughout the Empire. It reached its peak in the 2nd and 3rd centuries A.D. It was finally wiped out with the official recognition of Christianity.

**MOESIA SUPERIOR**, Upper Moesia, the Roman province covering the larger part of today's Central Serbia, Kosovo, Macedonia down to Skopje (*Scupi*) and the western part of Bulgaria. Established initially as Moesia, it encompassed a large area south of the Danube and all the way to the Black Sea. After the division of the province, the area east of the Tsibritsa river (*Ciabros*) became another province, Lower Moesia (*Moesia Inferior*).

**MUNICIPIUM**, a town with limited autonomy, managed by Roman citizens, but with an autochthonous population too, differing from a colony, which was completely populated by Roman citizens.

**NICAIA** (L. *Nicopolis*) the capital of the province of Epirus Vetus.

**NICETA**, archbishop of Remesiana (Bela Palanka) and personal friend of Paulino of Nola. He wrote *De Psalmodiae Bono, De Vigilis,* as well as the Christian hymn *Te Deum Laudamus.*

**NIMB** (L. *nimbus*, more often aureole) a sign stressing the godly or holy character of a person; sometimes it is a glow which surrounds a very powerful person; most commonly circular, although sometimes also triangular, square or with even more angles.

**NICOMEDIA** (Gr. *Νικομήδεια*), capital of the Roman province of Bithynia, founded in 262 B.C. by Nicomedes I and built in a strategically important place, linking the Danubian provinces with the eastern ones.

**NONO** (*Nonos*); 5th century, the most significant late antique poet, born in Panopolis in Egypt. In his poem Διονυσιακτ, in 48 books he describes the history of the god Dionysos.

**NOTITIA DIGNITATUM,** state handbook and one of the most significant military documents. It is in two parts: *Notitia dignitatum omnium, tum cuilium quam militarium in partibus Orientis,* and *in partibus Occidentalis.* This handbook contains the list of all civil and military services in the Roman Empire. It is the main source of information regarding the distribution of military troops in Late Antiquity. It is generally considered to describe the situation in the Roman Empire during the reign of Emperor Theodosius I (c. A.D. 395), although there are certain opinions that it appeared in the period between 425 and 433.

**ORIGEN** (*Adamantius Origenes*); approx. from 185 to 254, from Alexandria, Clemens's pupil, the most important and most educated Greek church writer; among his works, mostly biblically historic, very little remains in Rufin's translations.

**OSENOVO** a town in the province of Moesia the Second (*Moesia secunda*).

**OSIJEK** (L. *Mursa*), a town in the Roman province of Pannonia. The decisive battle between Constantius and Magnentius took place next to this town on September 28th, 351. After this battle, Constantius II unified the Empire as it had been in the Constantine period.

**PALIUM** ( L. *palium*); Greek cloak taken over by the Romans, usually made of wool; in Christianity it is a word for a band made of white wool worn around ones neck; it is a symbol of the Pope's rule.

**PALUDAMENTUM** (L. *paludamentum*); soldiers' cloak.

**PANEGYRICI**, a collective name for eleven writers of eulogistic oration in honour of Roman emperors of the 4th century. Among them is a speech by Eumenius delivered at the reopening of the school in Autun.

**PANIS CORONA** (L. *panis*, bread) a special kind of bread in the shape of a wreath. In early Christian time it was served during the Eucharist.

**PAPYRUS FROM LEIDEN** (*Papyrus Leidensis*) a manuscript from the 3rd century, found on mummified remains from Thebes, describing a painting technique with 110 instructions.

**PECS** (L. *Sopianae*) the capital of the province of Valeria (*Valeria*).

**PENICILUS** (L. *penicillus*, i.e. *peniculus*); a special kind of brush used by the Greeks and Romans.

**PETRONIUS** (*Petronius Arbiter*) from the 1st century, the author of the famous *Saturae*, of which only some parts remain preserved.

**PHILLIPI** (L. *Phillipi*) a town in the province of Macedonia Prima (see *Macedonia Prima*).

**PHILON** (*Philon*); from Alexandria, from the first half of the 1st century, Jewish Hellenistic religious philosopher. His Greek book mostly explains the Five Books, actually the Book of Genesis.

**PLINY THE ELDER** (*Plinius Secundus*) from 23 to 79, born in Como (*Comum*), northern Italy. He wrote the famous encyclopaedia called The History of Nature (Naturalis historia).

**POLYBIUS** (*Polybios*), from around 200 to 120. B.C., Greek historian from Megalopolis in Arcadia. He wrote the History of the World, in 40 books, of which only a few remain (the first five books and fragments of others).

**PRESBYTERIUM** (L. *presbiterium*); a room for a priest, usually with several steps or columns divided from other church parts and with a special fence.

**PROCOPIUS** (Gr. *Προκόπιος*), c. 500–562, writer and senior civil servant in the 6th century. His most important work is the history in 8 volumes about the wars against the Persians, Vandals and Goths, as well as *De aedeficiis,* about Iustinian's building activities. He is also the author of the pamphlet *Historia arcana,* di-

rected against Iustinian and his army commander Balthazar. Procopius was very well educated and spoke several languages: Latin, Syrian, Gothic and Persian. He described historical events often from personal experience. His historical works are objective, but not always chronologically reliable. In language and style his model was Thucydides. He influenced a great many later Byzantine historians.

**PUBLIUS HERENNIUS DEXIPPUS**, Greek historian from the 3rd century, coming from the old aristocratic family of Kerika. He was a personal friend of the famous Oribasius. He did not favour Christianity. His main work, *Chronicles*, covers the period from the creation of the world to A.D. 270, while in *Scythika* he describes the raid of the Germanic tribes from c. 238 until 270. His style resembles that of Thucydides.

**QUINTUS SEPTIMUS FLORENS TERTULLIANUS**, c. 150–230. The most prolific Christian author, born in Carthage. Lived and worked as a lawyer in Rome where he accepted Christianity, and then returned to his birthplace to work for the church. During the first decade of the 3rd century (most probably in 209) he joined the Montanist sect. His works may be divided into the period before and after joining the sect. In his early Christian period the most important work is *Apologeticum*, and as a Montanist, his papers are *Adversus Marcionem, De Anim* and *De pudicita.*

**REKA DEVNYA** (L. *Marcianopolis*) the capital of the province of Moesia the Second (*Moesia Secunda*).

**ROTA** (L. *rota*); round garment decoration.

**SILISTRA** (L. *Durostorum*) one of the bigger cities in the province of Moesia the Second (*Moesia Secunda*).

**SOFIA** (L. *Serdica*) the capital of Dacia Mediterranea (*Dacia Mediteranea*).

**SOCCUS** (L. *soccus*); sort of house shoes, slippers.

**SOLEA** (L. *solea*); a sort of sandal covering only ones soles and usually bound with two straps. It was worn only at home; during meals (in a laying position), servants had to take masters' solea off.

**SOLIN** (L. *Salona*); a town in the province of Dalmatia (*Dalmatia*).

**SPIRA** (L. *spira*); flat bread, resembling a pretzel, i. e. đevrek.

**STOLA** (Gr. *στολ²*, L. *stola*); festive, long dress, worn by rich Roman female citizens.

**SUETONIUS TRANQUILLUS** (c. 75–150), writer, knight, advocate and secretary (*ab epistulis*) of Emperor Hadrian. Of all his biographies of Roman emperors (*De vita Caesarum*), from Caesar to Domitian, have survived, as well as fragments of his writings about illustrious people (*De viris illustrisibus*).

**SULPICIUS SEVERUS**, c. A.D. 400, Christian writer from Aquitania. His most important work is *Chronica, Historia sacra*, covering the period from Adam to A.D. 400, presenting the Old Testament and the history of the church.

**TAVLION** garment decoration, rectangular or square, usually sewn next to the hem.

**TEGULA** (L. *tegula*); roof tile, usually rectangular, in several variants.

**TETRARCHY**, form of government with four emperors, two senior (with the title *Augustus*), and two junior (with the title *Caesar*). This system of governance was introduced by Diocletian, in the hope that rulers would be able in this way to control and intervene personally in areas that they governed. With the establishment of the Tetrarchy, Rome lost its dominant position, as each tetrarch took another town for his capital. The system failed in practice soon after Diocletian stepped down.

**THERMAE**, public bath, a building characteristic for Roman culture. Used for hygienic purposes and for public gatherings. A set of complex buildings connected to a water supply (L. *aquaeductus*), with a floor heating system (l. *hypocaustum*), so that they could be used the whole year round.

**THESSALONICA** (L. *Thessalonica*) the capital of Macedonia the First (*Macedonia Prima*).

**TRICLINIUM**, The guest dining room in a Roman house. Their characteristic features were three bunks (*clinae*) around three sides of the table, while the fourth side was free so that food could be served. Guests sat in a reclined position while eating.

**VARNA** (L. *Odessos*) one of the bigger cities in the province of Moesia Secunda (*Moesia Secunda*).

**VESTA** (L. *Vesta*, Gr. Βέστα, fireplace); Vesta, the daughter of Saturn and Rea, the goddess of the fireplace, homely harmony and safety in towns and states; also the goddess of fire in the fireplace on an altar under the Pallatinus hill, always kept lit by the Vestals.

**VESTALIA** (L. *Vestalia*); a Roman festival celebrated on the 9th of June; it was dedicated to the goddess of the fireplace and safety in towns and states. It was well respected and believed to possess special powers. Vesta's holy animal was the donkey.

**VIA APPIA**, the main Roman road leading to the south, from Rome to Capua. It was built by Appius Claudius Caecus, in 312 B.C.

**VIMINACIUM** (L. *Viminacium*) the capital of the province of Upper Moesia (*Moesia Superior*), later of *Moesia Prima*.

**ZONARAS** (Gr. *Ἰωάννης Ζωναράς*), a senior civil servant in the court, as a manager of the Imperial Chancery (*protasecretis*). Through his works we find some of the lost fragments of Dio Cassius and other writers. He wrote the *Chronicle of the World*, reaching the beginning of the 12th century. This *Chronicle* has been copied many times and translated into several languages, including Serbian.

**ZOSIMUS**, a senior civil servant under Emperor Theodosius II in the second half of the 5th century. He wrote the Roman history in six volumes in Greek, covering the period from Augustus to Diocletian in a summarised style, and from Diocletian to 410 in a more elaborate style. He used reliable sources, primarily Dexippos and Eunapius. His data is reliable and his style is excellent. He is better informed about events in the East than in the West. He was not inclined to Christianity and was an adept of the traditional Roman religion.

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*AAA =Athens Annals of Archaeology*, Athena
*AAn = Archaeologischer Anzeiger*
*AAS = Arkansas Archaeological Survey*
*AECW* = Atlas of the Early Christian World, London, 1958
*AÈ = Archaeologiai Èrtesitö*, Budapest
*AEM = Archaeologisch-epigraphische Mitteilungen*
AktenVII = *Akten des VII Internationalen Kongresses für Christliche Archäologie*, Trier 5th 11th Sept., Berlin, 1965
*AN = Aqvileia nostra*, Aquileia
*ANRW = Aufstieg und Niedergang der Römischen Welt*
*AP = Arheološki pregled*, Beograd
ArhEf = *Arhaiologike Efemeris*, Athenai
*Arheologiæ = Arheologiæ,* Sofiæ
*AV= Arheološki vestnik, Ljubljana*
BASD = *Bollettino di archeologia e storia dalmata*, Split
*BJ = Bonner Jahrbücher*, Bonn
*BKV = Bibliothek der Kirchenväter*
*CA = Cahiers archeologiques*, Paris
*CArt = Cahiers d'art* I, Paris
*CIL - Corpus inscrptiorum Latinarum*
*DOP = Dumbarton Oaks Papers*, Washington
*DS* = Daremberg-Saglio, *Dictionnaire des antiquites grecques et romanes*, Paris
*Germania = Germania*, Berlin
*Годишњак СКА = Годишњак Српске краљевске академије, Београд*
IVAD = Izvestiæ na arheologičeskiæ institut, Sofiæ
*IMS* = Inscriptions de la Mésie Supérieure
*JbAC = Jahrbuch für Antike und Christentum*
*JÖAI = Jahrshefte des österreichischen archaeologischen Instituts*, Wien
*JPME = Janus Pannonius Muzeum Evkönyve*
*LCL = The Loeb Classical Library*, Harvard University Press, London, Cambridge, Massachusetts
*MDAI = Mitteilungen des deutschen archaeologischen Instituts*, Heidelberg
*PW RE* = Paulys Wissova und Kroll Realenzyklopädie der klassischen Altertumswissenschaft, Stuttgart
*RAC* = Reallexikon fur Antike und Christentum, Sachwörterbuch zur Auseinandersetzung des Christentums mit der antiken Welt, Stuttgart
*RivASA = Rivista dell'Instituto nazionale d'Archeologia e storia dell'arte*
*SJ = Saalburg Jahrbuch*, Mainz am Rhein
*Споменик = Споменик,* Београд

*Starinar* = *Starinar,* Beograd
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