

AELIA MURSA REIMAGINED: A COMPREHENSIVE STUDY OF URBAN EVOLUTION THROUGH ARCHAEOLOGICAL INSIGHTS

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Izvleček

[Nov pogled na kolonijo *Aelia Mursa*: celovita študija urbanega razvoja skozi arheološka spoznanja]

Prispevek predstavlja rimsko kolonijo Elijo Murso. Ta je ležala na reki Dravi blizu sotočja z Donavo in je bila pomembna točka ob rimskem limesu. Na začetku je prikazano slabo poznano obdobje pred ustanovitvijo kolonije. Na Hadrijanovo pobudo so mesto okoli leta 133 povzdignili v kolonijo, edino, ki jo je v regiji ustanovil ta cesar. Zgodovina raziskovanja Murse sicer sega v 18. stoletje, vendar so nedavna izkopavanja bistveno spremenila topografsko sliko in pokazala nujno po reviziji starejših predstav. Izkopavanja med letoma 2008 in 2019 so omogočila vpogled v sistem mestnih utrd in razkrila podrobnosti o obzidju, vratih in obrambnih stolpih. Zapleten kanalizacijski sistem, verjetno podprt z vodovodom, kaže napredno urbanistično načrtovanje. Raziskave ceste ob limesu in mostu v Mursi so osvetlile prometne povezave in strateški pomen mesta v regiji. V predmestjih so se prepletala poslovna in stanovanjskima območja. Skozi zgodovinske vire in nedavna arheološka odkritja se teritorij Murse kaže kot pokrajina, prepletena z mejnim obrambnim sistemom rimskega imperija. Študije pozne antike v Mursi razkrivajo njen nadaljnji pomen, zlasti v 4. stoletju, ki ga zaznamujeta vojaška prisotnost in bitka pri Mursi.

Ključne besede: Spodnja Panonija, Elija Mursa, Hadrijanova kolonija, topografija, utrdbeni sistem, kanalizacija, most, teritorij, pozna antika

Abstract

This paper explores the Roman colony of Aelia Mursa, located on the Drava River near its confluence with the Danube, an important point along the Roman Limes. Established by Emperor Hadrian to urbanise Pannonia, the city's pre-colonial era remains a mystery, explored in this paper. The city's foundation was marked by Hadrian's initiative, elevating it to a colony around 133 AD, distinct in being the only colony founded by Hadrian in the region. Although the research history of Mursa extends back to the 18th century, recent excavations have significantly altered the perceived topography of ancient Mursa, highlighting the need to revise earlier conceptions. Excavations between 2008 and 2019 have provided insights into the city's fortification system, revealing details about its walls, gates, and defence towers. The discovery of a complex sewage system, possibly supported by an aqueduct, indicates advanced urban planning. Research on the Limes Road and the Mursa Bridge elucidated the city's connections and strategic importance in the region. Studies of Mursa's suburbs revealed a vibrant urban periphery with commercial and residential areas. The territory of Aelia Mursa, studied through historical sources and recent archaeological discoveries, reveals a landscape intertwined with the Roman Empire's border defence system. The study of Late Antiquity in Mursa uncovers its continued significance, especially during the 4th century, marked by military presence and the Battle of Mursa.

Keywords: Pannonia Inferior, Aelia Mursa, Hadrian's colony, urban topography, fortification

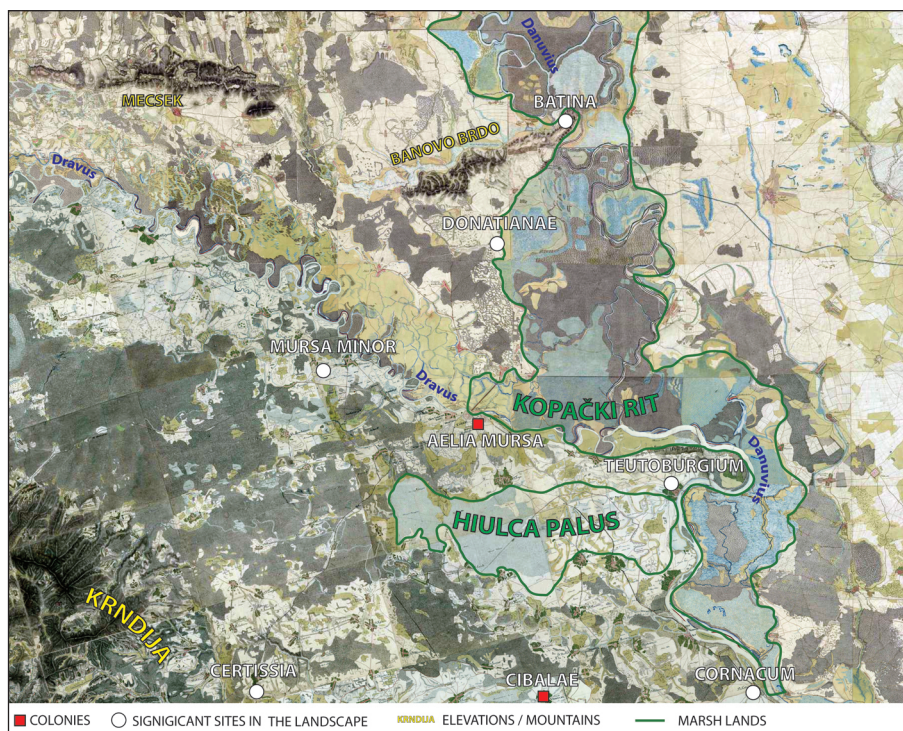


Fig. 1: Territory of Mursa on Croatia on Secret Maps (Horbec 2001).

In 2013 the *Archaeological Heritage of Ancient Mursa* project was launched by the Croatian Academy of Sciences and Arts and the Osijek Conservation Department of the Ministry of Culture of Croatia. The project involved a series of excavations that reviewed previous research and anchored more recent results in the overall scheme of the ancient city. The purpose of this article is to present new insights into the topography and developmental stages of the town. Due to the recent publication of several monographs focused on numismatics, religion, population, social analysis, and legal issues surrounding the city, this article does not delve into those subjects. Instead, it will focus on archaeological sources and new knowledge from recent archaeological research.¹

¹ The research underpinning this article was conducted as part of the *Hadrian's Pannonia: The Emergence and Development of Pannonian Cities in the 2nd and 3rd Centuries* project. The Austrian Academy of Sciences generously funded this endeavour through its Joint Excellence in Science and Humanities (JESH) programme in 2019. I sincerely thank Christian Gugl for his invaluable collaboration in this project. Additionally, thanks go to the Osijek Conservation Department of the Croatian Ministry of Culture, especially Vlatka Revald-Radolić, for their assistance in providing critical archival data.

GEOGRAPHICAL LOCATION

Aelia Mursa was a Roman colony positioned 16 km upstream on the Drava River, before it enters the Danube. It was an important location along the Roman Limes. Although the remains of the ancient city are mostly invisible today, the site covers a significant portion of the eastern part of Osijek, Croatia. The landscape around Mursa has changed considerably over time due to deforestation and swamp drainage since the 18th century (Fig. 1). However, maps from the 18th century depict the original landscape, which was characterised by extensive marshes, particularly those along the Drava and Danube. The confluence of the Drava and Danube creates an impassable swamp, which made it impossible for the Limes Road to follow the right bank of the Danube. The Limes Road had to be built away from the riverbank, and the influx of the Drava River, which disintegrates into a swamp in its lower course, presented another obstacle to constructing the Limes Road in this part. The most suitable location for building a bridge over the Drava and constructing an elevated road through the swamp was the stretch of swamp between Osijek and Bilje. Despite the drastic changes to the area's landscape over the years, the significance of Aelia Mursa as a critical point along the Roman Limes must be considered. The construction of the Limes Road overcame the challenges of building roads through impassable swamps and river inflows and played a vital role in the Roman Empire's defence.

The Polača swamp, in antiquity called the Volceian wetlands or *Hiulca palus*,² stretched from the colony to the south (Fig. 1). It is completely dried up today. In the 18th century, it still covered a significant part of the area between Osijek and Vinkovci (Cibalae). So, at the time of its foundation, Mursa was almost surrounded by swamps, which is why it is not surprising that its name is etymologically connected with the name of a swamp.³ Between the marshes to the north and south, the right bank of the Drava rose as a series of elevated terraces that were a natural corridor between the Danube and the Alps, another important strategic aspect of the position of Mursa, which was located on that corridor. It is unclear whether the Romans utilised irrigation to transform the swamplands surrounding Mursa into cultivable farmland before establishing the colony. However, given the colony's relatively late establishment, it is possible to assume that Aelia Mursa followed the example of other new settlements in provinces in this way.⁴ There is a plausible assumption that the road connecting Aelia Mursa to Cibalae, an autonomous town in the southeast, was constructed through the Polača swamp. Consequently, it can be concluded that the road would take the form of an elevated structure, much like the one observed along the Limes to the north of Mursa. Alternatively, it is also conceivable that the swamp was drained during a later phase of development of this part of Pannonia. However, such hypotheses warrant further investigation and evaluation in future research endeavours.

When considering the importance of Mursa, one must consider its strategic location to the Drava and Danube rivers. Despite the challenges posed by the hydrology of these waterways, a suitable riverport could not be established near their confluence, resulting in Osijek becoming the primary riverport for the region during the Middle Ages and modern times. Therefore, in ancient Roman times and as we see today, Aelia Mursa played a crucial role as a Danube port, offering a safe anchoring spot for ships navigating the Danube shipping route, particularly during high water periods. Moreover, it is worth noting that the shipping industry along the Drava River held a significant place in the local economy during premodern times, making Osijek/Mursa an essential port on this waterway. Therefore, Mursa's location near the confluence of these two rivers was of utmost importance, serving as a transportation hub for river traffic on the Danube and transporting goods deeper into the province via the Drava.

THE PERIOD BEFORE THE ESTABLISHMENT OF THE COLONY

The veteran colony in Mursa was established as part of Hadrian's effort to urbanise Pannonia. Before Hadrian's time, Sirmium was the only city in Lower Pannonia, while the rest of the land was empty. The Romans conquered the Andiseti tribe in the 1st century BC. The Roman army definitely took control of the Andiseti territory before 16 BC, as indicated by the context of Tiberius' Pannonian Wars, which aimed to establish peace after a rebellion in the lower Drava area. The Andiseti were listed among the peoples conquered by Augustus in an inscription in the temple of the imperial cult in Aphrodisias, which suggests that the Romans had already intervened in the Andiseti territory by 35 BC. During the Great Dalmatian-Pannonian Uprising of 6–9 AD, the Roman army suppressed the rebellion and engaged in heavy battles that caused significant shortages.⁵ These are only a few written information and material evidence about the war operations during this time. Still, two pieces of data connect the Andiseti territory with the suppression of the rebellion: the battle at the *Volcae* marshes⁶ and a hoard of 200 denars dated between 6 and 9 found in the forest between Osijek and Valpovo.⁷ After the suppression of the Great Uprising, only a few material pieces of evidence have been discovered in eastern Croatia, all found in the region of Osijek. During excavations in 1961, an Acco beaker from the early and mid-Augustan periods was found. Although this find could be dated after the suppression of the uprising, it was found in a La Tène context. Therefore, the beaker is the latest find from the Late La Tène settlement, determining its end.⁸ A whole series of random finds of coins from the early and mid-Augustan periods originates from the area of Osijek. Still, the question is whether they are evidence of the existence of a native settlement or the presence of a military installation at that time.⁹

In the eastern part of Mursa, two *stela*e were discovered dating back to the early 1st century. These stone monuments provided evidence of an auxiliary camp in Mursa before the colony's establishment. The *stela*e belong to *Niger Sveitrius*, a horseman from the *Ala II Hispanorum Arvacorum*,¹⁰ and Velagenus Ulattius, a horseman from the *Cohors II Alpinorum equitata*.¹¹ Some authors believe that the military *stela*e were from the middle and second half of the 1st century, indicating that the fort only existed in the second half of the 1st

² Dio 55.32; Vell. 2.112; Domic Kunić 2012, 41, 53, 66–67.

³ Mayer 1935, 7.

⁴ Wilson 2000b, 309–317.

⁵ Suet. Tib. 16; Domic Kunić 2012, 63.

⁶ Dio 55.32; Vell. 2.112.

⁷ Radman-Livaja, Dizdar 2010, 48, 54.

⁸ Bulat 1977a, 26; Tonc, Filipović 2010, 504, 506–511.

⁹ Pinterović 2014, 83–84; Göricke-Lukić 2018, 90–91.

¹⁰ *CIL III* 3286, 10262; Pinterović 2014 83.

¹¹ Hoffiller 1912, 2–3; Pinterović 2014 83.

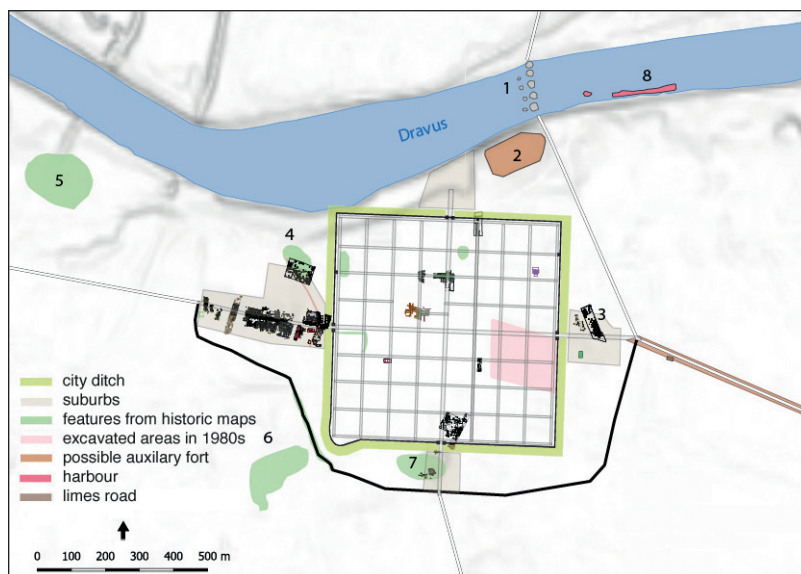


Fig. 2: Map of colony Aelia Mursa. 1 – the bridge; 2 – the plateau at Vodeničarska Street, the possible location of the Roman fort in Mursa; 3 – the pre-colonial cemetery; 4 – elevation, possible location of the amphitheatre; 5 – “the hill outside Mursa”; 6 – “Turtle Lake”, possible location of the amphitheatre; 7 – elevation next to the southern gate of Aelia Mursa; 8 – harbour.

century.¹² However, contemporary readings support the opinion of B. Lőrincz, which suggests that these stelae date back to the first half of the 1st century, possibly even the Augustan era.¹³ It is important to note that despite numerous protective excavations in almost all parts of the Osijek/Mursa site in the last 70 years, the remains of the military complex have not been uncovered. The earliest context found in Mursa is the cemetery discovered on Ban Josip Jelačić Square (Fig. 2: 3), which dates to the end of the 1st century. The Cemetery includes cinerary burials, some of which had rectangular enclosures like the Roman cemetery in Wederath-Belginum.¹⁴ As a result, these two stelae only serve as evidence of the Roman army's presence at the beginning of the 1st century, and the existence of military fortifications remains an open question that requires further archaeological evidence.

If the fort exists, the question arises about its location. Current excavations reveal that it was located off the area of a later colony. Josip Klemenc believed that the fortification in Mursa should have been found where traffic on the Drava could be monitored and the bridge could be defended.¹⁵ Therefore, the most suitable

location for the fort would have been the river terrace between the NE corner of the colony and the bridge. This oval-shaped terrace, a plateau at Vodeničarska Street, measures 192 x 145 m and rises 10 m above the river level next to the bridge (Figs. 2: 2; 10: 2). It would have been an ideal location for an auxiliary camp. Unfortunately, the area has never been excavated, and it is impossible to research it due to modern development. The only excavation carried out on the western slope of that plateau was in 1970, which uncovered the already-mentioned Acco beaker. The beaker and the Late Iron Age living features suggest the elevation was the centre of a La Tène settlement - oppidum. However, this excavation revealed remains of the Roman brick buildings, opening further inquiry possibilities. It is worth noting that the pre-colonial cemetery from the 1st century, at Ban Jelačić Square, is located south of that terrace, probably along the road to the bridge (Fig. 2: 3).

THE FOUNDATION OF THE COLONY

Several epigraphic and written sources confirm that Aelia Mursa was a colony in Pannonia established by Emperor Hadrian,¹⁶ who initiated the urbanisation wave in this region, increasing autonomous cities from 9 to 19. Aelia Mursa was the only town founded as a colony by Hadrian, while others were municipia. His involvement in Pannonia was influenced by his experience as an imperial legate in Lower Pannonia, which helped

¹² Pinterović 2014, 84; Göricke-Lukić 2000, 30, 33; Göricke-Lukić 2011, 37, 42.

¹³ Lőrincz 2001, 27, 49, 51, 59, 63, 65, 68, 72, 75, 80–83, 104, 154, 156, 159. I would like to express my gratitude to Chiara Cenati and Florian Matei-Popescu for their help with the datation of these inscriptions.

¹⁴ Leleković 2011; Leleković 2012, 320, 322; Leleković 2020, 93–96; similar to Cordie-Hackenberg, Haffner 1991; Cordie-Hackenberg, Haffner 1997.

¹⁵ Klemenc 1961, 18.

¹⁶ *CIL III* 3279; *CIL III* 10260.

him ascend to the imperial throne.¹⁷ The exact year of Aelia Mursa's founding is believed to be 133, based on a commemorative inscription of the works performed by the *Legio II adiutrix* for the city walls.¹⁸ Hadrian's biography also confirms that he stayed in the Danube provinces in 133, which further supports the possibility of his presence at the colony's founding ceremony.¹⁹

Mentioning Mursa in Ptolemy's *Geography* could suggest a foundation date in the 120s. However, it should be acknowledged that this is a topic of ongoing discussion and debate among experts in the field.²⁰ However, the reason for Hadrian's decision to grant Aelia Mursa the status of a colony remains unknown.²¹ According to the available epigraphical evidence, it is plausible to suggest that the city in question held significant associations with the worship of the imperial cult, specifically as the centre of the cult of Hadrian. However, it is imperative to locate the temple to validate this hypothesis.²²

HISTORY OF THE RESEARCH AND STATE OF RESEARCH

The history of Mursa research can be traced back to the 18th century to the Marsigli's *Danubius*, the first archaeological scientific publication on Croatian territory and Katančić's doctoral thesis.²³ During the 19th and 20th centuries, amateur enthusiasts in Osijek collected data and findings from the Mursa site until a museum was founded in 1877, and trained archaeologists took over supervision. Danica Pinterović's monograph from 1979 is still the primary reference for this Roman site.²⁴ Still, the work of Mirko Bulat, Slavica Filipović, and Hermine Göricke-Lukić, particularly her publications on the cemeteries and numismatic finds of ancient Mursa, are also indispensable,²⁵ as well as Emilio Marin's monograph.²⁶

Since 2002, various sites in Osijek have undergone extensive protective research. The primary source of

information on these excavations reports. However, a comprehensive overview of the excavations is available in the *Hrvatski arheološki godišnjak* in short papers. The bibliography accompanying this paper includes all relevant sources.²⁷

TOPOGRAPHY

The location of Aelia Mursa has been known since the 18th century, with the remains of the ancient city still visible, as documented on a map from 1786.²⁸ Until recently, this map was the basis for the topography of ancient Mursa.²⁹ However, over the past 20 years, archaeological research has revealed that the city looked differently than previously believed. Mursa is situated in the eastern part of Osijek, covering an area of 2.57 km² or 257 ha, stretching from the Drava River in the north to the present Osijek bypass in the south. The primary purpose of this paper is to present a new outline of Aelia Mursa based on recent archaeological research (*Fig. 3*).

AELIA MURSA INTRA MUROS

The archaeological research conducted between 2008 and 2019 has provided new information on Aelia Mursa's fortification system. The remains of the city's walls have been discovered, allowing for the reconstructing their direction and the original colony's exact position and appearance. The city's core, Aelia Mursa intra muros, was a square measuring approximately 655 x 655 m with a total area of about 4.3 ha (*Fig. 2*).

Archaeological remains of the city walls were discovered in three locations along the southern, western, and northern walls.³⁰ However, only the foundations were discovered, while the walls were demolished. The defensive towers were found on three occasions, one during the excavation of the northern wall in 2019 (*Figs. 3: 6; 4*) and during the excavations on the Campus in 2021 and 2023 (*Fig. 3: 10,12*).³¹ These towers were built entirely on the inner side of the walls, like the tower in the case of Basiana.³² Therefore, Aelia Mursa had curtain walls with inner towers for defence. During an excava-

¹⁷ Mócsy 1974, 119; Boatwright 2000, 36–37, 42.

¹⁸ *CIL III* 3280; Brunschmid 1900, 23–24; Leleković 2020, 80–81; Leleković 2023, 88–89.

¹⁹ Dio LXIX, 14.5; Halfmann 1986, 209; Birley 2008, 142–147.

²⁰ Pinterović 2014, 100.

²¹ Birley 1997, 52–54; Bennett 1997, 101,165; Fitz 1993–1995, 220–223, No. 104; Strobel 2010, 281–282; Kovács 2014, 86; Time establishment Pannonian cities it is taken from Šašel Kos, Scherrer 2004.

²² *CIL* 3289, 10260; Suić 1985, 65–68; Pinterović 2014, 1978,53; Marin 2018, 76–78.

²³ Marsigli 1726, Map 11; Katančić 1782; on the importance of Peter Matija Katančić for the development of Croatian archaeology see Kuntić-Makvić, Šegvić 1992.

²⁴ Pinterović 1978; Pinterović 2014.

²⁵ Bulat 1977b; Filipović 2004a; Filipović 2004b; Filipović 2008b; Göricke-Lukić 2000; Göricke-Lukić 2011.

²⁶ Marin 2018.

²⁷ Filipović 2005b; Filipović, Katavić 2006a; Filipović, Katavić 2006b; Filipović 2007c; Filipović 2008a; Filipović 2008b; Filipović 2008c; Leleković 2009; Sunko et al. 2008; Vodička Miholjek 2008; Zubčić 2008; Filipović 2009a; Filipović 2010a; Hršak, Vukmanić 2010; Rajković 2011; Vukmanić 2011; Filipović 2012a; Filipović 2012b; Zubčić 2013; Crnković, Filipović 2014; Nadander 2014.

²⁸ Bulat 2001, 44–45; the map published in Gačina, Ivanković 1996, 37.

²⁹ Lolić, Wiewegh 2012, 201–203; Pinterović 2014; Marin 2018.

³⁰ Sunko et al. 2008, 21–23

³¹ Pušić 2019, 17–19.

³² Milin 2004, 263

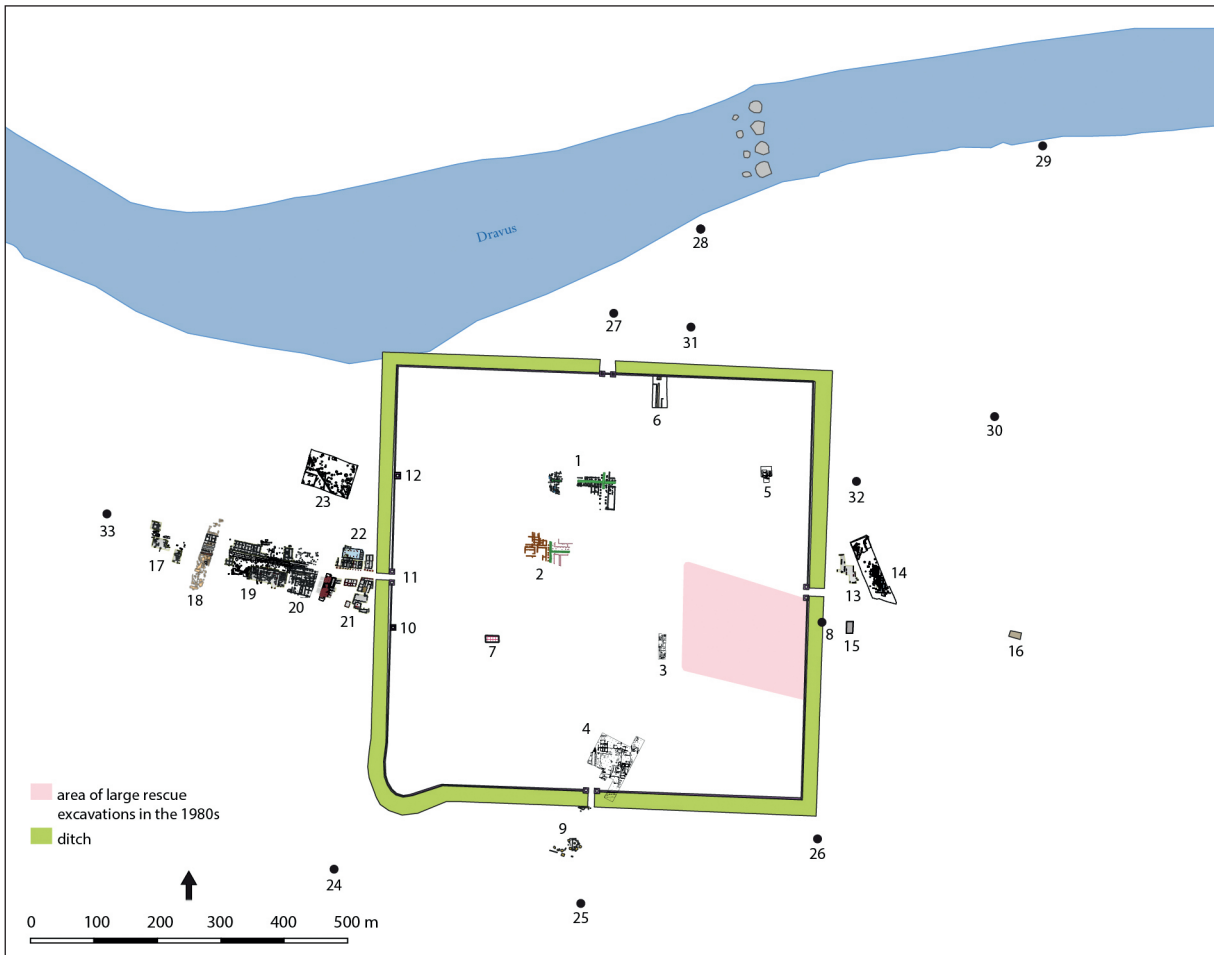


Fig. 3: Locations and sites in colony Aelia Mursa. 1 – Park kraljice Katarine Kosače / Queen Katarina Kosača Park; 2 – Faculty of Education; 3 – Huttlereova / Huttler Street; 4 – Silos; 5 – Krstova 8; 6 – General Hospital (excavation 2019); 7 – University campus (excavation 2023); 8 – Obrtnička škola / High school; 9 – Sloboda; 10 – University campus (excavation 2023); 11 – University campus (excavation 2016); 12 – University campus (excavation 2021); 13 – Trg bana Josipa Jelačića / Ban Jelačić Square (Park); 14 – Trg bana Josipa Jelačića / Ban Jelačić Square (Market); 15 – Post office (1971); 16 – Gubčeva 7 / Matija Gubec Street 7; 17 – Student dorm, Pavilions 1–2 (2002); 18 – Student dorm, Pavilion 3 (2013); 19 – Faculty of Agriculture; 20 – Faculty of Engineering and Architecture; 21 – ZICER; 22 – Faculty of food technology; 23 – University library; 24 – Divaltova 120 / Martin Divalt Street 120; 25 – intersection Huttler-Duvlat Streets (excavation 2003); 26 – Splitska, Bosanska, Viška, Šoltanska (Streets); 27 – Faculty of Medicine (1984); 28 – Donji grad/Osijek port (excavation 1961); 29 – finds of limestone blocks on the Drava embankment (2016); 30 – Cvjetkova, Evangelical University; 31 – Huttlereova / Huttler Street 5 (excavation 1996); 32 – Krstova Steet 18; 33 – Svačićeva / Petar Svačić Street.

tion in 2019 at the General Hospital Osijek (Fig. 3: 6), it was discovered that compacted clay supported the northern wall from the inner side. Compared to other examples, Aelia Mursa's defensive wall was relatively narrow, with foundations measuring 1.20–1.30 m (4 Roman feet). The walls were built using blocks of poor-quality local limestone collected from Batina, a site on the Danube 35 km north of Mursa (Fig. 4). During the excavation of the western city gate (Fig. 3: 11), it was discovered that some parts of the entrance were constructed using limestone sourced from the Budapest area.³³ The dimensions and appearance of the city gate were like the

³³ Bojan Djurić has kindly shared the preliminary results of the stone analysis.

fortifications of other colonies, such as Ulpia Traiana and Aelia Augusta. Aelia Mursa had four city gates, although archaeological evidence has confirmed only the western gate in Osijek's University Campus. The western gate consisted of two square towers measuring 8.50 x 8.10 m, spaced 8.50 m apart, and protruding from the wall for one-third of their length. The dimensions of the western entrance were 25.75 x 9.00 m (Figs. 3: 11; 5). To compare, the Maas gate was 26.75 x 10.30 m, and the Burginatum gate was 7.00 x 28.00 m. The western entrance of Aelia Augusta was slightly smaller at 19.00 x 7.40 m.³⁴

³⁴ Ortisi 2001, 19, 71; Müller 2008, 280, 284–288 ; Maschek 2012, 290–291.



Fig. 4: Defence tower and the northern wall of Aelia Mursa found during research in General Hospital Osijek in 2019 (Fig. 3: 6). (Excavation documentation, Delmat-Galio)

The excavation of five different sites revealed that a triple moat surrounded the city. While the northern, eastern, and southern sides were only partially excavated, the western side was fully exposed, giving us a clear picture of what the moat looked like (Figs. 3: 21–22; 5).³⁵ The fossa had a specific purpose and was used for a certain period, as evidenced by the excavated portion of the city ditch. Initially, it consisted of three ditches, with a smaller fourth trench dug at the entrance. The triple moat was 19 m wide and had a V-shaped cross-section. The deepest ditch was closest to the wall, ranging from 2,50 to 1,20 m from west to east. The ditch varied in width from 2.40 to 3.10 m and narrowed to 1.90 m near the city's entrance. During the second phase, the fossa was buried, and a concave ditch with bevelled walls and smaller channels to drain excess water was dug in its place. Whether it was created for defensive or drainage purposes is uncertain, as the findings from the ditch have yet to be analysed. The timeframe for when the original trench was buried or the later ditch was constructed remains to be determined.³⁶

Recent research has led to a more accurate recreation of the street network in Aelia Mursa (Fig. 2). Excavations conducted from 2013 to 2018 in the Park of Queen Katarina Kosača, within the city walls, revealed intersections of the 2nd Northern Decumanus with the *Cardo Maximus* and the 1st Western *Cardo* (Figs. 3: 1; 6).³⁷ In 2019, an excavation in the General Hospital Osijek uncovered the remains of the 1st Eastern *Cardo*, which was previously only visible as a depression on



Fig. 5: Aerial view of a part of the western fortification system in Aelia Mursa. The picture shows three ditches running from north to south and a road coming from the west (Fig. 3: 22).

the park's surface (Fig. 3: 6).³⁸ The excavations revealed streets on four other occasions (Fig. 3: 2–4,6,7).³⁹ Therefore, the street network was reconstructed using blocks that measured 2 x 2 acti, with streets found to be between 71 and 71.5 m apart (Fig. 2). The *Cardo Maximus* was located on the colony's central axis, dividing the city's enclosed part into two halves. Although the *Decumanus Maximus* has not yet been confirmed, its position can be easily defined due to the location of the western city gates and the discovery of the street on Bana Jelačić Square, which exited the city towards the east (Figs. 3: 13; 14: 1). The main *decumanus* divides the city into two equal parts, as it is 322 m away from the northern wall and 319 m from the southern one.

The main street of the ancient city, *Cardo Maximus*, spanned 12 m, or 40 Roman feet, in width. In contrast, the other uncovered streets had a width of around 6 m or 20 Roman feet (Fig. 6). The curbs of *Cardo Maximus* were made of limestone blocks, different from the side streets. During the 2006 excavations at Silos, the crossing of *Cardo Maximus* and the 3rd Southern *Decumanus*

³⁵ Filipović 2008b, 17–18; Sunko et al. 2008, 21–23; Leleković 2020, 105–109.

³⁶ Nodilo 2017, 32–36.

³⁷ Leleković 2015, 36–40; Leleković 2016, 62–68; Leleković 2017, 30–31; Leleković 2018a, 27–29; Leleković 2020, 111–112, 131–143; Leleković 2023, 90–95.

³⁸ Pušić 2019.

³⁹ Sunko, Katavić 2007, 21–25; Sunko et al. 2008, 20–26; Filipović 2010a; 37–38.

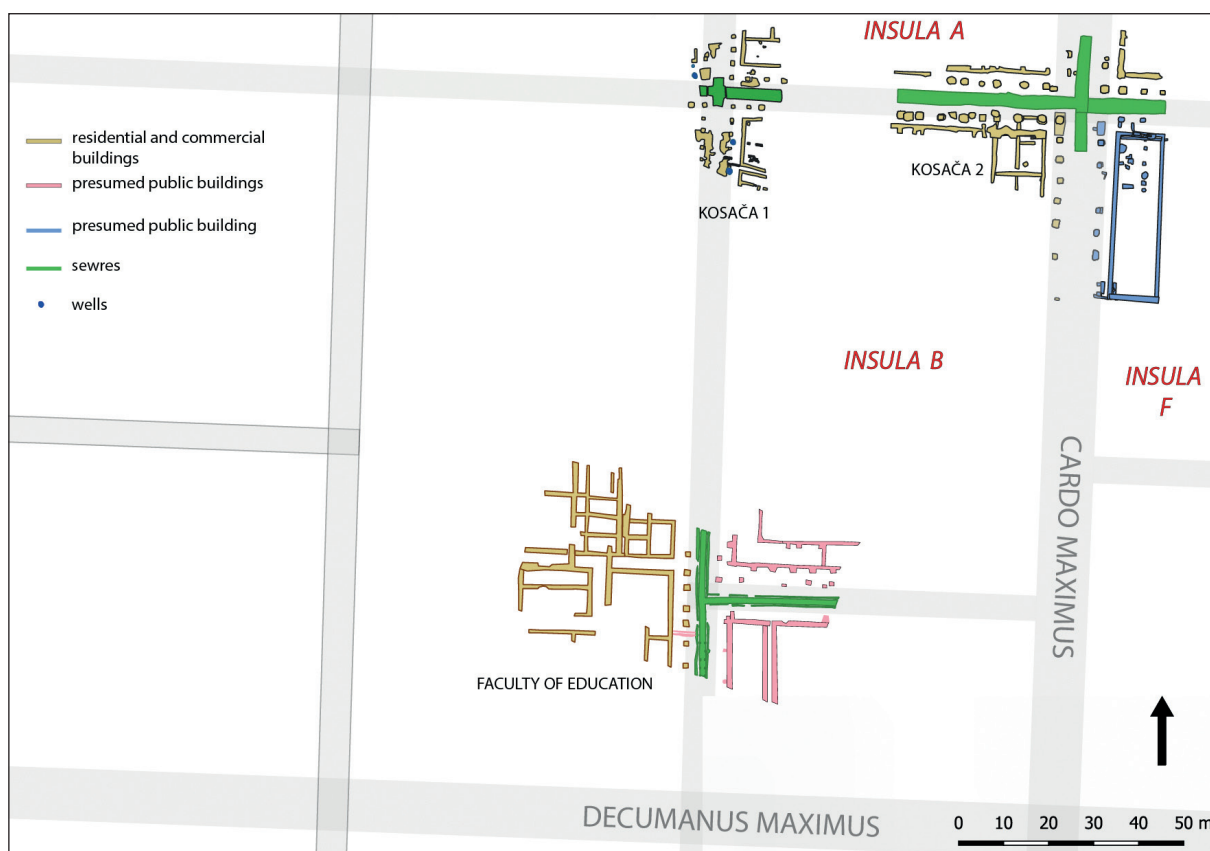


Fig. 6: Excavation plan in Queen Katarina Kosača Park (Kosača 1, Kosača 2, Faculty of Education). Remains from the 3rd development phase (Fig. 3: 1–2; 24; 25).

was discovered (Fig. 3: 4). The excavation plan revealed an intervallum or space, approximately 7.5 m wide, next to the wall.⁴⁰ Recent excavations in 2019 at the General Hospital Osijek showed that the width of the intervallum along the northern wall was slightly wider. The distance between the city wall and the neighbouring insula's portico was 12.30 m (Fig. 3: 6). Lastly, the exposed tower and the insula had approximately 7 m of space between them.⁴¹

In 2009, during an excavation at the Faculty of Education (Figs. 3: 2; 6: south), a section of the colony that did not follow the predicted street network was discovered. Instead, it was defined by a T-shaped intersection. The excavated buildings revealed that the insulae did not follow the previously elaborated scheme. The insulae between cardi maintained the width of 2 acti, but their north-south longitude varied. For instance, the insula between the First and Second Western Cardio consisted of two city blocks, making it 151 m long, stretching from the Second Northern Decumanus to the Decumanus Maximus. On the other hand, the neighbouring insulae to the east were organised differently. The architecture indicated that the First Northern Decumanus did not

exist as previously proposed. However, an alternate street was built 28 m south of the presumed street, forming an insula 106 m long with the 2nd Northern Decumanus. South to this block, the "alternative street" formed with the Decumanus Maximus, a smaller block with approximate dimensions of 40 x 70 meters. The interpretation of unearthed architecture is unknown,⁴² although the plan suggests that public buildings stood on both sides of the "alternate street." The two buildings on the Decumanus Maximus (Fig. 6: south) resemble those discovered on the Cardio Maximus in Kosača Park (Fig. 6: north), indicating a prominent public building on the crossing of Cardio Maximus and Decumanus Maximus.

Recent research has revealed new information about Aelia Mursa's sewage system. The most comprehensive research was carried out in Queen Katarina Kosača Park, documenting the system's evolution. Each street had a sewer drain along the central axis, but the gutters varied in material. The Cardio Maximus and the 2nd Northern Decumanus had brick-built drainage systems. In contrast, the southern part of the Cardio Maximus, the 1st Southern Decumanus, and the 1st Western and 1st Eastern Cardio had a wooden sewage system. The wooden channel was square in cross-section, lined

⁴⁰ Sunko et al. 2008, 21–23.

⁴¹ Data provided by Slavko Galiot.

⁴² Filipović 2010a, 37–38.



Fig. 7: Remains of the wooden sewage system in the first Western *Cardo* in the southern part of the excavation in the Queen Katarina Kosača Park (Fig. 3: 2; 6).

with oak planks and covered with bricks. Interestingly, the wooden drainage was integrated into the brick-built cloaca at the intersection of the 2nd Northern *Decumanus* and the 1st Western *Cardo*, providing insight into how these two types of drainage worked together. The discovery of glazed pottery from the 3rd and 4th centuries in the sewage suggests that the system was no longer used in the 4th century, well before the abandonment of Aelia Mursa (Figs. 7; 8).

The sewage system is closely linked to water supply systems, and whether a sewage system can function without a constant and uninterrupted flow of water is debatable. The ancient drainage system in Rome serves as an example, as it requires a continuous flow of water to prevent blockages and contamination that could harm the city's inhabitants.⁴³ There have been previous discussions regarding the existence of an aqueduct that supplied water to the city of Aelia Mursa,⁴⁴ but its remains have yet to be discovered. However, the intricate sewage system of Aelia Mursa suggests that the colony had an aqueduct, as this type of sewage system required a constant flow of water.⁴⁵

THE MURSA BRIDGE AND THE LIMES ROAD

Recent discoveries have brought new information about the roads surrounding Aelia Mursa, particularly the Limes Road and the bridge over the Drava River. While there is limited information about the city's eastern pe-

⁴³ Trevor Hodge 2000, 46–49; Wilson 2009, 310–312.

⁴⁴ Bulat 2005.

⁴⁵ Wilson 2000a, 172.



Fig. 8: Remains of the brick-built cloaca in the *Cardo Maximus*, excavated in the central part of the Queen Katarina Kosača Park (Fig. 3: 1; 6).

riphery due to a lack of excavations, it has been discovered that the Limes Road did not pass through the colony or the eastern suburbs. Excavation to the east of the Roman city has revealed a section of the Limes Road at Matije Gupca Street 7 (Fig. 3: 16).⁴⁶ Another stretch of the Limes road was found on the eastern outskirts of Osijek in 2017.⁴⁷ These two stretches have the same inclination NW-SE, showing the Limes Road was a straight line before coming near the eastern suburbs. The orientation of Limes Road differs from that of the street discovered in the eastern suburb excavated on Ban Jelačić Square in 2008 (Fig. 3: 14).⁴⁸ The road to the city's east gate took a different path from the Limes Road, which ran outside the suburb, indicating that the Limes Road turned northeast of the suburb, leading to the bridge over the Drava River. It is worth noting that the graves in the pre-colonial cemetery are oriented in the same way as a segment of the Limes Road, which could suggest that this road was part of the route that preceded the colony (Fig. 2).⁴⁹

⁴⁶ Leleković 2018b.

⁴⁷ Janeš, Krmpotić 2016, 61.

⁴⁸ Leleković 2009, 49.

⁴⁹ Leleković 2020, 94, Fig.5.



Fig. 9: Aerial photo of the Roman bridge in Mursa. View towards west.

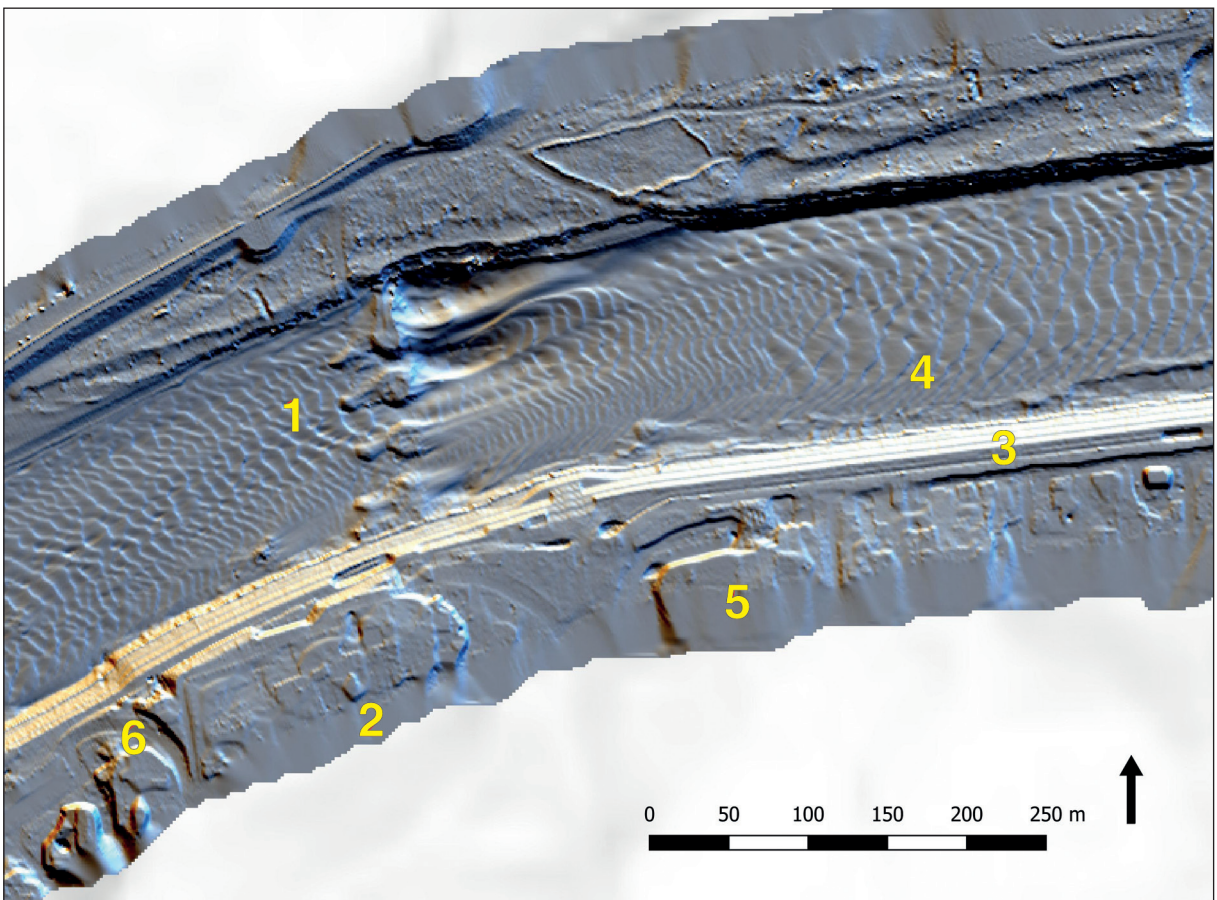


Fig. 10: Bathymetry of the Drava riverbed north of Mursa: 1 – the remains of the Roman bridge; 2 – the plateau at Vodeničarska Street, the possible location of the Roman fort in Mursa (Fig. 2: 2); 3 – location of the large limestone blocks (Fig. 11); 4 – features in the riverbed of the Drava; 5 – elevated terrace; 6 – Osijek port, excavation 1961.



Fig. 11: Limestone blocks were discovered on the southern Drava embankment, showing possible Roman harbour remains (photo: Igor Vukmanić).

The bridge was built with stone blocks and wooden stakes to secure the base. Although the upper structure of the bridge is yet to be discovered, the artifacts found in the Drava around the bridge suggest that they might have been used in its construction.⁵⁰ The bridge's remains consist of five hexagonal pillars with dimensions of approximately 20 x 19 m, which helped establish that the road on the bridge was 12 m wide (Figs. 2: 1; 9; 10: 1).

HARBOUR

Although there have not been many new archaeological discoveries about Aelia Mursa during the Late Antiquity, scarce findings offer new lines for thought and research. It is essential to acknowledge its significance in enhancing our understanding of this historical site for its importance at that time. Aelia Mursa was an episcopate during this era and witnessed the notable role played by Bishop Valens in various synods.⁵¹ In the 4th century, Mursa played a vital role as the base for the Danube fleet (*classis Histrica*). Notably, a detachment of the *Legion VI Herculia* was stationed there, suggest-

ing its continuous military importance throughout its existence as a colony.⁵²

During construction of the south Drava embankment in 2017, workers discovered limestone blocks about 200 m downstream from the Roman bridge, some of which had iron fittings and metal rings that could have been used to anchor ships (Figs. 2: 8; 3: 29; 10: 3; 11). Initially, these blocks were considered parts of the Roman bridge, possibly displaced during river dredging in the 20th century.⁵³ However, further investigation, including detailed bathymetry of the Drava, revealed that these blocks were probably part of structures in the riverbed that preceded modern Osijek. These riverbed features and limestone blocks seem to be remains of Roman docks. The location of old Osijek's cargo port, which was in use until the 1970s, upstream of the bridge and north of the colony, was assumed to be the location of the Roman port. In 1971, excavations did uncover buildings in the northern suburb that could be part of a commercial harbour.⁵⁴ Therefore, the findings in 2017 suggest the existence of two ports in Aelia Mursa: a military port and a civil one. It appears that in Aelia Mursa, public buildings were made of stone. Therefore,

⁵⁰ Zubčić 2008; Zubčić 2010; Zubčić 2013; Pinterović 2014, 359–361.

⁵¹ Sardelić 2012, 79; Pinterović 2014, 190–191.

⁵² *Note. Dign. Occ.* XXXII.53; Visy 1988, 126–127; Radman-Livaja 2012, 176.

⁵³ Vukmanić, Hršak 2020.

⁵⁴ Bulat 1977a, 30–31, 35, 52, 69.

the presumed pier discovered in 2017 could have served as the foundation for the Danube fleet. These discoveries open intriguing possibilities, especially regarding military installations in Mursa. The potential existence of a military naval base downstream of the bridge raises the prospect of a “military Mursa” in the area east of the city and the Limes Road, a part of the city’s primarily unexplored periphery. The 2017 discovery could be vital for new overlook in this area and redirecting research focus accordingly.

SUBURBIA

The study of suburbs in the archaeology of Aelia Mursa is a relatively new topic. Until recently, these suburban areas remained overlooked,⁵⁵ but several excavations have shed new light on the city’s outskirts over the past two decades. These discoveries have transformed our understanding of Aelia Mursa. I previously believed that Aelia Mursa only had two suburbs, in the east and west.⁵⁶ However, in 2021, excavations near the southern gate uncovered evidence of a previously unknown southern suburb. This revelation and the discovery of the northern city wall in 2019 prompted a re-evaluation of the 1984 excavation results. The buildings uncovered during that excavation were part of the north suburb.⁵⁷ In essence, Aelia Mursa boasted four entrances to the city, each associated with its suburb (Fig. 2).

Extensive rescue excavations were carried out in the largest western suburbs of Aelia Mursa. Once a military barracks, the University campus was excavated due to the construction of new faculty buildings (Fig. 3: 17–23). In total, approximately 3.8 ha have been excavated. Based on these excavations, it is assumed that the suburb covers an area of at least 9 ha, although the exact boundaries are difficult to determine. Recent excavations have revealed that the western suburb might have extended along the city moat to the north and south, which suggests that it might have occupied an even larger space than thought (Fig. 12).

The suburb had a main street with several public buildings, while the part closer to the entrance from the west was the commercial area, featuring tabernae with a porch that extended over 190 m on both sides of the street (Fig. 12: 1). Some shops had large pottery kilns, suggesting that they were involved in productive activities.⁵⁸ Behind the tabernae, numerous pits and smaller wooden facilities hinted at further production areas (Fig. 12: 10).⁵⁹ The uniformity of these tabernae suggested careful planning, possibly corresponding to

the description of an inscription by Katančić from 1784. An inscription states that decurion Caius Aemilius Homullinus built 50 tabernae with porches at his own expense (*tabernas L cum I porticibus duplicib(us)*). The inscription was found 330 Roman feet west of the colony, approximately in the uncovered tabernae area in western suburbium.⁶⁰ It is an open question of interpreting the term “double porch. Suić thought this inscription describes two separate rows of tabernae with porches.⁶¹ As previously mentioned, the data gathered from the southern side of the street is not clear. However, the number and size of buildings located on the northern side of the road match the description provided in the inscription. Therefore, it is highly likely that the discovered tabernae constructed on the entrance road were the “Homullinus market”.

Continuing along the southern side of the street from the tabernae area, sizable public and private buildings emerged. One distinctive structure had a spacious inner courtyard that was 34 m wide and probably 31 m deep (Fig. 12: 2). Namely, the building was investigated in full width, measuring 58 m (E-W) and only 38 m to the south. The front face of the building, with a 27-meter-long portico detached from the street’s edge for 7 m, forms a small open space in front of the building. Four altars dedicated to the god Silvanus were found during excavation in the yard. Slavica Filipović and Vladimir Kusik assume that the building was a shrine for Silvanus and that the yard was a temenos.⁶² Although the proposed interpretation cannot be discarded, it remains to be determined whether this building was a sanctuary, a public building of another purpose, or a luxurious residence.

Adjacent to this building, a large square edifice with a monumental stone portico indicated a luxurious peristyle house, although its function remains unclear. The excavated area measures 1750 m², while the total building mastered at least 2000 m² (Fig. 12: 3). This building had a monumental stone portico facing the street, at least 50 m long, with distinctive columns with “masked capitals”. The included internal courtyard indicated this was a public building or a luxurious peristyle house⁶³ with several construction phases.

Adjacent to the former, another edifice with a peristyle existed towards the east (Fig. 12: 4). Although not entirely excavated, its estimated area is approximately 1 square actus (equivalent to 32 x 32 m). This structure is noteworthy for its amalgamation of two distinct buildings that differ in orientation and construction. The northern section, exposed to the street, exhibits

⁵⁵ Lolić, Wiewegh 2012; Pinterović 2014; Marin 2018.

⁵⁶ Leleković 2020, 114–118.

⁵⁷ Görlicke-Lukić 2018, 274–275.

⁵⁸ Filipović, Katavić, 2006a; Filipović, Katavić 2006b.

⁵⁹ Crnković, Filipović 2014.

⁶⁰ Katančić 1794, 116–117; *CIL* 3288; Pinterović 2014, 103–104.

⁶¹ Suić 1985, 58, 61.

⁶² Filipović, Kusik 2017, 227–229.

⁶³ Filipović 2008d; Filipović 2009a; Lolić, Wiewegh 2012, 216.

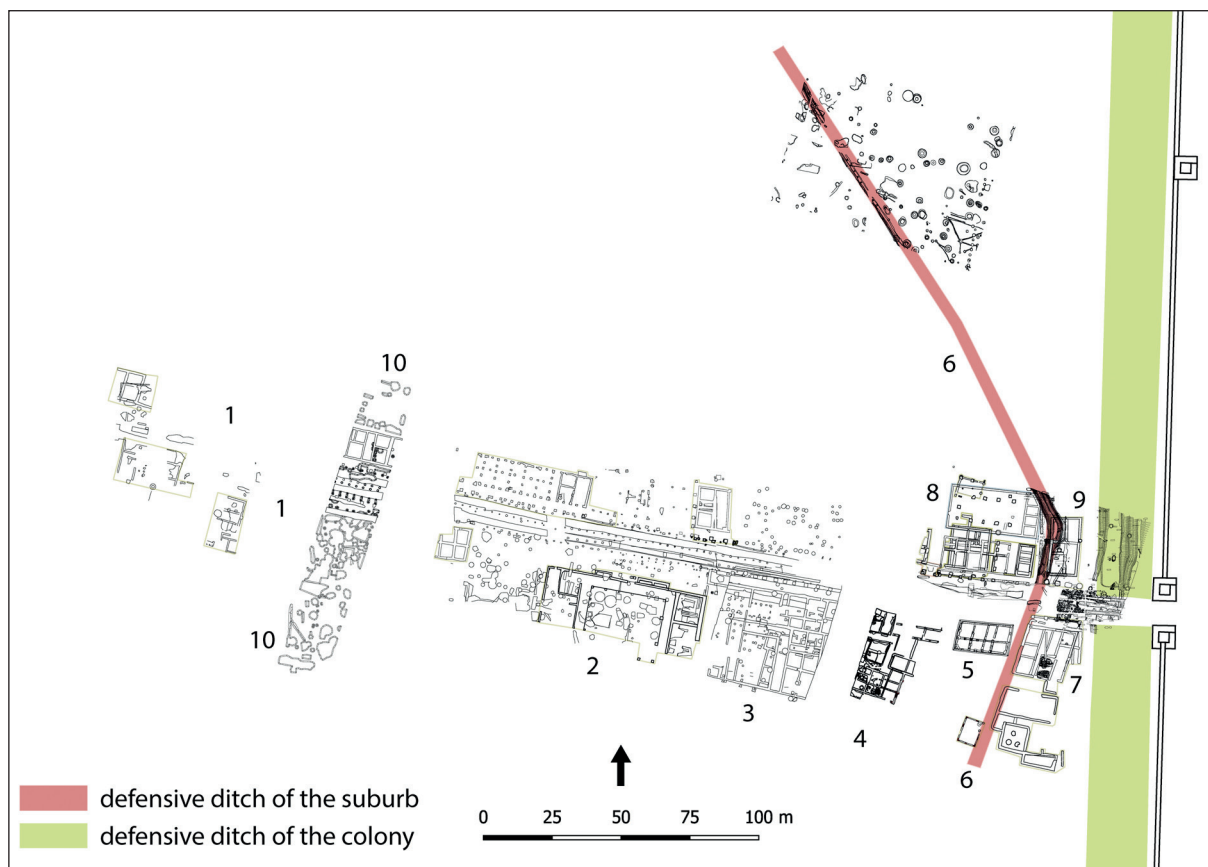


Fig. 12: Investigated part of the western suburb of Aelia Mursa with named buildings. 1 – The market of Homullinus; 2 – The building with large courtyard; 3 – The building with mask pillars; 4 – The peristyle house; 5 – *Tabernae* from the 3rd century; 6 – ditch; 7 – The house with mosaic; 8 – The basilica complex; 9 – The little temple; 10 – production area consisted of pits (Fig. 3: 17–23).

a frame construction made of wood and clay, with an orientation parallel to the street (i.e., NE-SW). On the other hand, the southern section, constructed of brick with at least one story, has an orientation of NW-SE. The south wing of the house features a spacious room with a heating system, which faces south and opens to a paved terrace. It is noteworthy that despite the inferior construction of the northern wing, the walls, made of brick and wooden frames filled with clay, are embellished with the same frescoes that adorn the southern wing, exuding a perception of luxury (Figs. 12: 4; 13).

Archaeological excavations have unveiled another structure constructed using the same architectural method (Fig. 12: 5), which blends a framework with dried bricks, resembling the northern section of the ‘house with a peristyle’. The distinction lies in the fact that the vertical components of the frame were constructed entirely from brick. This edifice stood independently and is likely to have functioned as *tabernae*.

The final house in the row on the southern side of the road, situated just opposite the city gate, boasted remarkable features despite its relatively modest size, covering an area of only 400 m² (Fig. 12: 7). Its exceptional

characteristic was its exclusive use of limestone, a rarity within this suburban area. The house featured a grand stone portico measuring 18 m long and supported by five imposing columns. What truly sets this structure apart is a room housing the sole surviving mosaic floor in Aelia Mursa. The mosaic is adorned with simple yet elegant monochrome geometric patterns. The house may have been part of a larger complex extending to the south. However, without comprehensive documentation, any definitive conclusions remain premature.⁶⁴

The much longer row of *tabernae* defined the northern side of the street more than the southern side. The row of *tabernae* spread opposite the “house with courtyard”, ending with a building with porches on the south and western sides. The most prominent feature on the northern side is the imposing building complex measuring 1080 m². The building was divided into two parts. The one open to the street, with the portico, consisted of several smaller rooms. At the same time, the inner part was a three-nave basilica of 32 x 15 m (Fig. 12: 8). Excavation revealed a small side street west of the building that led from the main road and enabled

⁶⁴ Galiot, Đuričić 2017



Fig. 13: Peristyle house, excavated in 2016 and 2022, shows a merge of wooden skeletal construction (*opus craticium*) and a proper brick-built building (*opus testaceum*) (Fig. 12: 4).

an approach to the presumed main entrance to the basilica (Fig. 12: 8). Next to it was a smaller building with a porch measuring 220 m². This building could have been a temple before the western gate, opposite the monumental building with a mosaic floor (Fig. 12: 9).

During the excavations by the Croatian Academy on Campus from 2016 to 2022, several phases of development were identified in the western suburbs. The suburb was established in the era of Hadrian and consisted exclusively of wooden buildings. One of the unique features of the suburb is the irregular defensive ditch, which was detached only 15 m from the colony's moat (Figs. 12: 6; 19). The trench was filled with communal waste towards the end of the 2nd century, indicating that it was probably used as a defensive ditch during the Marcomannic wars. The ditch was covered once the threat had passed, and work on the construction site resumed. Most masonry structures discovered can be attributed to the Severan period, with some built over the ditch. In contrast, others were constructed in its vicinity, leading to their gradual deterioration over the years. Buildings of the Severan period were made of stone or brick. The road leading to the colony was paved with broken bricks and stone pieces. The only evidence of Late Antique development is two brick buildings constructed on the

remains of 3rd-century structures.⁶⁵ Coins dating back to the 4th century were discovered on the remains of this building, indicating that the suburb continued to exist until the end of Aelia Mursa.⁶⁶

The eastern suburb was explored on a much smaller scale. About 5,000 m² were investigated, with a segment of the entering road of only 50 m being investigated (Fig. 3: 14). According to the excavation results and archival data, the eastern suburb extended about 200 m from the east gate, making the assumed area of the eastern suburb equal to 2.5 ha. During the rescue excavation in 2008, a 3,000 m² area at the market on the Ban Jelačić Square was explored, revealing the historical development of this section of the city. The earliest layer uncovered was a cemetery of settlement that was later replaced by the suburb of the colony. At 133, a road leading to the city's eastern part was constructed over the graveyard, and the eastern suburbs were built alongside it (Fig. 14: 1). From the mid-2nd century, the northern side of the road consisted of wooden strip houses. Remains of craft, such as pottery kilns, working pits, canals, and wells, were discovered in the courtyards of the houses. Additionally, one of the houses was a bakery, including grinding

⁶⁵ Đuričić 2017, 32–34.

⁶⁶ Šeparović, Filipović 2023.

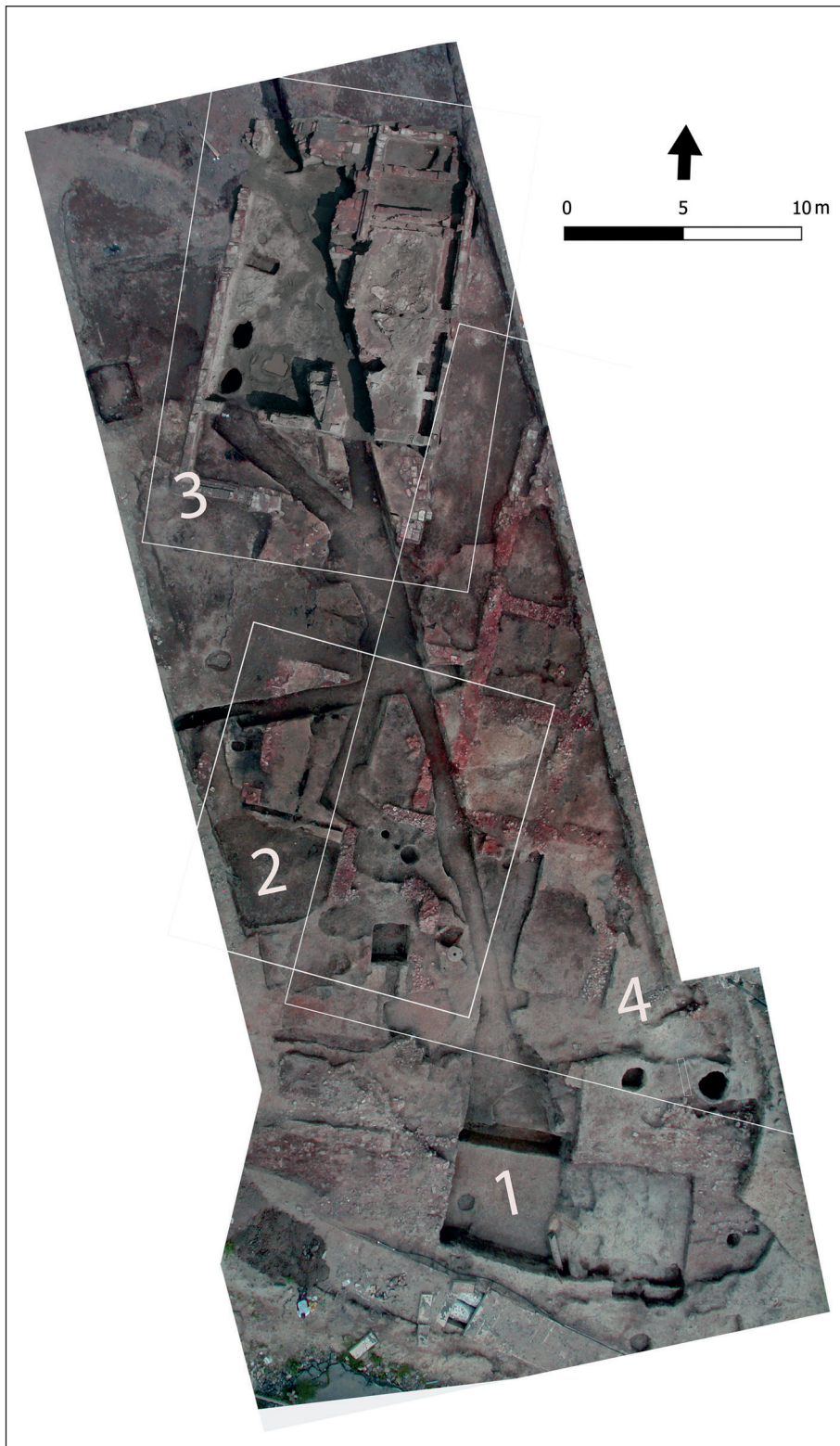


Fig. 14: Orthographic picture of the excavated part of the eastern suburbs, Ban Jelačić Square (2008). 1 – excess road to the east gates of Aelia Mursa; 2 – strip house with remains of a bakery; 3 – luxurious pavilion house with heating system and remains of frescoes; 4 – brick built residential house (*taberna*).



Fig. 15: Detail from the bakery, Ban Jelačić Square (Figs. 3: 14; 14: 2).

stones and bread ovens in the front of the strip house (Figs. 14: 2; 15; 16).⁶⁷

In the 2nd century, a fire destroyed the eastern suburb, leaving behind burnt remains and layers of burned earth. The time of the fire can be determined in the late second half of the 2nd century. Therefore, a large building complex was constructed on the same land in the late 2nd or early 3rd century, featuring several buildings, courtyards, and gardens. These structures were made of brick, had internal heating, and were adorned with frescoes, stone slabs, and stucco (Figs. 14: 3; 17; 18). However, the buildings were almost destroyed during the terrain leveling in the 19th century, and only their foundations were discovered. No signs of fire or violent demolition would indicate sudden abandonment. It is more likely that the buildings were abandoned due to population decline or confinement within the city walls. The abandoned mansions were looted and used for construction materials. In the 3rd century, the ruins became a burial ground with 316 graves dating back to the second half of the 3rd and early 4th centuries (Figs. 20; 21). The highest density of graves was found in the former garden, but some were inside the buildings. In the 4th century, the city cemetery was abandoned, and the purpose of the former eastern suburb remains to be discovered. The last development phase included a building with a 6 x 6 m floor plan and an improvised ossuary with bones from destroyed graves.⁶⁸ Significant discoveries were made during excavations on the opposite side of the street, southeast of the city gate, in the 1950s. A substantial structure with stucco and marble coverings was revealed.⁶⁹ To the west of it, construction workers in 1970 discovered a marble base for a statue of Silvanus. In 1971, the excavation unearthed a large building resembling a temple (Fig. 3: 15). Interestingly, not far from this “temple”, three *arae* that beneficiaries dedicated to Jupiter were discovered during infrastructural works.

⁶⁷ Leleković 2009, 45–46; Leleković 2020, 115–118.

⁶⁸ Leleković 2009, 47–50.

⁶⁹ Göricke-Lukić 2018, 266–267.



Fig. 16: Terracotta plastic found in 2008 within remains of the baking oven in the bakery on Ban Jelačić Square (Eastern suburb of Mursa) (Figs. 3: 14; 14: 2).



Fig. 17: Fresco, depicting a woman with a mirror (presumed Venus), found in the pavilion house on Ban Josip Jelačić Square in 2008 (Figs. 3: 14; 14: 3).

Altars were found in the backfill of the city ditch, likely thrown in it during the Late Roman period.⁷⁰

Excavations conducted in 2021 have shed light on the discovery of a previously unknown southern suburb. The remains include a road that was built in two phases. The first phase used rammed earth and had two drainage channels, while the second phase consisted of a pavement made of broken bricks and stones and a brick paving. The street was bordered by buildings with porches, like

⁷⁰ Bulat, Pinterović 1971, 101–105; Pinterović 2014, 116; Göricke-Lukić 2018, 266–267; Marin 2018, 105.



Fig. 18: Pavilion house with heating system and remains of frescoes, Ban Jelačić Square (Figs. 3: 14; 14: 3).



Fig. 19: Defensive ditch in the western suburbs (Fig. 12: 6) with a collapsed tabernae porch from the late 2nd century (Fig. 12: 5) and remains of the wooden palisade or a wooden structure built along the ditch. View towards north.



Fig. 20: “3rd-century expansion” of the eastern cemetery among the remains of the abandoned east suburb, Ban Jelačić Square, 2008 (Fig. 3: 14).

in other suburbs. Further excavations showed that the space behind the buildings was used as a waste disposal site, with pig and cattle bones discovered in the holes closest to the road. This suggests that the buildings could be the remains of slaughterhouses. The first significant concentration of graves was located 135 m from the southern gate, indicating that this is also the limit of the south suburb's extension. The southern suburb occupied approximately an area of no more than 1.2 ha (Fig. 3: 9).

The northern suburb is situated along the Drava River and has access to the port, making it an attractive location. However, it is the least explored suburb. Recent

discoveries of the northern wall have led to a reassessment of earlier research that the architecture found in 1989 at the site of today's Faculty of Medicine was outside the walls (Fig. 3: 27). The buildings along the street that led to the northern gate from the riverbank, the bridge and the Limes Road are lined up. Excavation in 1971 unearthed remains of brick and stone buildings close to the river that could be part of a port and the northern suburb. The discovery of amphorae during this excavation, rarely seen in *Mursa*, makes this find even more indicative (Fig. 3: 28).⁷¹ It is challenging to determine the

⁷¹ Bulat 1977a, 30–31, 35, 52, 69.



Fig. 21: Double male and female burial from the mid-3rd century, Ban Jelačić Square, 2008 (Fig. 3: 14).

boundaries of this suburb, but it can be assumed that if we consider it with a river port, the suburb filled much of the space between the northern wall and the Drava.

CEMETERIES

A 2011 monograph on the Murša cemeteries shed new light on the burial space by revealing archival data on all Roman graves in Osijek until 2000, including chance discoveries during construction and utility works. These sporadic finds outline a ring about one-kilometre-wide that surrounded the ancient city, within which several clusters of graves can be detected, which could be interpreted as separate cemeteries. There are 963 graves on the list, but this list does not include grave finds from the University campus discovered in surveys from 2013 to 2017. Of the 963 burials, 601 were found during protective excavations, while the remaining 362 were sporadically scattered chance finds. Almost all the chance finds are inhumations, typically destroyed and looted.⁷²

⁷² Göricke-Lukić 2011; Leleković 2012.

So far, the most graves have been found east of the ancient city, totalling 527 graves. There are 57 chance finds. On Ban Jelačić Square (Fig. 3: 14), during the archaeological excavations, 37 graves were found in 1988 and 1999,⁷³ and 402 graves in 2008.⁷⁴ In 2003, another 23 graves were archaeologically investigated in Cvjetkova Street (Fig. 3: 30).⁷⁵ The excavation from 2008 is crucial for understanding this part of the site. First, it showed that the cemetery is earlier than the colony and that most cremated graves from that part of the site should be dated before the colony's foundation (Figs. 2: 3; 3: 14). Furthermore, the group of 311 graves excavated during the rescue excavation on the market at the Ban Jelačić Square (Figs. 3: 14; 20; 21) showed that it was a short-term cemetery created ad hoc. In 2007, an inhumation and a tomb were discovered at Krstova Street 18 (Fig. 3: 32).⁷⁶ Notably, none of the graves can be dated before the 4th century, except for one containing a denarius of Emperor Vespasian.⁷⁷ This group of burials once again bears witness to the two different phases of the eastern cemetery. Therefore, the eastern cemetery expanded over the eastern suburbs because of some cataclysm, epidemic or war. Thus, the actual eastern cemetery was farther east than Ban Jelačić Square.

The Limes Road passes through the eastern part of the burial area. Earlier mentioned excavations at Matije Gubca Street 7 (Fig. 3: 16), which uncovered a stretch of the Limes Road, also revealed two cremation graves type bustum.⁷⁸ This suggests the eastern cemetery may have been established along the Limes Road. The protruding position of the Late Roman cemetery in Cvjetkova Street also supports this theory (Fig. 3: 30).⁷⁹ Excavations conducted in 2008 on the market at the Ban Jelačić Square revealed that in the second half of the 3rd century, the eastern cemetery expanded to the then-abandoned eastern suburb (Fig. 3: 14). The graves were found away from the road to the east gate, indicating that the area along the road was still being used for commercial purposes. Additionally, the tomb discovered during the excavation behind the High School on Ban Jelačić Square in 2008 (Fig. 3: 8) and several inhumation graves discovered during communal works in the park on Ban Jelačić Square may have been part of this expansion (Fig. 3: 13). The eastern cemetery expanded to the city gates during the second half of the 3rd century (Fig. 20).⁸⁰

The first proper excavation in the southern cemetery occurred in 2003 at the intersection of Josipa

⁷³ Göricke-Lukić 2000; Göricke-Lukić 2011, 200–214.

⁷⁴ Leleković 2009; Leleković 2011.

⁷⁵ Filipović 2004b.

⁷⁶ Göricke-Lukić 2011, 194–199.

⁷⁷ Filipović 2008c, 26–27.

⁷⁸ Leleković 2018.

⁷⁹ Filipović 2004b; Göricke-Lukić 2011, 18–19.

⁸⁰ Leleković 2008, 49–50; Filipović 2008b, 17; Leleković 2020, 124–126.

Huttlera Street (Fig. 3: 25). Although it was a small excavation, it determined the boundary between the suburb and the southern cemetery, as only graves were found. Among the five discovered burials from the time of Gallienus, one was a bustum.⁸¹ The second excavation occurred in 2009 at Martin Divalt Street 120 (Fig. 3: 24), where 82 Roman graves were uncovered in an area of 500 m². Graves date from the Antonine period up to the second half of the 3rd century, except for one burial containing Constantius II's coin. This grave differed from the others in numerous ways, making it the only one created after the 3rd century. It is uncertain whether there were different phases of burials in this area, as seen in the eastern cemetery.⁸² Random graves were discovered in the region enclosed by Splitska, Bosanska, Viška, Šoltanska Streets (Fig. 3: 26) and Petra Svačića Street (Fig. 3: 33). It was also noted that burials in the southern cemetery were frequent between the mid-2nd century and the mid-4th century.⁸³ The burial area was not centred around the road leading to the southern gate, as it extended beyond the south ditch and ran parallel to the southern wall. It appears that the central area of the cemetery may have been a road that encircled the city and its southern suburbs, leading eastward to the Limes Road. This could mean that a road led around the city walls as a form of a bypass that allowed traffic to flow outside the city. This relates to other such examples in the provinces.⁸⁴

The western cemetery in Mursa has received less attention or publication than other areas. Petra Svačića Street is the boundary between the western suburbs and the western cemetery (Fig. 3: 33). So far, west of Petar Svačić Street, 88 graves have been discovered by chance, including the intriguing burial of a dignitary with a stool.⁸⁵ However, more burials were found during protective excavations on the Campus, located east of that boundary, but these remain unpublished. As a student working with Slavica Filipović's research team in 2002, I witnessed the discovery of a grave. It was found while excavating the foundation of a small building situated about 20 m east of Petra Svačića Street (Fig. 3: 17). The grave dates to the 2nd century and was a cremation grave. It included a lamp of the Loeschcke X type, which helped determine the post quem dating. The cemetery and settlement border were initially closer to the western wall. However, due to suburban expansion, it was pushed westward to Petar Svačić Street.

The northern cemetery in Mursa is expected to be the smallest due to its narrow location between the settlement and the Drava River. A total of nineteen graves were discovered in Josipa Huttlera Street 5 in

1996 (Fig. 3: 31), while eight were found during protective excavations at the Faculty of Medicine on the premises of General Hospital (Fig. 3: 27). Based on the findings, it can be concluded that the northern suburb was abandoned by the 4th century, allowing space for the burial of the dead. The cemetery layout suggests it was constructed along the road along the Drava, from the suburbs to the bridge.

DEVELOPMENTAL STAGES OF THE AELIA MURSA

The archaeological research conducted by the Croatian Academy gave a good insight into the different development phases of the colony. The excavation at Katarina Kosača Park provides valuable information about the town's growth within the city walls (Fig. 3: 1–2). Similarly, the research conducted at Ban Jelačić Square (Fig. 3: 14) and the Campus (Fig. 3: 17–23) sheds light on the development stages of the suburbs. By examining the excavation reports from other sites in Mursa, it is possible to gather additional data that can be applied to the entire colony. The results obtained from these excavations demonstrate similar phenomena, making them relevant to the overall understanding of the area's history.

It is challenging to discuss the relationship between the colony and its predecessor due to the limited information available. The 2008 excavation in Ban Jelačić Square (Fig. 3: 14) revealed that part of the pre-colonial cemetery was destroyed by a road construction project leading to the eastern city gate. This suggests that the colony obliterated the earlier settlement. The colony's structure was not uniformly developed inside and outside the city walls. An excavation in Katarina Kosača Park (Fig. 3: 1–2) revealed a stratigraphic sequence from the colony's foundation to the second half of the second century. At the same time, the suburbs showed a line from the colony's foundation to the period of Late Antiquity.

THE FIRST PHASE OF THE COLONY

Aelia Mursa was initially built with wooden houses and streets with plank sidewalks. The city plan and architectural order were respected from the beginning, as the ground plans of the houses followed the edges of the roads. During this stage of development, the sewers were also made of wood. Conduits were flanked with wide oak planks covered with bricks, while septic pits were used until the town fully developed the sewage system (Fig. 22; 23a). Evidence of a metallurgical workshop was found in the first sub-phase of the Insula A in Katarina Kosača Park, which was destroyed in a fire. In the second sub-phase (Fig. 23b), a glass workshop was built in

⁸¹ Göricke-Lukić 2011, 200–214, 224–240.

⁸² Hršak, Vukmanić 2010, 32–35.

⁸³ Göricke-Lukić 2011, 22–23, 224–232.

⁸⁴ Gros 2008.

⁸⁵ Bulat 1977b; Göricke-Lukić 2011, 215–223.



Fig. 22: Stratigraphy in the insula A in the rear of the photo, septic pits in front, Queen Katarina Kosača Park in 2015 (Kosača 1; Figs. 6; 21a: north).

its place. Neighbouring Insula B did not have several sub-phases or fire traces. Only one wooden building was found there, replaced later by a built house. The lack of sigillata ware from Rheinzabern indicates that the first stage of development ended at the beginning of the second half of the 2nd century. Therefore, findings from these layers and features are perfect material for the study of the provincial material culture of the 2nd century. In this regard, it is interesting to observe that some finds, traditionally dated in the Flavian era, are present in this context. Also, further analysis of the collected findings will give insight into the spectrum of pottery variety preceding the widespread influence of goods from the Germanic provinces.

THE SECOND PHASE OF THE COLONY

During the second development phase in Aelia Mursa, the wooden city was transformed into a Roman colony with stone and brick buildings. The masonry structures were likely built in the 160s, as evidenced by the terra sigillata range and local and regional fine ceramics. However, whether this process coincided in both insulae is still being determined. At the same time, the streets changed with raised walking surface levels to match the new buildings, replacing the rammed earth and wooden plank pavements with crushed brick paving and limestone curbs. The construction of the masonry sewer system also likely began during this time.

While the remains of foundations were excavated and indicated two construction techniques, the build-

ings themselves needed to be better preserved. The foundation layers were made of clay and rubble, with a brick base and wall built on top or larger pieces of crushed limestone connected with plaster. The ground floor of the buildings was open to the street with a portico on brick columns along the entire length. The height of the buildings is uncertain, but in some places, the depth of the foundations suggests multi-story structures. The example of the corner building in insula A indicates that the first floor extended over the pavement, assuming the role of the portico. Very little has been preserved from the interior of the building, except for one stone threshold and fragments of wall and ceiling frescoes, typical of Pannonia at the time (Fig. 23c).

During excavations within the city walls, the remaining architectural remains were mainly private buildings made of bricks, with some parts made of stone. Their design with open porches facing the streets was typical of colonies in this part of the Empire (Figs. 6; 24; 25). However, there was an exception - a stone building found on the northwest edge of insula F (Figs. 3: 1; 6: F). Excavations on the *Cardo Maximus*, in the northwestern corner of Insula F, revealed the remains of a building covering an area of 310 m². This building was unique in its shape and appearance, differing from all the other remains of architecture. By removing the modern layer and burials created by the extraction of ancient building material, at least three development phases were identified in that part from the time of the colony. The first phase was wooden, while the second consisted of foundations covered with bricks. In contrast, the third phase consisted of the remains of a monumental building with

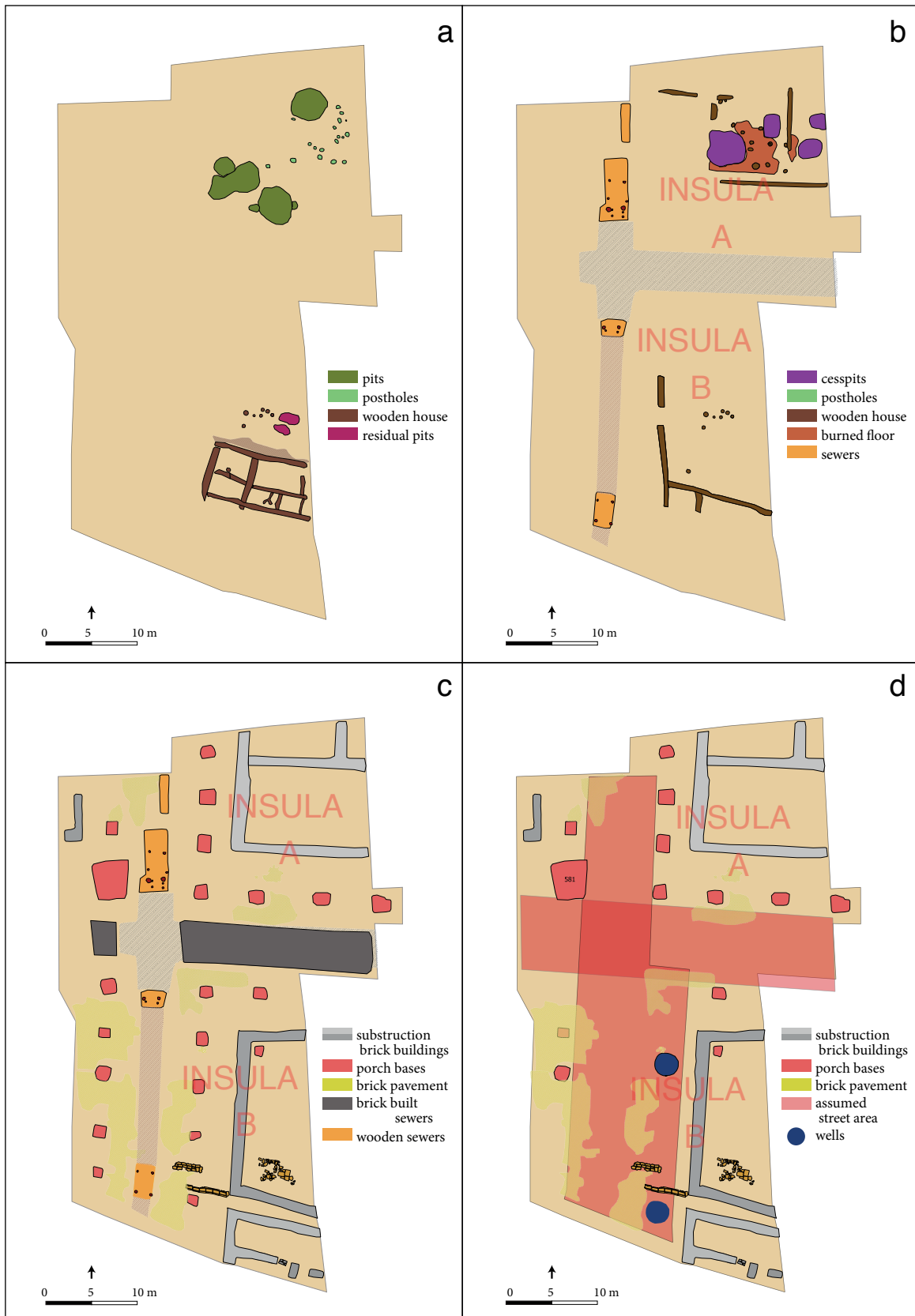


Fig. 23: Excavations 2013–2015 in Queen Katarina Kosača Park (Kosača 1; Fig. 6): **a** – the initial settlement phase of Aelia Mursa; **b** – the first development phase defined by wooden built buildings; **c** – the second development phase defined by brick and stone built architecture; **d** – the third development phase, with Late Roman adaptations of the building in Insula B.



Fig. 24: 2017 excavation in Queen Katarina Kosača Park (Kosača 2; Fig. 6): the intersection of the Cardo Maximus and the second Northern Decumanus. On the left side is a public building made of stone in Insula F, while on the right side, a private facility remains in the NE corner of Insula B. The remains of the cloaca are in the centre of the picture, enclosed by a fence. View towards south.

stone foundations and walls. A part of the wall above the foundation level built of hewn limestone was partially preserved, which is a rarity in Mursa (Figs. 24; 25).⁸⁶

THE THIRD PHASE OF THE COLONY

The buildings erected during the second colonial phase in Aelia Mursa remained in use until the end. There is no evidence of their destruction and replacement in Queen Katarina Kosača Park (Figs. 3: 1; 6; 23d). However, some buildings and infrastructure underwent specific changes after the Severian era. These interventions are divided into two phases - one in the second half of the 3rd century and the other in the 4th century. The most significant changes can be observed in Insula B, where the western portico was demolished during this phase, as evidenced by the brick paving covering the foundations of the columns. At the same time, several wells were dug and walled next to the facade of the building, with no walls separating it from the street. These wells were dug for public use, indicating that the presumed aqueduct was not operational then. Therefore, the wells replaced it as an alternative. The middle of the 3rd century was a tumultuous period for Aelia Mursa, as the city was the site of a battle between Emperor Gallienus and the usurper Ingenius.⁸⁷ The coins found in

graves in Ban Jelačić Square (Fig. 3: 14) indicate that the eastern suburb of Aelia Mursa was abandoned and converted into a cemetery during Gallienus' reign. Whether this suburb was destroyed due to the civil wars and left for this reason, or the plague ravaging Pannonia is still unknown.⁸⁸ Could the aqueduct that supplied Mursa with water have also suffered damage, causing citizens to dig wells? Was the aqueduct destroyed in the 3rd or 4th century, rendering the sewage system inoperable? At present, there is insufficient data to answer these questions. The only Late Antique pottery discovered in Kosača Park was found in the ruins of the sewerage, in the clay layer along the upper edge of the drainage channel. This discovery suggests that the sewerage was no longer functional at this stage, as it was covered with waste and clay. This discovery also supports the assumption that the aqueduct was destroyed. To reexamine these assumptions, finding better-preserved segments of the drainage system is necessary (Fig. 23d).

COLONY'S TERRITORY AND LIMES

The territory of Aelia Mursa has been studied using historical sources like Tabula Peutingeriana and Antoninus Itinerary. In this regard, it is essential to note that the colony's territory overlaps with the Roman Empire's border defence system in the east, which raises questions

⁸⁶ Leleković 2017.

⁸⁷ Sardelić 2012, 77

⁸⁸ Leleković 2009; 49–50; Leleković 2020, 116.



Fig. 25: 2017 excavation in Queen Katarina Kosača Park (Kosača 2; Fig. 6). Public building made of stone in Insula F. Possible base of a statue on the NW edge of the insula (down left). View towards east.

about the colony's role in the organisation of the Limes. Recent archaeological research on Limes sites has led to re-evaluating previous assumptions and opened new perspectives on this part of the territory. Moreover, large-scale rescue excavations on infrastructure projects in this region have provided new data on previously unexplored areas, expanding our understanding of the landscape around Aelia Mursa.

The current state of research shows three prominent forts on the eastern fringe of the territory. Geophysical surveys have unveiled a complex of 40 ha at the Kneževi Vinogradi-Dragojlov brijeg site, including an auxiliary fort, a civil settlement, and additional military facilities (Figs. 26: 20; 27). This site can be identified as Donatiana, a site included in the Tabula Peutingeriana, providing one more fixed point for determining the locations of other sites depicted on that map. One of the sites, which has not been identified yet, Antiana, remains significant, but their exact location is uncertain. According to the same source, Antiana lies 12 miles from Donatiana. This site is also mentioned in Antonine's itinerary as a stop on the road from Sirmium to Lauriacum (IA 232.7) and along Limes Road (IA 243.7). As it is a rare site from the Mursa area mentioned by both sources, its importance is evident. Recent excavations near Beli Manastir revealed rural settlements (Fig. 26: 3),

suggesting Antiana might be there. However, a prominent Roman settlement or a fort has not been found in the Beli Manastir area, so it is possible that Antiana was elsewhere.⁸⁹ According to the distance stated in the sources, a suitable candidate is Batina (Fig. 26: 18).

The Roman fort in Batina (Fig. 26: 18) is an impressive structure on a raised plateau that stands 85 m above the Danube. It provides a panoramic view of the river and the surrounding areas. Although it is believed to have been called Ad Militare, there is no concrete evidence to confirm this. Conducting archaeological and geophysical research on the site has become challenging due to extensive development. Nonetheless, excavations and geophysical surveys have been carried out here since 2012.⁹⁰ Excavation revealed a cemetery from the 3rd century, including both inhumations and cinerary graves.⁹¹ A recent LiDAR survey has revealed that the fort covers an area of 4.6 ha, with measurements of either 200 x 226 or 215 x 215 m. The survey has changed

⁸⁹ Hršak 2016; Los 2016.

⁹⁰ Bojčić et al. 2009; Bojčić et al. 2011a; Bojčić et al. 2011b; Mušič, Vukmanić 2011; Hršak 2012; Hršak et al. 2013a; Hršak et al. 2013b; Hršak et al. 2014a; Hršak et al. 2014b; Mušič, Vukmanić 2014; Hršak et al. 2015; Hršak et al. 2016; Hršak et al. 2017; Hršak et al. 2018.

⁹¹ Leleković 2021, 78–89.

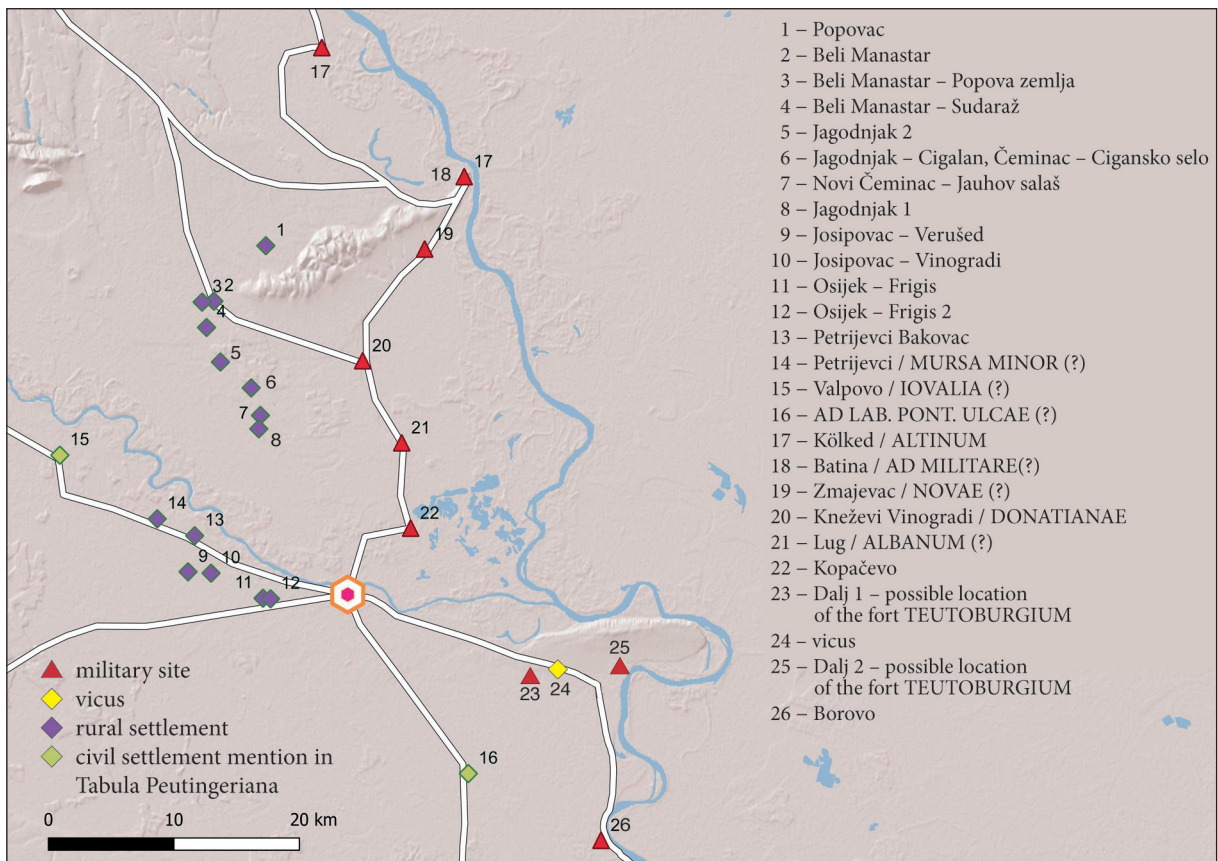


Fig. 26: Map of the territory of Aelia Mursa. 1–13: rural settlements; 14–16: settlements mentioned in the sources; 17–26: forts on the limes.

the initial view on the site.⁹² Although the fort's name remains uncertain, some scholars speculate it might have served as a legionary camp for *Legio VI Herculia* during the Late Roman period, given its strategic importance and large size.⁹³

The third fort near Mursa is Teutoburgium, known only in its name. Its exact location remains unknown. However, its location in the village of Dalj is supported by military equipment and inscription findings but has not been physically located (Fig. 26: 23). Recent geophysical research suggests its presence. In 2023, geophysical research revealed remains of a large vicus that grew alongside the road leading from Mursa to the Danube (Fig. 26: 24). The survey's results, still in the analysis process, suggest that vicus covered at least 150 ha, although it was bigger than that because it spread alongside the road toward the west and towards the east. Two possibilities exist: the fort was located some 6.5 km west of the Danube, meaning that vicus lay on the road leading from the fort toward the military installation or port on the Danube. The other possibility is that the road

is a portion of the Limes Road leading to the camp on the Danube in the northern part of the modern village.⁹⁴

The Antonine Itineraries describe Limes Road as a direct route to Mursa. At the same time, the Tabula Peutingeriana mentions that Limes Road leads to Ad Labores, located west of Teutoburgium and south of Donatiana, which avoids Mursa. It is possible that Ad Labores could be near Mursa, and the bridge in Mursa over the Drava may be referred to as Ad Labores on that map. Alternatively, Ad Labores could be the name for the elevated part of Limes Road that leads from the bridge towards the western part of the modern village of Bilje.

The Antonine Itinerary also mentions two sites, Novae (Ad Novas) and Aureus Mons, located on the road between Mursa and Antiana.⁹⁵ However, the source does not give the distance between these two sites, making it challenging to determine their actual locations. Notitia Dignitatum confirms that Novae were a castellum and

⁹⁴ Fluss 1934.

⁹⁵ In *Not. Dign. Occ. XXXII*, a fortress in Zmajevac, it is called Novae. At the same time, in the Antonine itinerary and on the Tabula Peutingeriana, this position was named Ad Novas as the station was located near the *Novae* camp. Arrangement of fortresses per provinces see in *Not. Dign. Occ. XXXII-XXXIII*.

⁹² Leleković 2022, 175–177.

⁹³ Kovács 2016, 256; Leleković 2022, 170.



Fig. 27: Interpretation of the geophysical survey of the site Kneževi Vinogradi – Dragojlov Brijeg (C. Meyer).

is believed to be situated in the village of Zmajevac. Nonetheless, recent studies have shown that during the Late Antiquity, only one watchtower and a smaller civilian settlement, currently known for its cemetery on Zmajevac-Mocsolas, existed.⁹⁶ Therefore, it is still difficult to draw definitive conclusions. It is possible that *Novae* was the actual fort's name in Batina, while *Ad Militare* and *Antiana* locations should be searched elsewhere.

The *Tabula Peutingeriana* mentions *Ad Labores Pontis Ulcae* in the Polača swamp, about 12 Roman miles south of *Aelia Mursa* on the road to *Cibalae*. It is believed to be the location of a bridge over the Vuka River (Fig. 26: 16), but it could also refer to a similar feature as the stretch of *Limes Road* between *Mursa* and the village of *Bilje*. Excavations in *Petrijevci*, on the western border of the territory, revealed wooden settlements on both sides of the *Karašica River* (Fig. 26: 14), suggesting the existence of a bridge. The V-shaped cross-section of the recovered ditch indicates the presence of a minor fort that probably protected the bridge. The militar' instal-

⁹⁶ Filipović 2005a; Filipović 2006; Filipović 2007a; Filipović 2007b; Filipović 2009b; Filipović 2010b; Filipović, Crnković 2013.

lation's age is uncertain, and its purpose is likely to have been to serve the road to *Poetovio*, which is situated on the assumed border of the colony's territory.⁹⁷

Recent excavations have revealed several rural settlements within the colony's territory. However, it is essential to note that the locations of these settlements are not representative of the entire region. This is because the highway's route only covers the western and north-western parts of the territory. Most of these settlements are small farmsteads from the 2nd and 3rd centuries.⁹⁸ They consist of wooden buildings with tile roofs. Interestingly, no brick buildings that could be interpreted as *villa rustica* have been found in *Aelia Mursa's* territory, except for the site *Popovac* (Fig. 26: 1). This site has a fortification, making it possible that it was a fortified villa during the Late Roman period. Located 6 km NE of *Beli Manastir*, some believe this is the site of *Antiana*.⁹⁹

⁹⁷ Filipović 2012b, 42–43.

⁹⁸ Filipec, Karneluti 2009; Filipec et al. 2009; Jerončić, Paro 2014; Nađander 2014; Tresić Pavičić 2014; Vrkić 2015; Balen et al. 2016; Dizdar, Ložnjak Dizdar 2016; Đuričić, Galiot 2016; Vrkić 2016.

⁹⁹ Vukmanić, Mušić 2020, in press.

Determining the precise boundaries of Aelia Mursa's territory is challenging due to the absence of epigraphic evidence. However, considering the surrounding landscape, we can estimate the colony's limits. The Vuka River and Polača swamp serve as the colony's southern borders.¹⁰⁰ As the region had sizeable marshes, it is reasonable to assume that the colony's territory extended further to the west. The western boundary, separating Upper Pannonia from Lower Pannonia, likely ran along the Krndija mountain range,¹⁰¹ extending northwards to the confluence of the Karašica River with the Drava near Petrijevci. During Diocletian's reign the province boundaries probably respected those of independent cities, implying that the borders between Pannonia Valeria and Second Pannonia matched those between Mursa and Sopianae territories. The *Notitia Dignitatum* indicates that the fort of *Ad Militare* (*Fig. 26: 18*) was under the jurisdiction of the imperial legate of Valeria, while *Novae* (*Fig. 26: 19*) was under the legates' authority of Second Pannonia. Considering the new insights in the Limes sites, the idea that the northern border was between *Ad Militare* (Batina) and *Novae* (Zmajevac) is becoming outdated. The prominence of BANSKO BRDO in Baranja probably played a role in distinguishing these two areas, with the local border possibly situated on BANSKO BRDO itself or further north, near the present-day Hungary-Croatia border. Ultimately, the Danube River formed the eastern boundary, aligning Aelia Mursa's territory with the Andesites tribe's assumed territory (*Fig. 26*).¹⁰²

LATE ANTIQUITY

To delve into the study of Late Antiquity, it is important to examine the Battle of Mursa, which is considered the most significant historical event associated with the city. The battle commenced on September 28, 351, in the amphitheatre located outside the city walls, where the forces of Magnentius were concealed and ready to ambush. Later, the battle moved to a flat area on the outskirts of the town. According to Zosimus, Constantius II observed the battle from the Basilica of the Martyrs on a hill near the city, providing a commanding view of the battleground.¹⁰³ However, the battle's location and structures mentioned in the description have been challenging to determine, relying solely on an 18th-century map of Osijek.¹⁰⁴ Recent excavations in 2021 in front of the southern gate question the previous determination of the location of the Basilica of the Mar-

tyrs (*Fig. 2: 7*),¹⁰⁵ invoking new lines of thought. A map of Osijek from the 16th century shows that a hill existed west of the remains of Mursa (*Figs. 2: 5; 28*).¹⁰⁶ This hill was incorporated into the eastern bastion of the baroque fortress of Osijek (Tvrđa) in the 18th century. In the 20th century, the bastion was levelled, so the hill was also erased from the landscape. North of the western suburb, the 1786 map shows an oval elevation with a depression inside, resembling an amphitheatre with a diameter of around 110 m (*Fig. 2: 4*). However, the excavation at the site of the University Library in 2011 did not reveal any remains of an amphitheater. Instead, only several wells were found.¹⁰⁷ It seems that the most likely location of the amphitheater is the "Turtle Lake" drawn on the 1786 map, SW of the city walls (*Fig. 2: 6*). This would mean the battleground was located west of the ancient city.¹⁰⁸

Current investigations in the SE part of the city within the walls have unveiled residual pits dated with coinage in the second half of the 4th century, suggesting partial abandonment within specific parts of Aelia Mursa. In addition, two edifices in the western suburb, dating to the same time (*Fig. 3: 21*),¹⁰⁹ and a square tower-like structure in the eastern suburb (*Fig. 3: 14*), also contemporary with this period, attest to the rebuilding of the suburbia after the battle of Mursa. The recent disclosure of a small hoard comprising late Roman coinage from the latter half of the 4th century further bolsters the assertion that suburban regions sustained habitation at least to the end of the 4th century (*Fig. 3: 19*).¹¹⁰

It is now known that Aelia Mursa survived the Gothic invasion in 380 and existed beyond that point. However, the exact time when it was abandoned remains unknown. We must expand our investigation beyond its immediate boundaries to discover what happened to this city. Specifically, the focus should be on the surrounding areas, including the Štrbinci cemetery in Đakovo,¹¹¹ located south of Mursa, the cemetery in Zmajevac to the north,¹¹² and Treštanovci to the west.¹¹³ These cemeteries, situated on the fringe of the Aelia Mursa's territory, contain graves that date to the early 5th century. By examining them, we might be able to shed some light

¹⁰⁰ Campbell 2000, 2–4.

¹⁰¹ Migotti 2012b, 1–5.

¹⁰² Radman-Livaja, Ivezić 2012, 137, 139, 140.

¹⁰³ Sardelić 2012, 76–77; 90; Humphries 2020.

¹⁰⁴ Gačina, Ivanković 1996, 37.

¹⁰⁵ Filipović 2004a, 161; Pinterović 2014, 107; Marin 2018, 53.

¹⁰⁶ Map Tvrđa_1688_KAW-GPA Inland C VII Esseg Nr. 05.

¹⁰⁷ Filipović 2012a.

¹⁰⁸ Šašel 1992; Bleckmann 1999; Gračanin 2003; Sardelić 2012, 76, 77, 84, 87, 89–90.

¹⁰⁹ Đuričić 2017, 32, 34 (Objekt 2).

¹¹⁰ Šeparović, Filipović 2023.

¹¹¹ Migotti 2004, Migotti 2007, Leleković 2012, 342–349, Migotti, Leleković 2013, Migotti, Leleković 2017.

¹¹² Filipović 2005a; Filipović 2006; Filipović 2007a; Filipović 2007b; Filipović 2009b; Filipović 2010b; Filipović, Crnković 2013.

¹¹³ Sokač-Štimac 2005; Leleković 2012, 342–349.

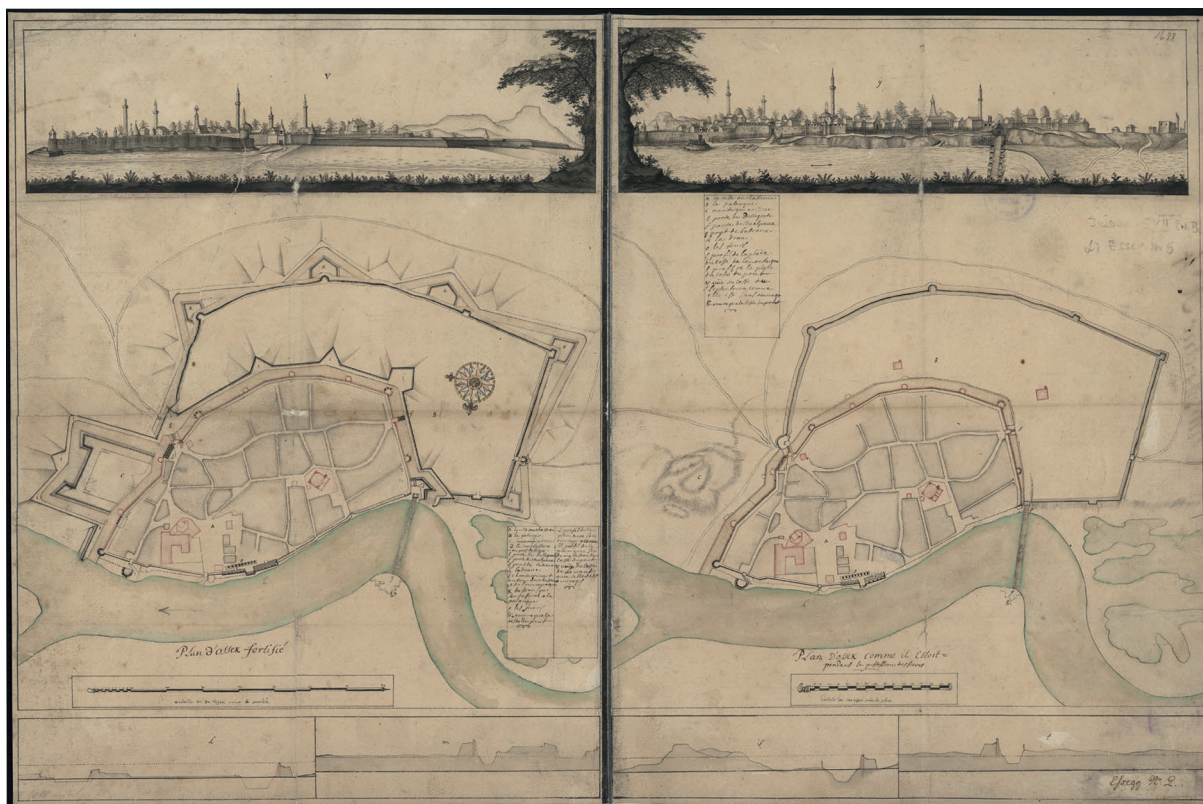


Fig. 28: Plan of Ottoman Osijek from 1688, before the building of the Baroque fortress was built. The vedutas of the hill are visible on the right plan, east of the Ottoman town (KAW-GPA Inland C VII Esseg Nr 05).

on the last decades of Mursa. It is hard to assume whether the city could have lasted until the 6th century like Sirmium. Given the vicinity of these two settlements, a more extensive investigation is necessary to understand the timeline of Aelia Mursa's decline. In conclusion, the history of Aelia Mursa is a captivating puzzle, with the evidence indicating a complex and intriguing past. The

discovery of Roman docks, a possible military harbour, and the Battle of Mursa all contribute to our evolving understanding of this enigmatic city during Late Antiquity. However, due to the scarcity of archaeological evidence, uncertainties remain. While these ideas on Late Roman Mursa cannot be confirmed with exact material evidence, they can serve as guidelines for further research.

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