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**Title** Characterisation of the Roman Danube Limes

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## Contents

1. Neighbour Sciences of Archaeology and Classical Sources Providing Information on the Roman Danube Limes.....	4
1.1. Introduction.....	4
1.2. Literary Sources.....	5
1.3. Epigraphical Sources.....	7
1.4. Iron Gates – Gorge of the Imperial Tablets.....	13
1.5. Papyrological Sources.....	17
1.6. Numismatical Sources.....	21
1.7. Burials.....	23
1.8. Bibliography.....	26
2. Appearance and Development of the Roman Danube Limes.....	28
2.1. Geography and Topography.....	28
2.1.1. The Danube as “Wet Border” on the Northern Edge of the Roman Empire.....	28
2.1.2. Threats for the Roman Heritage at the Riverbanks of the Danube Today.....	28
2.1.3. The Roman Roads.....	29
2.1.4. Civil Towns and Military Camps along the Eastern Sector of the Roman Danube Limes.....	30
2.1.5. Bibliography.....	31
2.2. Historical Development of the Roman Provinces on the Lower Danube.....	32
2.3. Historical and Archaeological Development of the Roman Danube Limes.....	35
2.3.1. Focus 1: The Limes Shifts in Raetia and the Germaniae.....	35
2.3.1.1. Bibliography.....	38
2.3.2. Focus 2: The Moesian Limes and the Roman Province Dacia.....	39
2.3.2.1. Bibliography.....	41
2.4. Roman Installations along the Roman Danube Limes.....	42
2.4.1. Fortifications of the Roman Danube Limes.....	42
2.4.2. Bibliography.....	45
3. The Danube in Roman Times – A Connecting Waterway or Natural Barrier?.....	48
3.1. Roman Inland Navigation in the Northern Provinces.....	48
3.2. Roman Riverboats.....	49
3.3. Roman Harbours and Landing Sites along the Danube.....	52
3.4. Known classes and nautae danuvi.....	54
3.5. Bridges and River Crossings.....	55
3.6. Bibliography.....	58

4.	Further Aspects Characterising the Roman Danube Limes .....	60
4.1.	The Danube as Roman Frontier, Passage and Connection .....	60
4.1.1.	Bibliography .....	62
4.2.	<i>Limitatio</i> – Roman Land Surveying .....	64
4.2.1.	Technical Features.....	64
4.2.2.	Interplay between Military Camps and Civil Settlements.....	67
4.2.3.	Continuity until Today – Roman <i>limitatio</i> Visible in Modern Structures.....	68
4.2.4.	Bibliography.....	69
4.3.	Barbaricum.....	71
4.3.1.	Bibliography.....	72
4.4.	Defence and Military.....	73
4.5.	Economy and Trade.....	75
4.6.	Limes Zone and Hinterland.....	76
4.6.1.	Bibliography.....	81
4.7.	Life Along the Limes: An Insight into Roman Social History .....	82
4.7.1.	What Does Social History Mean? .....	82
4.7.2.	Building Types.....	82
4.7.3.	Alimentation.....	83
4.7.4.	Family Life.....	85
4.7.5.	Clothing .....	85
4.7.6.	Cult and Religion as Part of the Provincials’ Social Life .....	87
4.7.6.1.	Mortuary Cult.....	87
4.7.6.2.	Household Gods .....	88
4.7.6.3.	Gods in Everyday Life .....	89
4.7.6.4.	Immigrated Gods .....	89
4.7.7.	Bibliography.....	90
4.8.	Religion and Cults .....	91
4.8.1.	Bibliography.....	93
4.9.	Excursus: Spiritual Exchange Between the Romans and Local Population in the Eastern Danube Province.....	95
4.9.1.	Bibliography.....	100
5.	Research History .....	103
5.1.	Germany.....	103
5.1.1.	Bibliography.....	105
5.2.	Austria .....	106
5.2.1.	Bibliography.....	108
5.3.	Croatia .....	109

5.3.1.	Bibliography .....	113
5.4.	Serbia .....	116
5.4.1.	Srem region or Lower Pannonian Limes .....	116
5.4.2.	Central Serbia (Moesian frontier) .....	116
5.4.3.	Projects Djerdap I and II.....	117
5.4.4.	Bibliography .....	121
5.5.	Bulgaria.....	125
5.5.1.	Bibliography .....	127

## **1. Neighbour Sciences of Archaeology and Classical Sources Providing Information on the Roman Danube Limes**

### **1.1. Introduction**

When exploring the Roman Danube Limes the researchers of Classical Studies need to combine a wide range of different sources in order to get a picture of the Roman past as complete and authentic as possible. The most apparent sources in this context are the archaeological sources that cover all material legacies of a past culture. This includes the general material culture as well as the art objects of an old civilisation and their art-historian analysis.

In addition to archaeological sources, there are also a number of written sources, which provide insight into the Roman life along the Danube. There is literary evidence on the one hand, Roman authors writing about important events taking place at the Danube and its bordering provinces, high-ranking personal visiting, or important political developments. On the other hand there are more mundane sources of written information: epigraphical sources (inscriptions on stone or metal), numismatic sources (inscriptions and depictions on coins), and papyrological sources (writings on wax tablets or the ancient equivalent to modern paper – papyri or wooden writing tablets). Though not everybody could read or write in Roman antiquity, we have numerous proof that Romans found it necessary to record i.e. juridical details in writing, but also to send letters to friends and family, who were sometimes very far away.

## 1.2. Literary Sources

*Rupert Breitwieser, Paris Lodron University Salzburg (Salzburg, Austria)*

For Roman authors the Danube region and the Danube provinces were not always the most promising areas to write about. To summarise, Roman authors usually wrote about their emperors, high-ranking individuals and their great deeds in either politics or warfare, geographically interesting and peculiar areas or provinces or general historical compilations, preferably *ab urbe condita*, since the founding of Rome itself (which, as legend has it, took place in 753 BCE). Thus, the references to the Danube provinces varies over the span of 600 years of Roman presence, always according to the political or military engagements in the respective areas.

Starting in the west, the regions of today's Austria were barely in the focus of antique records. The Latin and Greek authors, for the most part, left behind only short notes in which they briefly refer to individual historic events. It was only in late antiquity, that important literary works began to focus on this region. The earliest reference to the later Austrian Danubian region is found in Velleius Paterculus' (approx. 20 BCE to 30 CE) *Historia Romana*, or "Roman History" which for the first time mentions Carnuntum as an important place in the kingdom of Noricum in the year 6 CE (Vell.Pat. II 109, 5). The probably most famous Roman historian, Publius Cornelius Tacitus (approx. 58-120 CE), focuses twice on events near the Danube in his *Annales*, his second important historical work after *Historiae*. In the second book, he describes the crossing of the Marcomannic king Marobodus into Roman territory in the province of Noricum (Tac. ann. II, 63), whereas in the twelfth book he reports the deployment of a Danubian flotilla to evacuate the Quadi king Vannius and his followers (Tac. ann. XII, 30) (see Chapter 3.5 *Bridges and River Crossings*). Only short reports by the late Roman authors Eutropius and Orosius deal with the events surrounding the outbreak of the Marcomannic Wars (166-180 CE). Important sources, like the contemporary author Cassius Dio, miss parts relating to these events. More source material is however, available dealing with the famous "rain miracle", taking place in 172 CE, which is also depicted on the Marcus Aurelius Column in Rome (Fig. 1.2.1). During a battle against the Quadi in the upper Danube region, a sudden heavy rain shower allegedly saved the Roman army from dying of thirst. Cassius Dio ascribes the salvation to Iuppiter, who was invoked by an Egyptian priest (Dio. 71, 8, 2). Tertullian, who lived almost at the same time as Cassius Dio, and who was baptised later, thus becoming the first Latin Christian writer, attributes the rescuing thunderstorm to the intercessory prayers by the Christian soldiers belonging to the *legio XII Fulminata*, which took part in the fight (Tert. apolog. V, 6).

The Danubian limes is of great literary and philosophic importance as the place of origin of one of the most important scripts of the younger stoic philosophy, the "Meditations" by the Roman emperor Marcus Aurelius. He wrote the "Meditations" during the last years of his life, when he was in charge of the Roman armies' military operations directly along the northern border, thus the river Danube itself. The *Scriptores Historiae Augustae*, a late antique collection of the biographies of 30 Roman emperors from Hadrian to Numerian/Carinus (117-284/85 CE), mentions that Septimius Severus was proclaimed emperor by his legions on the 9<sup>th</sup> of April 193 CE in Carnuntum (Script. Hist. Aug., vita Sev. 5).



**Fig. 1.2.1.** The so called “rain miracle” depicted on the Marcus Aurelius column in Rome. The heavy rainfall is shown as bearded man spreading his arms from which the water is pouring over the thirsty Roman soldiers. (Source: G. Becatti, *Colonna di M. Aurelio* (Milano 1957) Fig. 11).

However, the highlight and endpoint of literary works on the western Danubian limes region is the *Vita Sancti Severini* by Eugippius (approx. 465- 533 CE), a biography of Saint Severinus (approx. 410-482 CE) from the province Noricum. The vita of the saint is the most valuable contemporary source of the 5<sup>th</sup> and 6<sup>th</sup> century in the region of modern Austria. It covers the period from shortly after Attila’s death (453 CE) to the death of Saint Severinus and describes his journeys and miracles in Noricum Ripense on the edge of Late Roman times and the start of the Early Middle Ages, heralded by the so-called Barbarian invasion, which ended the Western Roman Empire in 476 CE. Another saint’s live, the *Passio Sancti Floriani*, also dates back to Late Roman sources, but was compiled in the 8<sup>th</sup> century at the earliest.

### 1.3. Epigraphical Sources

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The word “epigraphy” comes from ancient Greek and means writing on durable materials, such as stone, ceramic shards, bronze tablets or wood. Epigraphical sources are either chiselled, scratched or painted, they are not written with pen and ink. Inscriptions can be found literally anywhere; there are formal dedications by high-ranking officers on the fora, milestones on the roadsides, gravestones, but also graffiti scratched casually in the plaster of private and public buildings. The following section provides examples of epigraphy commonly found in the Roman Danube provinces. A common feature of all Roman inscriptions is the multiple use of abbreviations, which in some cases follow a strict set of letters and in others might just break in the middle of the word, depending on the space available on the medium carrying the inscription.

In contrast to less durable materials, such as parchments, papyri, wooden slates or tablets, epigraphic sources offer an excellent possibility for obtaining contemporary information about and insight into ancient cultures. Thus, epigraphy is an important means to explore various aspects of the ancient world. An inscription is a precious and very special find in archaeological excavations. In times of distress (no matter whether in Roman or later times), chalk was produced from seemingly persistent materials, such as marble, metals were stolen and melted, and wood simply rotted over the centuries, unless it has been specially deposited. Therefore, many inscriptions were lost for posterity. They are of immense importance because they relate information that archaeology alone cannot produce, for example the name of the location during Roman times, the initiator(s) of the inscription, the addressee(s) of the inscription, the reasons for the inscription, information on language and cultural background, the spelling of names together with cultural, ethnic and social background transported by the names, insights into family structures and society, the variety of religious beliefs and cults, or information about Roman economy.

**Dedicatory inscriptions** (*tituli sacri*) are very often addressed to gods and emperors, but also high-ranking officials of the Roman Empire. Dedications to gods or emperors are not only found near temples, statues and altars, but on articles of daily use like weapons or containers. When dedicated to one or several deities, these inscriptions show the variety of religions, which existed contemporaneously and give insight into the different cult rites followed in the Roman Empire. A dedicatory inscription from *Carnuntum*, dating to the beginning of the 3<sup>rd</sup> century CE, gives evidence of the construction of temple in honour of the gods Serapis and Isis (Fig. 1.3.2). Another example from 3<sup>rd</sup> century Carnuntum was commissioned by a veteran’s association for the good of the emperors and the imperial dynasty and engraved on an elaborately decorated stele (Fig. 1.3.1).





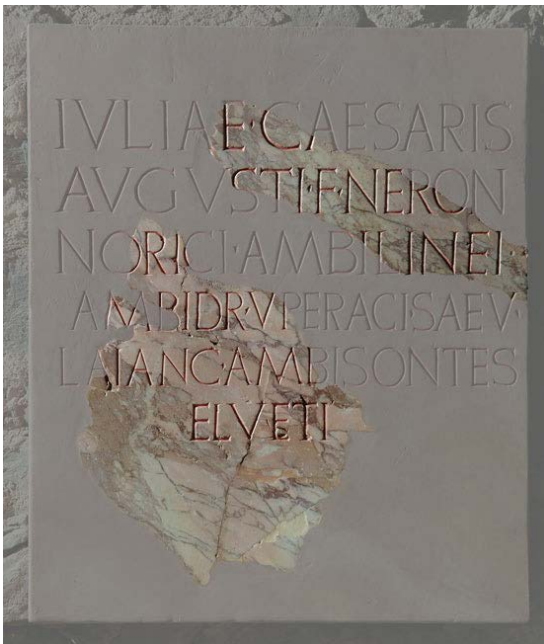
**Fig. 1.3.1.** Dedicatory inscription for the good of the emperors and the imperial dynasty, Carnuntum, 238 CE. CIL III 11189 (Source: F. Beutler et al., *Der Adler Roms, Carnuntum und die Armee der Cäsaren* (Bad Deutsch-Altenburg 2017) 103).



**Fig. 1.3.2.** Dedicatory inscription to Serapis and Isis, Carnuntum, 213-214 CE. AE 1992,1412 (Source: F. Beutler et al., *Der Adler Roms, Carnuntum und die Armee der Cäsaren* (Bad Deutsch-Altenburg 2017) 108).

Another category are **building inscriptions**, which, as suggested by their name, are found on monuments, either on the construction itself or engraved on panels, and give information on the construction, construction activity or its principal. Inscriptions are also a fixed component of milestones (*miliaria*). The inscription on a milestone stated the distance to the starting point, the head of the road, the *caput viae*, in Roman miles, the name of the respective location, the year of construction of that segment of the street and construction or maintenance activity. The street's principal indicated was always the emperor; therefore, the erection of milestones served also as imperial propaganda. Only few of the milestones that have been preserved were found in situ in their original place of erection, whereas many of them were reused in later times. Reusing old stones (with or without inscriptions) was a common feature already in Roman times throughout the Empire, and the same holds true for the Middle Ages. The building inscription from Carnuntum highlights another feature of Roman inscriptions, namely that the letters themselves were not only carved out of the stone, but also coloured, in this case in red, to enhance their visibility. This inscription dates to the second half of the 4<sup>th</sup> century CE and mentions the emperors Valentinian and Valens as well as Valentinian's son Gratian. It gives evidence to fortification works along the Danube Limes, which were ordered by the emperor (Fig. 1.3.4).

A Roman milestone found in the area of the Austrian city Tulln, Roman *Comagena*, indicates that it is in the distance of 26 Roman miles to *Aelium Cetium*, today Lower Austria's capital St. Pölten (Fig. 1.3.5).



**Fig. 1.3.3.** Honoric inscription for Iulia, daughter of Augustus, Magdalensberg, Augustan period. CIL III SUP 6, 7, 8a (Source: F. Harl, <http://www.ubi-erat-lupa.org/monument.php?id=6695> (22.10.2020)).



**Fig. 1.3.4.** Building inscription indicating fortification works along the Danubian Limes, naming Emperor Valentinian, Valens and Gratian, Carnuntum, 374 or 375 CE. CIL III 14358 (Source: F. Beutler et al., *Der Adler Roms, Carnuntum und die Armee der Cäsaren* (Bad Deutsch-Altenburg 2017) 165 Fig.14).

Similar in appearance to milestones are boundary stones, so called *termini*. They were usually set up magistrates, such as consuls or censors, or even emperors themselves (though most often not in person, but in name). They indicate specific demarcation acts, such as city boundaries, delimitation of the Tiber banks in the city of Rome, or the demarcation of state territories or of public aqueducts, in accordance with senate resolutions.

**Epitaphs** or **burial inscriptions** (*tituli sepulcrales*) were a sure component of every Roman burial and are often found along the roads leading to and from major settlements, since until the Late Roman period, when Christian beliefs began to take over the pagan rites of the old Romans, burials inside the town walls were not permitted. The Romans both inhumed and cremated their dead, but until Christianity began to take over, incineration prevailed. In early Roman times, there existed a rich variety of grave types, e.g. large grave monuments, crypts, ash containers and steles. The respective epitaphs offer diverse information on the deceased, such as name, age, sex, and profession, sometimes including also other family members and the creator of the grave. Usually a special consecration formula was used, for example beginning with *D(is) M(anibus)*, which invokes “the divine spirits of the dead” and ending with a blessing, such as *s(it) t(ibi) t(erra) l(evis)*, “may the soil light for you”. Some burial stele also show elaborate abstract design, depictions typical for the trade, the deceased used to follow when alive, or pictures of the dead ones, wearing their best clothes.



**Fig. 1.3.5.** Milestone Tulln-Nitzing, 217-218 CE. CIL III 13534 (Source: E. Kuttner, <https://www.univie.ac.at/limes/php/site.php?ID=336> (22.10.2020)).



**Fig. 1.3.6.** Family gravestone of Seccius Secundinus, Hiesberger Marble, Lauriacum. CIL III 05671, 201-300 CE. (Source: S. Traxler, Ein Veteran der *Legio II Italica*, In: Amt der Oberösterreichischen Landesregierung. Direktion Kultur (ed.), OÖ. Landesausstellung 2018. Die Rückkehr der Legion. Römisches Erbe in Oberösterreich (Linz 2018) 33).

In *Lauriacum*, modern Enns in Austria, a family gravestone of a veteran of the *legio II Italica* was found. The inscription mentions the soldier, whose name was Seccius Secundinus, and who ordered the gravestone for him and his family while he was still alive. We also learn that his son had died at the age of 25, after only six years of service in the military, so the son had joined the army as well. In this six years to son had risen to the rank of a *beneficiarius* of the legion's prefect (who was responsible for camp administration). We also get to know the names of the immediate family members of Seccius Secundinus, for whom the grave is erected as well (Fig. 1.3.6). Translated into English the burial inscription reads as follows: "To the divine spirits of the dead, Seccius Secundinus, veteran of the *legio II Italica pia fidelis* and Iulia Severio, his wife, have erected (the grave) for themselves, for their daughter Seccia Secundina and for their grandsons Marius Maximus and Marius Secundus in their lifetime, as well as for their son Iulius Apricius, soldier of the above mentioned legion, *beneficiarius* of the legion prefect, who died at the age of 25 after six years of service".

A number of other categories of inscriptions on stone exist, like documents regulating the state community, laws are published in writing on durable stones set up for the public to read, as are senate resolutions (*senatus consulta*) and imperial decrees (*constitutiones*), representing the highest document category of Latin epigraphy. Calendars on display at prominent places of Roman settlements offer an insight into the social and religious life and provide orientation in the course of the year. In addition, annual lists of various office holders, such as consuls and high state priests, have been preserved. These annual lists record important events, i.e. sacrifices, ritual acts, victory celebrations within their geographical sphere.

Engraved on metal are the so-called **military diplomas** (*diplomata militaria*). They are copies of the discharge certificates of Roman soldiers. The original discharge lists were set up publicly in the city of Rome, so anyone to whom it would concern could check on the legal status of a Roman veteran. The discharge lists were most important, since after 25 years of service in the Roman army, veterans, who did not have the Roman citizenship before, were granted the citizenship and a number of privileges that came with it. Thus it was very important for discharged veterans of the auxiliary units (Roman citizens served for 20 years in the legions, non-citizens for 25 years in auxiliary units), to have proof of their new legal status. The rights granted to them were copied onto a bronze tablet, once on the outside and once, in identical wording, on the inside. Then the document was sealed and witnessed. If a question on the legal status and the rights granted to a veteran arose, the military diploma would be opened in court and the words written on the inside (which could not be hampered with unless the seals were broken) counted. These bronze diploma give insight into the military career of its owner, the units he served in, and also the rights he gained with his honorary discharge. Just like inscriptions on stone, military diploma are often found a very fragmentary state. Fig. 1.3.7 shows the reconstruction of a military diploma from Ranovac in Serbia, dating to the beginning of the 2<sup>nd</sup> century CE. The reconstruction clearly shows the metal threads holding the two sides together and the seals on the front side of the diploma, on which also the names of the seven witnesses are written.



**Fig. 1.3.7.** Reconstruction of a military diploma, Ranovac (Serbia), 14 October 109 CE. (Source: F. Beutler et al., *Der Adler Roms, Carnuntum und die Armee der Cäsaren* (Bad Deutsch-Altenburg 2017) 404 Fig. 909).

Inscriptions are also found on objects of daily use, either stamped, scratched or painted; these objects can be any types of containers, vases, tableware, or building material. Brick stamps, imprints and signs, for example, give an insight into the activities of Roman officials and offer a vivid picture of Roman working life. Soldiers often fabricated bricks, thus the number and name of their unit was stamped on the bricks during the production process. The tile stamps

with the names of the legions and other units give information on their tours of duty in the Roman Empire. The fragment of a plate brick from *Carnuntum* shows two rectangular stamps of the *legio XIII Gemina*, abbreviated as *LEG XIII G*, three imprints of nailed shoe soles, as typically worn by soldiers, and two imprints of not-nailed soles. During fabrication, a mark was wiped into the tile (top of the picture), and also a dog ran across while the tile was drying (Fig. 1.3.8).



**Fig. 1.3.8.** Tile with legionary stamp, footsteps, wiped mark and imprints of a dog's paw, Carnuntum, prob. 3<sup>rd</sup>-4<sup>th</sup> century CE. (Source: F. Beutler et al., *Der Adler Roms, Carnuntum und die Armee der Cäsaren* (Bad Deutsch-Altenburg 2017) 251, 279).

Whilst so far the inscriptions were usually written in what today would be called capital letters (no such distinction existed in Roman times), there are a number of types (official and private) that were written in the writers personal hand, in cursive script. Roman cursive writings looked different during the centuries and also depending on the geographical region in question or the type of document written in cursive. Writings on walls could either be *graffiti* (scratched into the plaster) or *dipinti* (painted onto the plaster, in red or black ink). Today's graffiti in official Roman terminology would be *dipinti*, since they are not scratched, but painted (or sprayed). *Dipinti* could convey official and semi-official information, for example election dates or candidates, whereas graffiti were mostly considered to deface the walls (even if some of them are rather arty). Both *graffiti* and *dipinti* provide information on day-to-day life, including anathemas and amorous advances. However, graffiti and dipinti rarely survived, since they need the walls they were scratched and painted on; thus, the most prominent examples come from the Vesuvian sites around Pompeii and Herculaneum. More likely to survive, but nevertheless rare are curse tablets, or *defixionum tabellae*. The most usual form they take are lead with incised or scratched magic formulas often accompanied by mystic signs, which should curse unwelcome persons like thieves or rivals, but also animals, like for examples the horses of the rival charioteer in horse races.

#### 1.4. Iron Gates – Gorge of the Imperial Tablets

*Nemanja Mrđić, Institute of Archaeology (Belgrade, Serbia)*

In the Iron Gates gorge there were nine documented imperial inscriptions that existed until the 20<sup>th</sup> century (two tablets of Tiberius, one of Claudius, two of Domitianus, three of Traianus, one of Diocletian and Maximianus). The oldest imperial inscriptions were located at the site Gospođin Vir where on only a few dozen meters apart three imperial inscriptions existed. One of Tiberius, one of Claudius and one of Domitianus. All of them were related to the enormous undertaking of the erection of the Roman road through the gorge. As at some sections, there was simply no space to put the walk path but it had to be cut into the cliffs of the mountains. Legionaries with only their hand tools cut the road into the stone and then extended it on the consoles over the river itself. This proves both the importance of the Limes Road as well as the resilience of the troops establishing frontier. The road was built, rebuilt, extended, and repaired again and again keeping it in function for centuries. Many emperors sent troops with this task into the magnificent gorge. At this early stage, Danube banks were not intended as permanent frontier because of the strategy *Imperium sine fine* ("Empire without borders", "Empire without an end"). But the dangerous kingdom of Dacia under Decebalus forced Romans to fortify the right bank until the respectful enemy was defeated. This road and tablets remained in situ until the major construction works of the 20<sup>th</sup> century. Today, some are destroyed, some submerged, some relocated. After the construction of Hydroelectric power plant Djerdap the roman road together with 26 fortifications went under the new accumulation lake that formed behind the modern dam. In the following lines, the most important inscriptions will be presented. The selection shall represent importance of the road and river communication in the region of the Iron Gate.

(1) Tabula Tiberiana, 33/34 CE. Gospođin Vir site. Still visible in the modern water line of Danube (Fig. 1.4.1).

TI CAESARE AVG(VSTI) F(ILIVS) |  
AVGVSTO IMPERATORE |  
PONT(IFICE) MAX(IMO) TR(IVNICIA) POT(ESTATE) XXXV |  
LEG(IO) IIII SCYT(HICA) LEG(IO) V MACED(ONICA)

*Tiberius, the son of Augustus, Emperor Augustus, Highest Priest, Tribune for the 35 time, 4<sup>th</sup> Scythian and 5<sup>th</sup> Macedonian Legion. (CIL III 1698 +add., 1024 = 13813)*

(1) Tabula Traiana, Kazan (Fig. 1.4.2)

The *Tabula Traiana* or Trajan's tablet at the exit of Kazan was the most famous of all the tablets, with beautiful reliefs. Text was carved in large *tabula ansata* flanked by the dolphins and two *genii* under the flowers and surmounted by the typical Roman Eagle. It was the last and ultimate monument to building of the roman road in the gorge and a little bit epic in a way, nearly 70 years after the building started and the first Tabula of the Emperor Tiberius.



**Fig. 1.4.1.** Sites Kazan (Tabula Traiana) and Gospodin Vir (three of five tablets from this site), Iron Gate Serbia, Imperial tablets and the Roman road. (Source: Marsigli, Luigi Ferdinando (1658-1730). *Danubius Pannonico-mysicus: observationibus geographicis, astronomicis, hydrographicis, historicis, physicis, perlustratus et in sex tomos digestus*. T. 2, [Antiquitates romanae militares ad ultramque ripam Danubii]. TAB 53. Hagæ Comitum: Apud P. Gosse, R. Chr. Alberts, P. de Hondt ; Amstelodami: Apud Harm. Uytwerf & Franç. Changuion, 1726 (Digital copy from the University Library Svetozar Marković, Belgrade, Serbia). Ekslibris: УБСМ: Т Р1 529/2, <http://ubsm.bg.ac.rs/cirilica/dokument/1854/http://phaidrabg.bg.ac.rs/o:4465> (30.12.2020)).

Not mentioning any legion, this inscription is directly perpetuating the divine Emperor and its greatness. Legionaries of the *legio VII Claudia* and *legio III Flavia Felix* on the other hand

resolved this by creating smaller and humbler tablet of their own to correct this emperor's omission – the Inscription of Lapidarii located nearby to immortalise this wonderful human achievement. Trajan's tablet originally stood just above the Roman road. In the enormous conservation effort just before the building of the Iron Gates dam it was cut with the part of the road and rose on rails upwards for 21,5 meters.

IMP(ERATOR) CAESAR DIVI NERVAE F(ILIIUS)  
 NERVA TRAIANUS AUG(USTUS) GERM(ANICUS)  
 PONTIF(EX) MAXIMUS TRIB(UNICIA) POT(ESTATE) IIII  
 PATER PATRIAE CO(N)S(UL) III  
 MONTIBUS EXCI[SIS] ANCO[NI]BUS  
 SUBLAT[I]S VIA[M R]E[FECIT]

*Emperor Caesar, son of the divine Nerva, Nerva Trajan, the Augustus, Germanicus, Pontifex Maximus, invested for the fourth time as Tribune, Father of the Fatherland, Consul for the third time, crashed the mountains and made this road on wooden consoles.*



**Fig. 1.4.2.** The most famous imperial inscription in the Danube region. Tabula Traiana circa 100 AD celebrating the building of the road in the Kazan gorge in the Iron Gate, Serbia. Present date state after relocation – 25 meters above the original location (© Nemanja Mrđić, documentation of the Institute of Archaeology).

(2) Tabula Traiana, Trajan's canal at Karataš – Diana fort (Fig. 1.4.3-4)

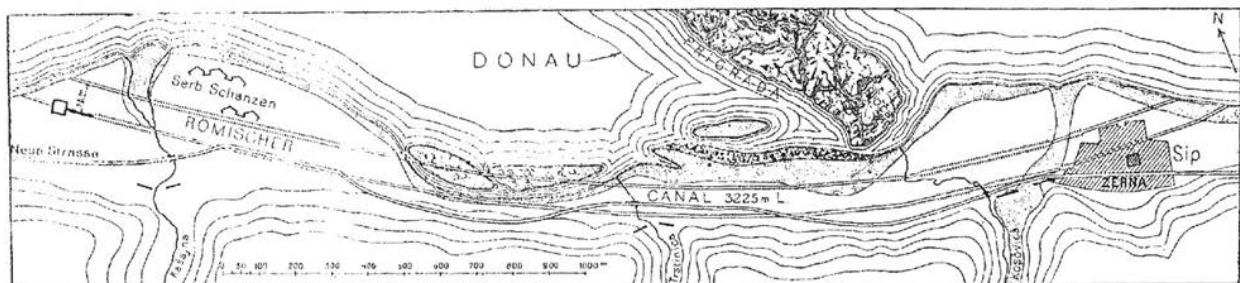
The second *Tabula Traiana* or Trajan's tablet originated from the area of the *Diana* fort (*Statio Cataractarum Dianae*) at the exit of the Iron Gates gorge celebrated enormous effort of digging



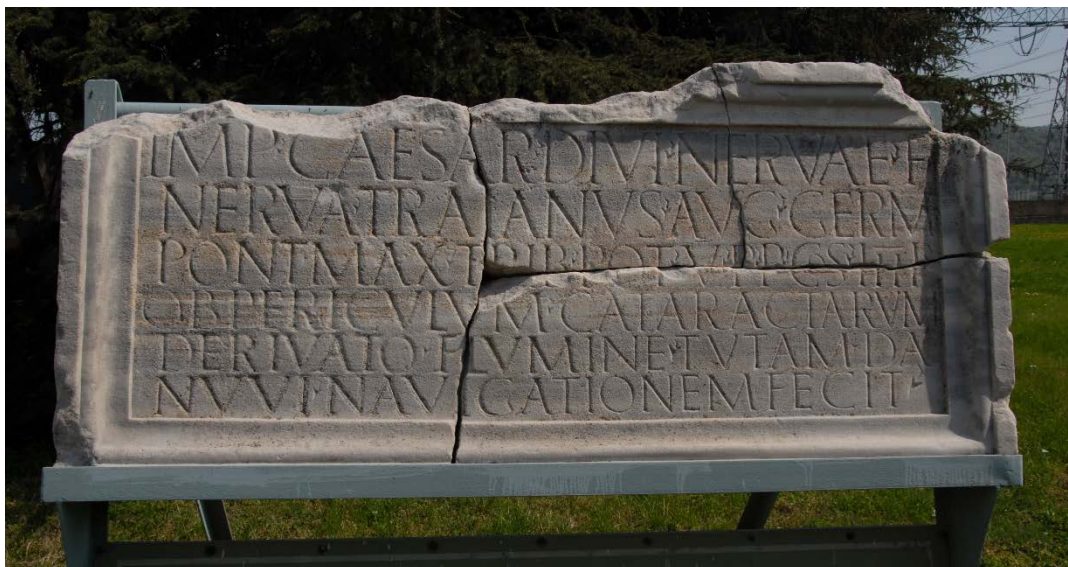
the large canal that diverted river and went around the treacherous Danube cataracts that obstructed the navigation along the Danube. Emperor is emphasizing that only after this deed the whole Danube was really and completely navigable.

IMP(ERATOR) CAESAR DIVI NERVAE F(ILIIUS)  
 NERVA TRAIANUS AUG(USTUS) GERM(ANICUS)  
 PONT(IFEX) MAX(IMUS) TRIB(UNICIA) POT(ESTATE) V P(ATER) P(ATRIAE) CO(N)S(UL) IIII  
 OB PERICULUM CATARACTARUM  
 DERIVATO FLUMINE TUTAM DA  
 NUVI NAVIGATIONEM FECIT

*Emperor Caesar, son of the divine Nerva, Nerva Trajan, the Augustus, Germanicus, Pontifex Maximus, invested for the fifth time as Tribune, Father of the Fatherland, Consul for the fourth time, because of the danger of cataracts diverted river and made the whole Danube navigable.*



**Fig. 1.4.3.** Felix Kanitz, Trajan's canal by the Diana fort (Source: Đ. S. Kostić, Dunavski limes Feliksa Kanica (Beograd, Viminacijum 2011) 194).



**Fig. 1.4.4.** Tabula Traiana circa 101 AD celebrating the building of the canal at Karataš (Statio Cataractarum Diana – Diana Auxiliary fort) today located at the entrance of the hydroelectric power plant Djerdap I (© Nemanja Mrđić, documentation of the Institute of Archaeology).

## 1.5. Papyrological Sources

*Anna Kaiser, Danube University Krems (Krems, Austria)*

Whilst leaden curse tablets were a shady business, writing tablets made of wood and wax, so called *tabulae ceratae*, were used throughout the Roman Empire equally for official business and private letter writing and everything in between. Since they are made of organic material that needs very special circumstances to survive centuries and even millennia, writing tablets are a rare find as well, especially in the humid provinces of the Danube Region (Egypt's desert areas are a completely other story, for that matter). Writing tablets are small wooden panels with a slightly depressed inscription field, filled with wax. They were used for daily written communications, short notes, calculations and written agreements and contracts. The usual form consisted of two wooden tablets that were wound together, could be opened and written on and snapped shut, thus preserving the writing on the inside during transport. The letters were scratched into the wax. The very well preserved example below dates to the 2<sup>nd</sup> century CE and was found together with about 50 others in a Roman gold mine in Romania, in ancient Alburnus Maior (Fig. 1.5.1).



**Fig. 1.5.1.** Wax tablet D XI, 2<sup>nd</sup> century CE, clearly showing the inscription field filled with dark wax and the seemingly white inscription. (Source: M. Simion, *Tablitele cerate de la Alburnus Maior / The wax tablets from Alburnus Maior*. Capodopere 2015 / Masterpieces 2015, 36, photo: Marius Amariae).

Of the 50 tablets found about 250 years ago, 25 could be preserved; 24 are written in Latin and one in Greek. They contain inter alia different legal contracts, like the purchase of a house or slaves, loan agreements, employment contracts, banking documents, as well as a list of purchases and expenses for the organisation of an event. These tablets give us the names of

97 individuals, including children and inform us that 42 of these were Roman citizens, the others being foreigners (or inhabitants without the Roman citizenship) and slaves. The documents feature bankers, slave traders, scribes, soldiers, but also miners and day labourers. One of the better-preserved wax tablets dates to May 164 CE and is 143 x 105 millimeters in size (National History Museum of Romania, Tab.Cer. D XI, Inv.no. 54187). The text is written in Latin cursive letters and reads as follows (Fig. 1.5.2):

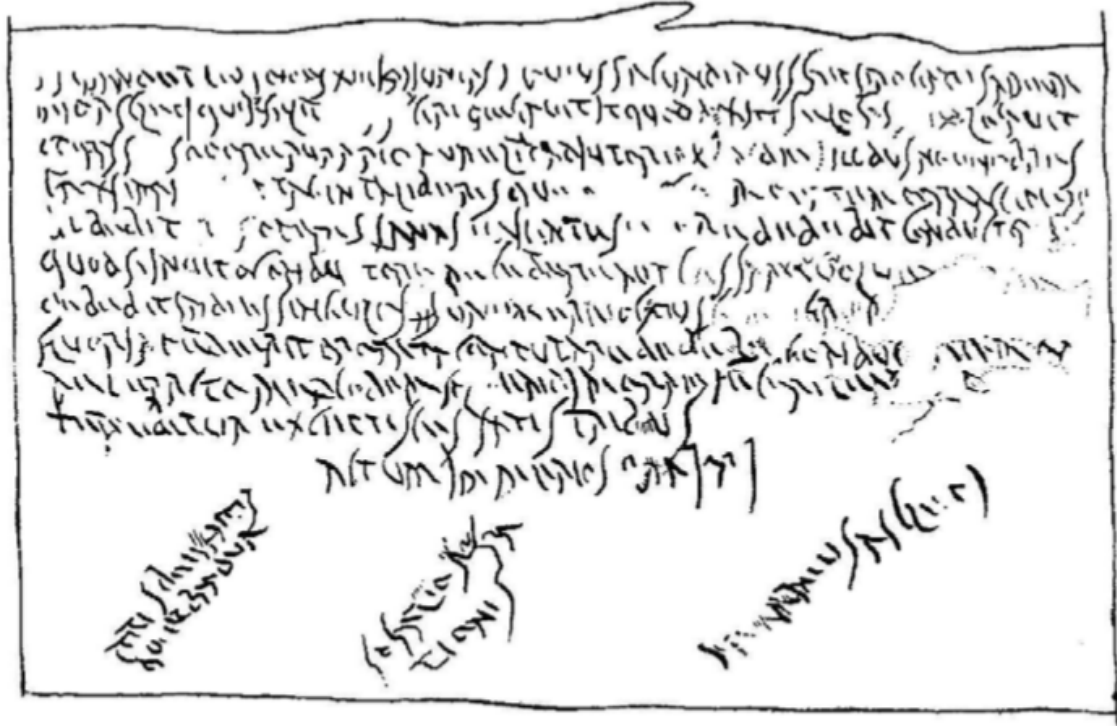
*“During the consulship of Macrinus and Celsus (164 CE) May 19<sup>th</sup>, I, Flavius Secuninus, wrote this, asked by Memmius, son of Asclepius because he did not know letters, who said he had contracted himself and contracted his labor in the gold mine to Aurelius Adiutor from this day until this next November 30<sup>th</sup>, for 70 denarii and 10 for his children. During this day he may receive pay. He will be responsible to give healthy and strong labor to the conductor named above. But if he decides to leave or to be inactive against the conductor’s will he will be responsible to give for each day a fee of 5 sesterces 8 asses to the conductor. If a flood hinders work, he will be responsible to calculate pay as fixed. If by the end of the term of the lease the conductor delays making payment, he will be held to the same penalty with the excepted three day delay.*

*Recorded at Immonsus Maior.*

*Titus, son of Beusan, who is also Bradua.*

*Socratio, son of Socratio.*

*Memmius, son of Asclepius.”* (Translation: Simion 2015, 37)



**Fig. 1.5.2.** Transcription of wax tablet D XI, 2<sup>nd</sup> century CE, in Latin cursive handwriting. (Source: M. Simion, *Tablitele cerate de la Alburnus Maior / The wax tablets from Alburnus Maior*. Capodopere 2015 / *Masterpieces* 2015, 38, photo: Marius Amariae).

From everyday documents like this, a lot of information can be gained. Memmius, who contracts himself and his children to work in the goldmine cannot write, so Flavius Secundinus

(written Secuninus in the document), who is a Roman citizen, as his name suggests, writes for him. Below the contract and running angular to the main text, are the signatures the witnesses and the holder of the contract. The names of the men involved either directly in the contract or as witnesses to the contract, show that the gold mining community was composed of people coming from all over the Roman Empire – in this document alone there are two Roman citizens (though it is not known where exactly they were from), local inhabitants without the Roman citizenship as well as men coming from the southeastern parts of the Roman Empire (Greece to the Levant). Very interesting is the mention of a flood that could hinder the work in the mines; this suggests that floods were rather common in *Alburnus Maior*/Roşia Montană (Romania) and could be a real hindrance for the mining.

Closely connected to the wax writing tables are papyri and thin wooden slates, which are the ancient Roman equivalent to modern paper (as closely as it gets at least). Both papyri and thin wooden slates are written on with a pen and ink, thus they are no longer epigraphical sources, since epigraphy requires chiseling or scratching. The writing material papyrus is made from the papyrus plant, a grass, native in the Egyptian Nile swamps and growing to be up to three meters high. The fibre of the stem was processed to writing material already by the ancient Egyptians and abundantly used by the Romans all over their Empire. The writing material papyrus only survived the centuries and millennia in very dry conditions, therefore most of the papyrological records come from the fringes of the Egyptian deserts, though not all of them were written in Egypt. There is one papyrus that was most likely written in Aquincum, modern Budapest in Hungary, by a soldier stationed there, who sent his letter to his family in Egypt; it dates to the 2<sup>nd</sup> / 3<sup>rd</sup> century CE (P.Tebt. II 583 descr.; Adamson 2012). Thus, the document was preserved and gives us detailed insight into the thoughts that prayed on the mind of the soldier as well as a number of different information in addition. Aurelius Polion served with the *legio II Adiutrix*, stationed in the province of *Pannonia Inferior*. In his letter, written in Greek, he complains of receiving no letters from his family and he mentions furlough, which he wants to ask for in order to be able to visit his relatives back home, whom he seems to miss dearly:

*“Aurelius Polion, soldier of the legio II Adiutrix, to Heron his brother and Ploutou his sister and his mother Seinouphis the bread seller and lady(?), very many greetings. I pray that you are in good health night and day, and I always make obeisance before all the gods on your behalf. I do not cease writing to you, but you do not have me in mind. But I do my part writing to you always and do not cease bearing you (in mind) and having you in my heart. But you never wrote to me concerning your health, how you are doing. I am worried about you because although you received letters from me often, you never wrote back to me so that I may know how you ... while away in Pannonia I sent (letters) to you, but you treat me so as a stranger ... I departed ... and you are glad that(?) ... the army. I did not ... you a ... for the army, but I ... departed from you. I sent six letters to you. The moment you have(?) me in mind, I shall obtain leave from the consular (commander), and I shall come to you so that you may know that I am your brother. For I demanded(?) nothing from you for the army, but I fault you because although I write to you, none of you(?) has consideration. ...”* (Translation: Adamson 2012, 85)

The letter continues with greetings to members of Polion’s extended family. Private letters, be they written on wax tablets or papyri or thin wooden slates, as discovered along the Hadrian’s Wall in Great Britain, give the most intimate insights into the daily lives of the Roman men and women living along the Danube or in any other provinces or the Roman Empire. They are rare



sources, which relate a completely different quality of information than official inscriptions and dedications, and it is the combination of all sources, including archaeological ones that makes the picture of the Roman Danube area 1,400 to 2,000 years ago as detailed as possible.

## 1.6. Numismatological Sources

*Mirjana Vojvoda – Nemanja Mrđić, Institute of Archaeology (Belgrade Serbia)*

Numismatic analyses of coinage from the limes sites were diverted into two different aspects: economical and iconographical. Monetary circulation leads to understanding and interpreting economic development. Iconographic analyze leads to understanding imperial policies and propaganda imposed to population in frontier provinces.

Coins and coin hoards provide us with chronology, information on routes of circulation and origins from mints across the Empire. Establishment of changes in circulation helps us to follow imperial monetary and fiscal policies through largest percentages from dominant imperial or regional mints.

Frontier was the best developed region of most of the Danubian provinces. From the economical aspect this was the full result of military presence and high military mobility. These are of greatest importance for understanding both civilian and military life at the frontier. Monetary circulation in the early and later centuries is directly connected to identifying monetary relation with the eastern and western provinces that are dominating in the number of coins present at the frontier during 2<sup>nd</sup> century CE. With early income from western mints and provinces during 1<sup>st</sup> and 2<sup>nd</sup> centuries situation radically changes with long term war campaigns in the East. Vexillations from Danubian provinces were often spearhead of imperial armies. Therefore, changes for example in Upper Moesia in circulation are direct consequence of participation of Moesian legions (*legio IIII Flavia Felix* and *legio VII Claudia Pia Fidelis*) in wars against Persia in the Eastern frontier. Evidence for this can be traced through enormous sudden increase of percentage of coins from Eastern mints and presence of Syrian merchants documented in inscriptions from *Viminacium* after units returned to their home bases.

During the 3<sup>rd</sup> century it is of crucial importance to follow Roman provincial coinage and special *Viminacium* local coinage production in this important provincial mint. Following distribution of coins produced in Moesia Superior we can see strong relations of *Moesia* with other Danubian provinces dominantly Pannonian provinces and provinces in *Dacia*. Coins from *Viminacium* mint can be traced from *Carnuntum* to *Moesia Inferior* and deeply into *Dacia*.

There are relatively few mints that were located at the frontier or close hinterland. With *Viminacium*, *Carnuntum* and *Treveri* on the first lines and *Siscia*, *Sirmium* and *Serdica* further inland suggest that Romans did not prefer positioning and exposing strategic facilities like this on the river sites. Especially as the first line of mints did not operate for long period.

In Moesia we have high percentage of coins from mint in *Stobi* (Northern Macedonia) in early centuries. Whether this can be related to the fact that many veterans spent their retirement in this region relatively far from the frontier remains an open question (*Scupi* as one of the deductive *coloniae* of the Moesian veterans).

Another aspect of numismatics are analyses of coin hoards with their dating and distribution. This information will provide us with historical events and crisis that lead to deposits of large quantities of coins at hidden places. The largest chains of hidden hoards belong to period of military emperors and crisis of the 3<sup>rd</sup> century.

Intrusions from Barbaricum of Germanic and Sarmatian tribes, usurpations of Ingenuus, Pacatianus and Regalienus all left catastrophic traces followed through coin hoards. Distribution of these hoards testifies how deep were penetrations into the hinterland of Pannonias, Moesias and Dalmatia by aforementioned barbarian tribes. These intrusions are measured by hundreds of kilometers into the hinterland. Civil wars and usurpations left almost equal consequences. The worst impact in these events were Gallienus punishments of rebellious of Pannonian and Moesian provinces imposing havoc on both troops and civilians who supported usurpers.

Similar situation can be followed through the 4<sup>th</sup> and 5<sup>th</sup> centuries as well. Large coin hoards from *Horreum Margi* (present day Ćuprija in *Moesia Superior* / Serbia) with smaller all over the frontier suggest the fast downfall of the limes defenses. Number of hoards, especially those from *Viminacim* allow us to follow crisis after crisis and ultimate fall under great invasion of Huns. In 441/443 CE.



**Fig. 1.6.1.** Gordian III, provincial mint of Viminacium, Year 4. Obverse with personification of province Moesia holding legionary insignia and flanked by bull and lion – emblems of the Legio VII Claudia pia fidelis and Legio IIII Flavia Felix. Obverse legend PMS COL VIM (Provincia Moesia Superior COLonia VIMinacium). National Museum in Belgrade. (© National Museum Belgrade, Serbia).

Imperial iconography and politics are clearly distributed through visual messages on averses and obverses of coinage. From political religious or other reasons, coins always bare multiple messages to different target groups. With high certainty today we can confirm that some series were intended for distribution among civilian population or troops, and for local, regional or widespread use. We have distinguished presence at the frontier of a large percentage of coins from mint *Nicea* in Asia Minor with specific obverses dedicated to military themes – legionary insignia, soldiers with weapons or insignia. Messages from the same mint that are found locally in province Bithynia in Asia defer from frontier finds with obverses that bare religious and clearly civilian themes. This difference in iconography can lead to identifying deferent policies suggested for safe provinces deep within the empire and hot or militarised zones at the frontier.

Special attention should be paid to identities of provinces and their legions through issues of coinage with personifications of provinces flanked by emblems of legions. The best examples belong to coins from Moesian and Dacian mints from middle of the 3<sup>rd</sup> century. This was among the best notable issues of the military propaganda where provinces demonstrate the importance and reliance on these legions.

## 1.7. Burials

*Snežana Golubović – Nemanja Mrđić, Institute of Archaeology (Belgrade, Serbia)*

Throughout the Roman history, people practiced different burial rites. Both inhumation and incineration were practiced. In the early centuries incineration was practiced, as one of the oldest burial customs going back far into prehistory. Local variations of this customs are present all over the frontier. For identifying people's origins research of cemeteries will provide best data. Both human-osteological remains and burial rite can help in identifying populations or individuals. With more than 14,000 excavated graves, the necropolises of *Viminacium* are one of the best-case studies and examples of cosmopolitan character of the cities at the frontier. People who come will live in the city. After their death, someone else will come and no trace of the previous owner in normal circumstances may remain. But wherever they go people kept their burial rites, therefore guiding us that people's origins should be sought rather in their death than in their lives.

During the first century and 1<sup>st</sup> half of the 2<sup>nd</sup> century cremations are dominating with very few inhumations. During the second half of the 3<sup>rd</sup> century, inhumation as burial type prevails, mostly as change arriving with traders, migrants or troops from the eastern provinces.

Placing ash in ceramic, stone or even glass urns was common throughout the Empire but in the Balkan provinces and partially in *Dacia* different variation is absolutely dominating (burials in urns for example at *Viminacium* are only 4-5 %). Incinerations were done in or above two or three level pits that are representing large burial urn as in this process, the walls of the pit were heavily fired (with walls up to 7-8 centimeters thick). Through the same process, the burial pit was ritually purified in fire. There are special types where simple burial pits were upgraded by constructions of bricks or roof tiles.

For 30 years now, this type of cremation has aroused much interest. It represents a typical cremation from the 1<sup>st</sup> to the 3<sup>rd</sup> century that appears at the territories of south-eastern *Pannonia*, *Moesia Superior*, partly even *Dacia* and *Thracia* in the east, as well as eastern *Dalmatia*. Only a handful of such graves were dated in the 4<sup>th</sup> century.

Recent research and experimental archaeology showed subcategories even in this type of ritual. In many regions these graves are treated as *busta*, and *in situ* incineration is notable. But at *Viminacium* and at parts of the Danubian hinterland cremations were done at an *ustrina* – one central cremation place at the cemetery. Burial pits were created obviously as a separate ritual in respect to ancestral origins of the rite.

Most common burial inventory consisted of a bronze coin, various jugs, pots or bowls for food, wooden boxes etc. Part of the local industry in large civil centers was even completely oriented to producing burial inventory as some of the jug types were exclusively used for burials and were not found outside cemetery contexts.

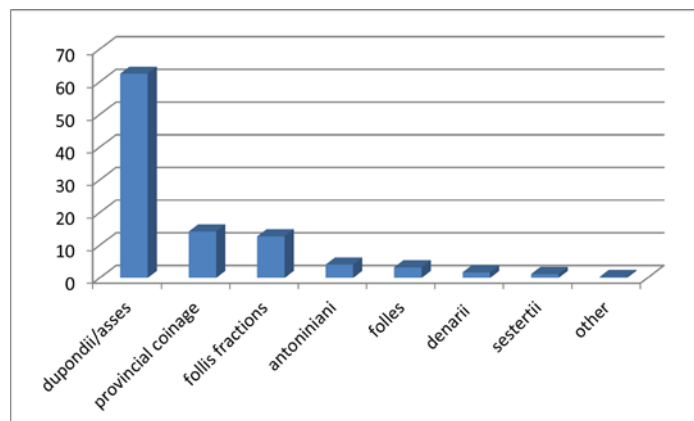
Approximately only one quarter of graves in total had coin as the inventory. Official statistics on the sample of more than 10,000 excavated graves is presented in the following table:



	Number of graves	Number of graves with the coins	%
Inhumations	7839	1461	18.65
Cremations	2930	1188	40.55
Total	10769	2649	24.60

**Fig. 1.7.1.** Incidence of graves with coins as grave goods at the southern cemetery of Viminacium (Source: M. Vojvoda / N. Mrđić, Coin finds from the Viminacium necropolis of Više grobalja and their role in funerary ritual/Nalazi novca sa viminacijumske nekropole Više grobalja i njihova uloga u pogrebnom ritual. Viminacijum knjiga 4 (Belgrade 2015) 113).

It is clear that placing coins as part of the ritual is far dominant in cremation burial rite as it was present in nearly half of excavated graves, doubling the percentage that is followed by the later dominant inhumation rite. Also, when talking about the Charon's obol – we can attest this custom through statistics of denominations that appear in graves at Viminacium southern cemeteries as the largest single cemetery sample in the Roman world. Dupondius and asses are absolutely dominating in the statistics as seen in the following graph.



**Fig. 1.7.2.** Incidence of denominations at the Viminacium southern necropolises graves (Source: M. Vojvoda / N. Mrđić, Coin finds from the Viminacium necropolis of Više grobalja and their role in funerary ritual/Nalazi novca sa viminacijumske nekropole Više grobalja i njihova uloga u pogrebnom ritual. Viminacijum knjiga 4 (Belgrade 2015) 113).

Luxurious graves are often attributed to wealthy class of the immigrants from the eastern provinces of the Empire, especially from Asia Minor.

The oldest inhumations appear already at the end of the 1<sup>st</sup> century. The deceased in those graves were mostly buried without coffins or in wooden coffins. Wooden coffins could be traced according to the position of iron nails, while the wood remains are very rare and scarce.

Somewhat later, at the beginning of the 2<sup>nd</sup> century, graves with all kinds of brick constructions appear. They can be built or consist of bricks laid without any binding material (mortar). The variety of grave constructions reflect the social-economic status of the deceased, while the

selection of materials represents local characteristics, brick being preferred to stone, which can be observed in cases of graves with pits partially covered with bricks. During late 3<sup>rd</sup> and 4<sup>th</sup> centuries vaulted, trapeze-shaped tombs rise special attention to wall painting decoration and luxurious finds. Family tombs appear with multiple burial places where most characteristic ones are cross-shaped with 11 burial chambers (lat. *locus*).

Plain grave pits or burials in wooden coffins make 96% of all the inhumations, especially until the middle 3<sup>rd</sup> century. There are rare examples where the deceased were laid in a grave pit covered with half of an *amphora*, or children laid in *amphorae* cut in half to be used instead of a coffin. Stone *sarcophagi* are also present in considerable number but because of looting and due to the easy detection only several were found intact.

Very rarely Romans were buried with weapons. There are a few examples, but considering the number of graves excavated and the small share of graves with weapons as burial good, this group is more or less negligible.

Lately a number of lead *sarcophagi* were discovered, mostly in *Moesia* during rescue excavations. Although it seems to be the burial type of rich people, most of them had very little or almost no inventory. The majority of them is related to inhumations. Only one is used instead of urn for cremated deceased.

Placing coins, liquids, or food in graves as well as similar, mostly pagan customs survived transition to Christianity and remained in some culture still bonded to Danube region although interpreted in different ways.



**Fig. 1.7.3.** Inhumation of high class Roman women in a tomb constructed of roof tiles. Viminacium, Upper Moesia (© Documentation of the Institute of Archaeology)



**Fig. 1.7.4.** Inhumation of a high class Roman person in a two level cremation burial pit (also known as Mala Kopašnica – Sase II type). (© Documentation of the Institute of Archaeology)

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## 2. Appearance and Development of the Roman Danube Limes

### 2.1. Geography and Topography

*Maria Tzankova – Boryana Stancheva, Association of Danube River Municipalities “Danube” (Ruse, Bulgaria)<sup>1</sup>*

#### 2.1.1. *The Danube as “Wet Border” on the Northern Edge of the Roman Empire*

As a natural river border, the Roman Danube Limes existed for about 400 years in the Western Roman Empire, in the Eastern Roman Empire even longer until the 5<sup>th</sup> and 6<sup>th</sup> century. The Roman provinces of Raetia (Germany, Austria, Switzerland), Noricum (Austria, Italy), Pannonia (Austria, Slovakia, Hungary, Slovenia, Croatia, Serbia) and Moesia (Serbia, Montenegro, North Macedonia, Bulgaria) were lined up along its south side; Dacia (Romania) was made a province on the north bank of the Lower Danube at the beginning of the 2<sup>nd</sup> century and existed in this form for about 170 years.

Also today, the river Danube is a natural barrier between various European states and functions as national border over long distances, such as between Slovakia and Hungary, Croatia and Serbia as well as Bulgaria and Romania. In antiquity, the largest part of the Northern frontier of the Roman Empire passed along the Danube. This natural border was of major importance – a powerful natural means of protection and at the same time, a convenient connecting route, facilitating the control of trade routes, a quick and inexpensive way to supply the legions.

Along the entire Danube River, the right bank is higher in elevation than the left one, which largely has a flat and open appearance, often with swamps and lagoons, contributing to its defensive nature. The system of fortresses, roads, settlements and service facilities on the southern bank of the Danube ensured additional protection functioning also as a major communication artery, a commercial and a supply road.

#### 2.1.2. *Threats for the Roman Heritage at the Riverbanks of the Danube Today*

In general, the physical remains of sites located outside contemporary settlements show a good state of preservation have largely preserved their authenticity. There are natural and anthropogenic risk factors that pose a serious threat to the physical remains and their surrounding environment. Especially coastal erosion, landslides in the Danube river bed and treasure hunters are the most common threats for the archaeological remains in this area of the Empire.

In many cases, archaeological sites located in the area of modern settlements have irretrievably lost their authentic material structure and their archaeological context. Through proper urban planning archaeological remains can be appropriately exposed in a park environment, as shown by the good examples of Vidin, Belene, Pleven, Tutrakan and Silistra (for parts of the ancient fortresses). Sites located in or near contemporary settlements (*Novae, Trimammium*)

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<sup>1</sup> Based on a consortium work of the *Partnership under the Obligations and Contracts Act “Danubius” and RubliMedia business SPL.*

can be interconnected with other functional systems of the settlement structure creating an attractive urban landscape and exploiting the full potential of the whole system.

In fact, in the past 2,000 years, most of the fortresses and hills close to the Danube river bank have lost part of their structures (often the northern fortified walls – for example, Trikesa in the village of Dolno Linevo, Valeriana in the village of Dolni Vadin, Burgo Zono, etc.) due to landslides in the river bed, which changed its banks, expanding the river bed about 20 meters to the south. This circumstance affects the sites located at a lower altitude; some of them are currently fully flooded by the Danube River (Apiaria in the municipality of Slivo pole).

The anthropogenic threats are as much devastating for archaeological sites –also for all other types of cultural heritage –as natural threats and therefore should be limited as much as possible by legal restrictions. In this context, investment intentions and treasure hunting are the driving forces. Especially the latter poses a very serious problem, since it mostly leads to an almost complete destruction of the site.

### 2.1.3. *The Roman Roads*

The installation of an extensive road network stretching all over the Roman Empire was a great and important achievement in classical antiquity. Paved roads were a novelty in Central Europe. They were built as straight as possible and because of their construction and the materials used, in contrast to previous nature trails, they were passable in all weather conditions.

The classical first-class Roman road was about 6 meters wide, built on a rugged four-layer gravel, sand, different ballast and small stones, gravel containing a large amount of mortar and a pavement of large stones. Along a Roman road several milestones (*miliaria*) were put up, providing the travellers with valuable data about the Emperor, the province governor, those who erected the column and – the most relevant information – the distance to the nearest settlement. In border areas, watchtowers were built every few miles along the Limes Road to send signals, and road stations, sometimes with settlement status, were built every 12-15 Roman miles.

The Limes Road connected the Roman military camps on the borders of the Roman Empire. It was part of the military security measures and therefore, built, maintained and used by the military. The gates of the military camps were the starting and ending points of the streets. In connection with the Danube Limes, the Limes Road is called Danube Road.

In the Bulgarian lands, the Romans found older Thracian roads, but due to their different military organisation, they started major construction of new roads with military-strategic importance. Among those was also the most eastern section of the Danube Road (*via istrum*), starting from *Singidunum* (Beograd) and passing *Dorticum* (village of Vrav, municipality of Bregovo), *Bononia* (Vidin), *Ratiaria* (village of Archar, municipality of Dimovo), *Almus* (Lom), *Ulpia Oescus* (village of Gigen, municipality of Pleven), *Dimum* (Belene), *Novae* (Svishtov), *Iatrus* (Krivina), *Sexaginta Prista* (Ruse), *Transmariska* (Tutrakan) and *Durostorum* (Silistra) in the Bulgarian part and continuing northwards to the Danube Delta. Its construction began under the rule of Emperor Tiberius (14-37 CE), and was finally completed under the rule of Emperor Traian (98-117 CE). For the longest part, the road runs near the river, except for

Northeastern Bulgaria, where it is going further south in a certain distance from the riverbank due to the swampy area near the Danube, which is unsuitable for construction. Even today, some of the modern roads follow the route of the Danube Road, which was reused by different civilisations since ancient times and contributed to cultural exchange between communities, intense commercial relations, the exchange of goods and ideas among the different tribes and peoples.

#### 2.1.4. *Civil Towns and Military Camps along the Eastern Sector of the Roman Danube Limes*

The constant danger of attacks was the reason for the continuous construction of fortifications and fortresses in areas under the control and supervision of the Roman army. In this context, the first and most important zone in Moesia Inferior was the Danube area itself, the second one included the passages to the Balkan Mountains, and the third one those to the south of the Danube Delta, as well as important points at the northern and northeastern shore of the Black Sea and Crimea.

Rome's fortification system along the Danube was consistent with a number of principles<sup>2</sup>:

- Fortifications were placed at the various transport hubs and trading centres along the Danube, such as *Remetodia*, *Pomodiana*, *Variana*, *Ad Putea*, *Dimum*, *Tegulicium*, etc.
- Fortifications were built on both sides of the river for effective border control.
- Fortifications were installed also on the Danube islands; they had observation posts on the riverbank or both riverbanks.

The first Roman fortification activities at the Danube Limes in Bulgaria began in the middle of the 1<sup>st</sup> century in *Oescus* and *Novae*. At the beginning of the 2<sup>nd</sup> century *Ratiaria* (village of Archar, region of Vidin), *Ulpia Oescus* (village of Gigen, region of Pleven), *Dimum* (Belene), *Sexaginta Prista* (Ruse), *Novae* (Svishtov) and *Nicopolis Ad Istrum* (village of Nikiup, Veliko Tarnovo) were also significantly fortified.

Along the Bulgarian section of the limes there are more than 40 fortresses, the most significant of them include *Alums*, *Augustae*, *Transmariska*, *Nigrinianis-Candidiana*, etc. Four Legionary Camps – *Ratiaria*, *Ulpia Oescus*, *Novae* and *Durostorum* belonging to Moesia Inferior – have been partially studied. Important fortresses for the defence of the borders of Moesia Superior are *Dorticum*, *Florentiana*, *Ad Malum*, *Remetodia*, *Pomodiana*, *Cebus*.

The urbanisation of these lands began after the separation of Moesia and the triumphant Dacian expeditions of Emperor Traian – the colonies *Ratiaria* and *Oescus* were established.

The Roman construction school is of a great importance, also for modern culture. It had developed more than 24 types of *opera* (construction techniques); their main principles are the modulation and systematisation of the materials they used.

The large-scale construction work of Emperor Traian (98-177 CE) required massive organisation of resources and manpower. In the cities, water supply networks and sewerage

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<sup>2</sup> Zaharia, R. (2010). South Danube Limes. Integration attitudes and policies of Roman ruins and fortifications within the urban tissue and in the territory. University of Architecture and Urbanism Ion Muncu from Bucharest.

systems were installed, and squares, cult and public buildings (temples, *basilicae*, *odea*, thermal baths, theatres), residential buildings, urban and suburban villas were designed and built.

The Romans already used advanced technology for supplying their settlements with fresh water and a highly functional sewerage system. They built aqueducts, often combined with a viaduct that transported water over dozens of kilometers and were used for hundreds of years. The water supply system was studied in the ancient city of *Novae. Nicopolis Ad Istrum* was supplied with water from a huge aqueduct carrying water from 26 km (from today's village of Musina) and a *castellum aquae* was found in the city as early as in the 19<sup>th</sup> century. In *Ratiaria* a part of an aqueduct is preserved along the Archaritsa river. Near Almus, remains of ceramic and lead aqueducts were found.

The fora of *Ulpia Oescus* with a Corinthian colonnade area on three sides is built according to an Italian model. The three temples of the Capitoline Triad are on the northern side of the forum – Jupiter Optimus Maximus, Juno and Minerva, and behind them the city basilica. The temple of Fortuna is also well preserved.

The city of *Ratiaria* is perhaps the most beautiful site in Bulgaria, though still very poorly studied and significantly destroyed by treasure hunters.

The most complex architectural and engineering buildings, embodying the finest construction and craftsmanship of the Romans, were the public thermal bath complexes. Very often, they also were the most expensive and largest buildings in the cities, comprising rooms of different size and function – temples, training halls, shops, *lupanaria*, latrines, etc. Beside their size and complexity, their heating system was impressive – not only in the water in the pools was heated by a hypocaust system but also the air in several the rooms. The thermal baths had richly decorated interior and exterior with various marble lining, frescoes and mosaics.

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## 2.2. Historical Development of the Roman Provinces on the Lower Danube

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The Roman conquest of the territories near the Lower Danube began in the first half of the 1<sup>st</sup> century BCE. Under the rule of Emperor Octavian (27 BCE-14 CE), the subjugation of the Balkans was an important step in the Roman Empire’s expansion. Octavian succeeded in imposing his desire to consistently push and establish the northern boundaries of the Empire in the Rhine and the Danube region after the end of the civil war (31 BCE).

Marcus Licinius Crassus, elected Consul of Rome, was given great powers to pursue Rome’s expansive interests in the Balkan Peninsula. In 29 BCE, the Romans declared the local tribe Dentelets attacked by the Bastarnae as their allies and entered Kyustendil Field (Bulgaria) to drive the conquerors back. The Romans managed to defeat and conquer significant territories and the next year they seized areas on both sides of the Balkan Mountains. With these two moves, the deserted Thracian lands were actually prepared for annexation by the Empire. In 11 BCE, General Lucius Calpurnius Piso suppressed the rebellion of the Thracians, who were constantly resisting, but the Roman principle to divide and conquer weakened them to a great extent.

Rome then pursued an aggressive conquest policy towards the Middle and the Lower Danube, and in 12 CE the new province of **Moesia** was formed with three legions operating – *legio IV Scythica*, *legio V Macedonica* and *legio XX Valeria Victrix*. The fourth legion was under the command of Marcus Licinius Crassus in Macedonia and sent to Scythia north of the Danube, where it defeated the local tribes.

The Roman marches largely depopulated the territories between the Danube and the Balkan Mountains, which led to a policy of permanent displacement of the neighbouring subjugated tribes.

The Moesian military contingent of legions and additional units were actively involved in the conquest of the other Thracian lands and the establishment of the new province of **Thracia**, and the *legio VIII Augusta* was also transferred to Novae (Svishtov, Bulgaria). Gaius Julius Roemetalces, whose name shows the Roman policy for gradual inclusion of the separate Thracian tribes, is the last ruler of Thrace (38-44 CE). In 45 CE, the last Thracian kingdom south of Hemus was annexed and the province of Thracia was formed.

This led to the expansion of the Moesia province east to the Yantra River and, under the rule of Emperor Vespasian (69-79 CE), the full integration of today’s Northeastern Bulgaria into the boundaries of the Empire began. Then the invasions of Dacians and Sarmatians were stopped. This expansion continued during the reign of the Emperors Titus (79-81 CE) and Domitian (81-

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<sup>3</sup> Based on a consortium work of the *Partnership under the Obligations and Contracts Act “Danubius” and RubliMedia business SPL*.

96 CE). In 85-86 CE Domitian led a war against the Dacians. The Dacian commander Diurpaneus, was defeated by the Moesian governor Cornelius Nigrinus.

The Flavian period also saw the first formation of large, double-size units, both infantry and cavalry, of a nominal strength of 1,000 men (*cohors/ala miliaria*). These were the mirror image of the double-strength first cohorts of legions also introduced at this time. During this time, many cohorts were formed of Thracian soldiers and employed by Rome in Britain, Africa, Germany, etc.

The *cohors I Thracum* is attested on six – possibly seven – inscriptions in stone have been found in *Banna/Waterhead*, *Lavatrae/Bowes* and *Pons Aelius/Newcastle* dating at the end of the 2<sup>nd</sup> and the beginning of the 3<sup>rd</sup> century. The regiment was originally recruited among the local Thracians and was believed to have been first stationed in Britain at the Worcester auxiliary fort, just to the south of the city of *Viriconium*, where the tombstone of a trooper in the Thracian cohort was discovered (RIB 291) dating in the second half of the 1<sup>st</sup> century. The cohort was stationed there during the early campaigns of the governor Ostorius Scapula. They were also involved in the building of Hadrian's Wall during the 120's CE.

During the Flavian dynasty, the limes was expanded east of Dimum (Belenes) when Dimum, Sexaginta Prista, Trimammium, Apiaria and Transmariska fortresses were built.

During the civil war, the Lower Danube defense system was significantly weakened and the area south of the river was subject to numerous barbarian invasions by the Roxolani, Sarmatians, Dacians. After the end of the civil war, the northeastern point of the Roman border was Novae, where *legio I Italica* was located.

In 85 CE, the Dacians surprisingly invaded the lands south of Danube and conquered Northeastern *Moesia*. Emperor Domitian (81-96 CE) took on an expedition to protect the borders but failed to push back the barbaric invasion. The Emperor sent massive reinforcements, led by the Governor of *Moesia*, Cornelius Nigrinus who defeated the Dacians.

In 86 CE, *Moesia* was divided into two provinces: *Moesia Inferior* (East) and *Moesia Superior* (West) separated by the Tisza River.

The fundamental changes in the military organisation of the Danubian provinces and the shift of the Roman military focus in Europe from Great Britain and the Rhine to the Danube entailed the formation of a new provincial army and the relocation of all legions and most additional units to the Danube. This led to a significant increase in the number of Roman garrisons and their reinforcement with new legionary and auxiliary forces and laid the foundations of the Danube border protection system, fully developed under the rule of Traian (98-117 CE) and of Hadrian (117-138 CE).

Traian began the largest military operation in ancient history in 101 CE with troops of 200,000 – 250,000 soldiers and allies. The number of the well-prepared Dacian troops and their federations was approximately the same. The war began heading in two directions – firstly, towards Sarmizegetusa and Drobeta (Romania), but the Dacians made an unexpected attack in Dobruza, which forced the Roman command to send an additional legion to Oescus. Claudius *legio XI Claudia* was divided into three parts and with the victory over the Dacians in 106 CE they settled in *Durostorum* (Silistra, Bulgaria).

After 106 CE, the consolidation of the new province of Dacia began. Between 117 and 119 CE, Dacia and Moesia Inferior were attacked by Sarmatians, Roxolani, and Iazyges, who were pushed back, and a lasting peace ensued in the Lower Danube region, which led to a new limes structure. The territory west of Novae already was in the north Roman territory and this required relocation of the military contingent. In the province of Moesia Inferior, three legions were permanently relocated: the legio I Italica in Novae, legio XI Claudia in Durostorum and the legio VMacedonica in Tremis.

The time of the Antonini and the Severan dynasty marked economic prosperity in Moesia Inferior and Thracia. Barbarian attacks by the Costoboci took place in 170 CE and, after the middle of the 3<sup>rd</sup> century, by Goths, Halani, Carpi and Roxolani.

At the end of the 2<sup>nd</sup> century and the first half of the 3<sup>rd</sup> century, the Balkan Peninsula played an important role in the Empire's political life, since it became the arena of the civil war between Septimius Severus and Pescennius Niger in 193 CE.

In 249 CE, Traian Decius was declared Emperor and crowned on the Lower Danube Limes. He fought the Goths until 251 CE when he was killed near *Abritus* (Razgrad). Over the next two years, Emilian was the Governor of Moesia and Pannonia. He overcame the Gothic crisis and in the beginning of 253 CE he was elected the Emperor by the Danube troops.

Due to the increasing Barbarian attacks and the impossibility of Rome to defend its vast border territories, Emperor Aurelian (271-275 CE) decided to evacuate the province of Dacia and the Danube once again became the northern border of the Empire. The large-scale administrative and military reforms of Diocletian (284-305 CE) and Constantine I (307-337 CE) included a complete reorganisation of the limes and were accompanied by extensive construction work.

Then, massive fortification construction work began on the right riverbank, which continued until the end of the 4<sup>th</sup> century. Existing fortresses were restored, new ones and such of different type and size were built at strategic locations. Archaeological analyses suggest a new spatial distribution and location of the fortifications compared to the previous period. The topography took precedence over the strategy, the accessibility of both riverbanks was considered, as well as the local hydrography and flora, favoring the settlements on both sides of the Danube.

The invasion of the Goths and Huns in the last quarter of the 4<sup>th</sup> century destroyed a large part of the fortresses and at the end of the 5<sup>th</sup> century the Roman rule began new major reconstruction work carried out in several stages, the first one was under the rule of Emperor Anastasius, and the last major one – under Emperor Justinian I. Until the end of the 6<sup>th</sup> century, only smaller activities were carried out.

The limes ceased to exist as a defensive system under the rule of Emperor Heraclius, when Rome lost control of its provinces after the invasions of the Slavs and Avars. Part of the ancient fortresses were also used in the Middle Ages, and those located in strategic places – until the Russian-Turkish War in the years 1877-1878.

## 2.3. Historical and Archaeological Development of the Roman Danube Limes

The Roman frontier along the Danube was gradually established in the 1<sup>st</sup> century CE and was strongly fortified after a temporary collapse in the late 3<sup>rd</sup> century. The western part, reaching approximately to the Croatian-Serbian border, was abandoned after the fall of the Western Roman Empire by the mid-5<sup>th</sup> century, while the eastern part continued to serve as the frontier of the Eastern Roman Empire until it was given up in the early 7<sup>th</sup> century. The presence of many Late Roman and Early Byzantine fortifications, some of which in considerably good state of preservation, is a distinctive characteristic of the Limes on the Lower Danube. It gives it some unique aspects that are not present at any other stretch of the Roman frontiers.

### 2.3.1. Focus 1: The Limes Shifts in Raetia and the Germaniae

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The development of the northern border in *Raetia* cannot be understood without the one in *Germania Superior*.

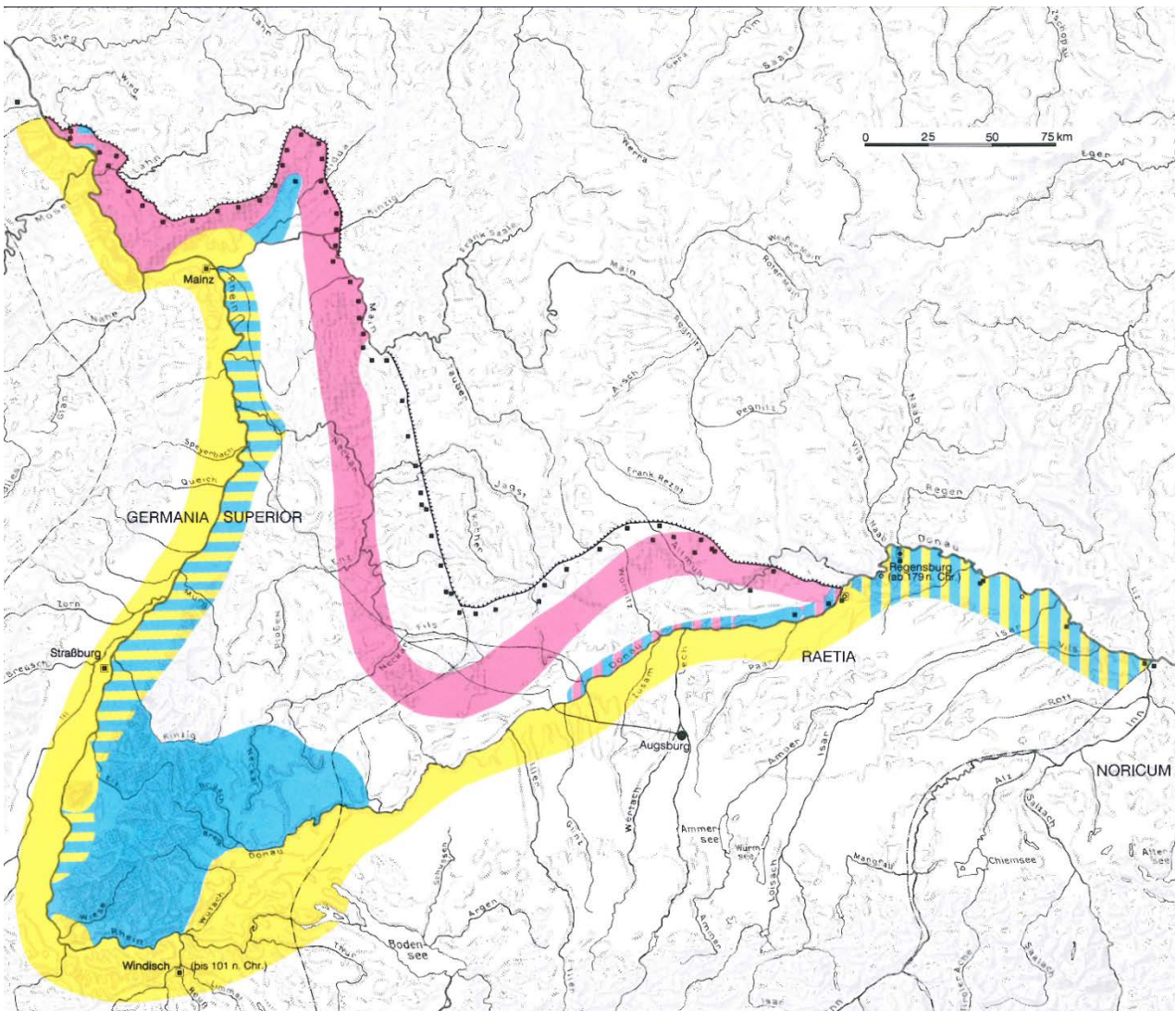
Since the Gallic Wars of Gaius Julius Caesar in the middle of the 1<sup>st</sup> century BCE, the Rhine had been the northern border of the Roman Empire. When Augustus became the new Emperor in 27 BCE, he aimed at closing the gap between the Rhine and the upper Danube in order to defend Italy against Germanic incursions on the Rhine and Danube. Therefore, Augustus tried to bring the Germanic tribes between the Rhine and Elbe under his rule and incorporate them in the Roman Empire. This attempt resulted in the Augustan Wars against the Germans, a series of military conflicts between 12 BCE and 16 CE.

After the devastating defeat of the Romans in the Battle of the Teutoburg Forest in 9 CE and further unsuccessful efforts to conquer and secure the German territories at the eastern banks of the Rhine in the subsequent years, the Roman troops finally retreated to the left side of the Rhine and right side of the Danube at the new Emperor Tiberius' demand in 16 CE. But with this decision, the question of an appropriate defence and organisation of the rear area arose.

Several years later, with the reign of Claudius (41-54 CE), the Roman troops once again began to systematically advance eastwards across the Rhine and northwards across the Danube (Fig. 2.3.1). They did this for two reasons: firstly, they wanted to control further fertile areas in order to feed the army; and secondly, they wanted to conquer strategically important areas, also in the sense of better control. The change in the course of border was characterised by a successive forward movement to the east and north corresponding with the construction of several new fortifications (Unterkirchberg, Rißtissen, Emerkingen, etc.) as well as the expansion and reinforcement of existing facilities (*Antunnacum*/Andernach). Initially, the overland border only had the shape of a lane which was laid through the primeval forest. This is the original meaning of the Latin word *limes*, which later became the generic term for all the aggregate states of the Roman border fortifications on land, in contrast to a 'wet border'« along rivers, such as the Danube and Rhine, which was called *ripa*.

After Tiberius' withdrawal to the Rhine border in 16 CE and Claudius' careful and gradual advances to Germanic regions it were the Flavian Emperors (69-96 CE) who pushed again the Roman expansion east of the Rhine and northern the Danube. from Vespasian (69-79) onwards. Initially, the Roman troops ventured northwards across the Rhine to the foreland of

Mainz towards the settlement area of the privileged *Mattiaci*, along the fertile trade route of the Lahn Valley and further south to the 'knee' of the upper reaches of the Rhine and Danube, the area called *agri decumates* by Tacitus (Tac.Germ. 29,3).



**Fig. 2.3.1.** Simplified presentation of the different phases of the occupation. Boundary zones up to Claudian times (yellow) and early Flavian times until around 80 CE (blue); boundary line from Domitian times until the middle of the 2<sup>nd</sup> century (red) and the Limes from the middle of the 2<sup>nd</sup> century until around 260 CE. (Source: C.-M. Hüssen, Grabungen und Forschungen der letzten 40 Jahre im obergermanischen und rätischen Limesgebiet. Der römische Limes in Deutschland AiD Sonderheft 1992, 38 fig. 23).

Vespasian built a road from Strasbourg through the Black Forest and the Swabian Jura to the Upper Danube, secured by permanent troop camps. It was only under Trajan – but already prepared under Domitian, for example through the conversion of the military districts to the two provinces of Germania Superior and Germania Inferior (from around 85 CE) – that the Romans systematically began to occupy the eastern and northern foreland of the two rivers and demarcate it from Germania Magna. Since then, the limes along the Rhine ended at Neuwied and enclosed the fertile areas of the Lahn Valley with the Wetterau and the Taunus. From there, it took the route to the south, using the course of the Main from Großkrotzendorf first to Würth, and later (from 150 CE) to Miltenberg at the southernmost point of the Main

knee. From there, at first still from Wörth, it went overland to the Neckar, still in the province of Germania Superior, and then in Raetia from the fertile Nördlinger Ries to Oberstimm, which already existed in Claudian times as a wooden fort, only to meet the Danube again at Eining.

From then on, the Danube functioned as *ripa* of the Northern border from *Abusina*/Eining downstream. During the Flavian period this section of the *ripa* has not yet been secured by a dense chain of forts (later with Regensburg, Pfatter, Straubing, Steinkirchen, Künzing and Passau) along the southern bank of the Danube (presumably because there was no threat in the Germanic settlement area, with only the *Hermunduri*, a Proroman privileged tribe, settling there).

The Upper Germanic-Raetian Limes, with its 550 km long course, which has been included in the UNESCO list of World Heritage Sites in 2005, received its final, most-eastward advanced development status in the second half of the 2<sup>nd</sup> century during the reign of Antoninus Pius 138-161 CE. Until then, it had become increasingly secured with densely sown watchtowers and forts built of stone. Having advanced further to the east, it now ran in a straight line from the Main knee near Miltenberg southwards, before turning east at the provincial border between Germania Superior and Raetia near Fort Schirenhof at Schwäbisch Gmünd northeast of Göppingen. With a slightly northward rising course (with towers e.g. in Mögging, Rainau, forts in Aalen, Rainau, Halheim, Ruffenhofen, Dambach) to the northernmost point of Raetia near the small fort of Gunzenhausen (with the bigger forts of Gnotzheim and Theilenhofen in the hinterland) on the Altmühl, the Raetian Limes bent into a southeasterly course (with the forts of Ellingen, Weißenburg in the hinterland, Oberhochstatt, Burgsalach, Biebig, Hegelohe, Pfünz in the hinterland, Böhming, Hienheim, Oberstimm in the hinterland (until 120 CE), Pförring in the hinterland, with towers e.g. in Pfahlbuck, Zandt) and met the Claudian course of the limes again at *Abusina*/Eining which therefore can be considered the most western fort of the later Danube Limes.

The limes, which was secured by a ditch construction in Germania Superior – where the natural conditions allowed it – and finally by a stone wall about three meters high as well as stone watchtowers at strategically advantageous positions in Raetia, lasted until the middle of the 3<sup>rd</sup> century. The political situation north and respectively east of the Roman Empire changed threateningly, culminating in the invasion of powerful tribal groups such as the *Iuthungi* (*Semnonnes*) and the *Marcomanni*. After several incursions during the 3<sup>rd</sup> century, which were not only noticeable in the Raetian area and led to the abandonment of the regions beyond Rhine and Danube, the last phase of expansion of the Upper Germanic-Raetian Limes took place at the end of the 3<sup>rd</sup> century and especially in the 4<sup>th</sup> century by Emperor Valentinian I (364-375) transforming the Roman forts into fortress-like installations. The so-called Danube-Iller-Rhine-Limes now ran up the Rhine to the outlet of Lake Constance, along the lake, northwards overland to the upper reaches of the Danube and from there again as ‘wet border’ downstream to the east. In the inland, similarly developed forts were built as on the limes, which were smaller and manned by a smaller group of men than before, but had more the character of castles (*burgi*). This last organised border defence only went under with the attacks in the middle of the 5<sup>th</sup> century, roughly at the same time as the fall of the Western Roman Empire (476 CE).

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### 2.3.2. Focus 2: The Moesian Limes and the Roman Province Dacia

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When the Roman emperor Claudius suppressed the Thracian state in 46 CE, the southern part of the Balkan mountains was organised into the province of Tracia, while the territory between the Balkans and the Danube was added to the province of Moesia, but does not seem to have been garrisoned permanently for nearly a quarter of century.

After the division of Moesia for strategic reasons and the creation of the two new provinces of Moesia Superior (west of Ciabrus/Tibrița river) and Moesia Inferior (bounded by the river Ciabrus/Tibrița to the west, by the Danube to the north, the Black Sea to the east and the Balkans to the south) by emperor Domitian (86 CE), the limes on the lower Danube acquired its definite shape which remained basically unaltered until the end of the Principate. The Danubian frontier between *Viminacium* (Kostolac, Serbia) and *Novae* (Svishtov, Bulgaria) was abandoned and some of the military units previously quartered upstream from Novae were sent north of the Danube into the new province of Dacia. The remaining units that were available to be quartered elsewhere were transferred eastward by Emperor Traian to guard the Danube's right bank as far as the river delta.

Preparations for Dacian wars was one of the biggest imperial and development project from Tiberius to Traian. Both infrastructure and local production was busted in the rate never seen before and barely seen afterwards. Dacia was not just a new territory. The conquest of new lands brought many changes along the Danube. Newly established provinces that were rich with gold and mines rose the income of the Empire significantly. Eliminating a long-term and dangerous enemy brought sense of freedom and security. All civilian settlements flourished and already under Hadrian a number of settlements became *municipia* completely changing character of civilian life and introducing full scale urban development. After the defeat of *Dacia*, the 2<sup>nd</sup> century has been a time of prosperity and the Danube was not the frontier anymore. Many forts were abandoned, and elite units moved further. Downstream from *Viminacium*, *Lederata* and *Cuppae* auxiliary troops moved away. At the forts that remained in place small garrisons were left to protect trade from pirates and bandits (*latrones*). All forts protecting bridges and river crossings kept their importance and continued to serve unchanged or with reduced garrisons. It was some time before the Moesian legions returned home (*legio VII Claudia* and *legio III Flavia*), but this was necessary as Pannonian plain remained Barbarian territory.

After 115 CE it seems that a concrete separation was made between Tracia and Moesia Inferior. Part of the newly conquered Dacia was annexed to Moesia Inferior, probably the northern border of the province started from the Danube, climbed the Olt valley to *Angustia*, descended on the Trotușului valley to *Piroboridava* and from here, on the lower Siret valley, to Barboși and Orlovka (Ukraine). This situation was valid until the middle of the 3<sup>rd</sup> century CE, when the territory located north of the Moesia Inferior was removed from the province, the border being preserved on the Danube river. Under Emperor Aurelian, the western and southern border of the province was changed by the creation of the province of Dacia Ripensis.



The biggest common attribute of all the limes sites in Moesia Inferior was obviously the Danube. The military importance of the limes is proven even today, by the more than 50 confirmed fortified spots on the limes of Moesia Inferior, from fortlet to legionary fortress, archaeologically identified and studied by historians. The predominant role of the limes was a military one, to defend the Roman world against the Barbarian invasions. As Dobrogea was a border province, a large concentration of troops was needed here, to ensure both the defense of the area and military mobility, in case of the need for rapid interventions.

Only after the reorganisation of the Moesian limes by Vespasian after 69/70 CE, the first Roman auxiliary military units have been stationed in Dobrudja. This action implying also the establishment of the *classis Flavia Moesica* (former *classis Moesica*); most likely the main *statio* of the fleet was at *Noviodunum/Isaccea* (Tulcea county, Romania). Other stations at *Troesmis/Turcoaia* (Tulcea county, Romania), *Barboși* (Galați county, Romania), *Halmyris/Murighiol* (Tulcea county, Romania), *Aliobrix/Orlovka* (Ukraine), *Dinogetia/Garvăn* (Tulcea county, Romania), *Aegyssus/Tulcea* (Romania) and probably at *Axiopolis/Cernavodă* (Constanța county, Romania). Its area of action was northern Dobrudja, its competence extending to the maritime area.

The work of organising the limes in Dobrudja began in the time of Traian, the system being completed by his successors. Fortified centres were built in the 2<sup>nd</sup> and 3<sup>rd</sup> century CE, such as *Sucidava*, *Alinum*, *Sacidava*, *Axiopolis*, *Capidava*, *Carsium*, *Cius*, *Troesmis*, *Arrubium*, *Dinogetia*, *Noviodunum*, *Aegyssus*, *Salsovia* – a total of 18-22 fortifications. Throughout the existence of the limes, military units were stationed in Dobrogea, a total amount of approx. 12,000-13,000 troops.

For the transport of troops inside the province and on the limes area, but also for the efficient organisation of the military and civilian supply, a dense road network was created. The base of the road network consisted of three major imperial roads, *viae*, which came from the south and crossed the province longitudinally to the mouth of the Danube. The oldest of these was the one along the river, the Danube Road, which connected all the Roman garrisons from *Novae* to *Halmyris*, having as main points along the route: *Durostorum*, *Sucidava*, *Axiopolis*, *Capidava*, *Troesmis*, *Noviodunum*, *Aegyssus*. Another road ran along the coast from *Argamum*, *Histria*, through *Tomis*, *Stratonis*, *Callatis*, *Bizone*, *Dionysopolis*, *Odessos* to *Mesembria* and *Apollonia*. Medial to these two routes ran a third path which, starting from *Marcianopolis*, through *Abrittus*, *Tropaeum Traiani*, *Ulmetum*, *(L)Ibida*, reached the Danube limes with its branches at *Troesmis*, *Noviodunum*, *Aegyssus*. Between these three main roads a multitude of local branches – *semitae* – ensured the communication between the different settlements in the province.

After the abandonment of Dacia under Aurelianus, fast rebuilding measurements of the frontier were done. But as the crisis was still ongoing it took some time to restore the defence line. The actual build-up and repositioning of troops was not finished until Constantine the Great. But this was now age of *comitatenses* and *limitanei*. The troops along the Danube were nothing alike those before the Dacian wars. In some sections there are more militia than military force, barely capable to fight off intrusions. Invasion of the Huns that came in the 4<sup>th</sup> century was definitely something they were unable to stop.

The last restoration of the frontier was done under the Justinian in the 6<sup>th</sup> century. Major construction works, that made the walls stronger and more durable are notable everywhere,

and even new fortifications emerged. Materials used were of high quality and capable to withstand more imposed force as stated in the latest material analyses. Justinian restored forts. Troops that defended them were neither improved nor was their number sufficient for the task to fulfill. The invasion of the Avars and Slavs completely wiped out the frontier at the very beginning of the 7<sup>th</sup> century and the Danube Limes was lost forever.

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## 2.4. Roman Installations along the Roman Danube Limes

### 2.4.1. Fortifications of the Roman Danube Limes

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Every Roman camp is, by default, a fortified site, i.e. a place we may call a fort or even a fortress if it is a bigger fortification meant to house a larger body of troops like a legion, for instance. Nonetheless, it would be wrong to assume that, as far as fortifications are concerned, Romans essentially shared the same notions as people in the Middle Ages or in modern times. Obviously, fortifications are primarily supposed to protect people within from the onslaught of enemies outside. In this respect, the Roman point of view would not differ considerably from the standpoint of a mediaeval warlord protecting his estate or from the perspective of monarchs in 17<sup>th</sup> century Europe building chains of fortifications to protect their kingdoms' borders. As a matter of fact, the latter analogy is more appropriate because of the somewhat similar geostrategic needs. While a medieval nobleman seeks to defend his property and status by fortifying his dwelling into an impregnable stronghold – as far as possible at least – and is not particularly concerned by the larger picture and feels no need to build linear fortifications to defend a vast territory (unless he owns huge estates), nations, be it the Roman or Chinese empire, or modern European states were governed by other priorities when defending their territories.

Nonetheless, when Romans started creating a line of forts on the frontiers, i.e. what we nowadays call the limes, their first intent was not so much to construct heavily fortified places which could resist long sieges but rather to build the infrastructure necessary to garrison troops needed to protect the borders of the Empire. Indeed, from the very beginning those places were protected and had ramparts and ditches, but they were nonetheless not heavily fortified. There are several reasons to that. The first camps on the limes, either legionary or auxiliary, were built on the model of marching camps, directly following their layout. As such, they were fortified with ditches as well as with wooden and earthen ramparts, which was good enough to prevent a sudden attack but they were never meant to sustain a long siege. That was not necessary, as a matter of fact. The potential enemy, people living on the other side of the Empire's borders were not skilled in poliorcetics and thus, investing in extensive fortifications in the 1<sup>st</sup> century CE would have been an expensive, time consuming and rather useless task from the Roman point of view.

Constructing marching camps, i.e. encampments fortified with banks and ditches when campaigning had been a standard practice which had proven its worth on numerous occasions by providing a temporary stronghold to Roman troops when moving through enemy territory. Besides having elementary defences, the marching camp was always built following a standard layout, so that every soldier knew not only where his century was pitching tents, but also where the commanding officers' accommodations, the assembly area, the storage areas, pack animals and horses, etc. were. It is hardly surprising that the Imperial army chose to follow this standard pattern, familiar to every soldier, once troops were garrisoned for longer periods of time in a given place on the frontier. However, the marching camp layout and its simple defences were not chosen only because their construction was well known to the troops and because it was less expensive than building more solid fortifications. It was also a matter of

operational and strategic habit in use during the Principate. Having ditches and ramparts would deter a sudden attack, but Roman troops at that time were not supposed to stay within the walls of their forts, sustain sieges and wait for relief. Camps were primarily meant to house troops, not to serve as defensive positions. For this very reason, when those camps truly became permanent garrisons during the 1<sup>st</sup> century CE, the first major reconstructions had more to do with improving the well-being of soldiers and raising the comfort of their accommodation than increasing the defences of the forts. The latter was not neglected however: as a matter of fact the original earth ramparts with revetments of piled turves, clay and timber were steadily replaced and improved with stone walls starting from the last decades of the 1<sup>st</sup> century CE.

Nonetheless, the strategic concept of frontier security did not rely on static defences. In case of perceived or real threat, Romans were to strike immediately and to carry war outside of Empire's borders, not to passively wait for enemy offensives to simply wear off before the barbarians retreat and go back to their lands. Therefore, when the limes was being built, both legionary and auxiliary camps were first and foremost perceived as barracks, places where soldiers were living when they were not campaigning and actively fighting the enemies of the Empire. Besides camps, linear barriers whose main role was to control borders and keep watch were also in function. They were normally composed of watchtowers and fortlets, but also ditches and earth banks with wooden palisades when needed, the Upper German-Raetian limes being a good example, or even walls, Hadrian's Wall in Britain being the obvious example. Such defensive lines, more or less fortified, were in reality not expected to stop attacks, but they could channel them and in any case soldiers stationed there were supposed to start the alarm so that a counterattack with troops garrisoned in the neighbouring forts might be quickly organised. Even so, whenever possible, natural barriers, such as rivers were preferred as boundaries. Thus, the Danube, which concerns us more particularly, was both the border of the Empire and a defensive line of sort.

This long time prevailing concept was perhaps the main reason why Romans did not start building complex fortifications matching later medieval fortresses or Vauban type bastioned fortifications. While the overall concept did not completely change in Late Antiquity – Romans were still counting on mobile troops to counter barbarian offensives – due to much bigger pressure on the frontiers and constant attacks, it became necessary to build up defensive positions to deal with the higher level of threat and the fact that reinforcements were not always available, forcing the garrisoning troops to rely more on fortifications while waiting for relief. In consequence, Roman military camps became more heavily fortified in the 4<sup>th</sup> century AD and chains of defensive structures on the main axis of advance leading from the frontiers towards the interior of the Empire were also being built as part of an overall defensive strategy, the defence system of the Julian Alps, called by Ammianus Marcellinus *claustra Alpium Iuliarum*, being a fine example. At the same time, and for the same reasons, many city walls, built in previous centuries rather as a matter of prestige than anything else, also underwent massive reconstructions which made cities fortresses as well.

Remains of Roman fortifications in the Danube area are thus very varied, for many reasons like chronology, environment, historical context, the extent of archaeological research certainly not being the least important, as well as modern reconstruction which has been very extensive on some sites. Some remains are bare traces unearthed thank to archaeologists while others

have remained visible in the landscape for millennia. While traces of fortifications belonging to the earlier period are commonly encountered in archaeological excavations, remains from Late Antiquity are usually more visible, not necessarily because they were more massively built – something to be expected from structures built of stone, concrete and bricks – but also because they are often built over earlier layers.

A short overview of such a vast topic is a daunting task but if one has to summarise the main points related to the development of Roman fortifications along the Danube limes, the broad lines may be presented in a chronological sequence.

The first forts, built in the first half of the 1<sup>st</sup> century CE were earth-and-timber structures, whose defences were reinforced by ditches, i.e. a single or double *fossa*. They were emplaced fairly loosely, usually at the endpoints of roads leading to Italy, i.e. at strategic points for securing lines of supply to the interior. It would appear that a concept of linear defence of the frontier started really developing during the Flavian period at the latest and reached its more or less final form in Traianic time, when most of the fort locations remained a permanent feature of the landscape till the end of Roman times, even though they underwent several reconstruction phases over the centuries. Although even the forts built during the Flavian period were initially made of earth and timber, this first phase did not last long and very soon stone walls started replacing the original ramparts. Brick and stone buildings also gradually replaced the timber buildings inside forts and one may often observe several phases of reconstruction during the 2<sup>nd</sup> century CE. Legionary fortresses were the first to be rebuilt in stone, such as Carnuntum or built in stone from the very beginning like the new Hadrianic fortress in Aquincum, while the process took more time for auxiliary camps, steadily going on during the Hadrianic and Antonine periods, quite a few forts being rebuilt in stone only after the end of Marcomannic wars. However, by the end of the 2<sup>nd</sup> century CE all of the forts along the Danube were certainly stone structures. A common feature were rectangular projecting gate towers as well as internal quadrangular angle-towers, while internal projecting quadrangular interval towers have been noticed in several auxiliary forts like Carnuntum or Campona. Round towers were a less usual feature but are also known from that period, in Vetus Salina for instance. In the early 2<sup>nd</sup> century CE projecting angle towers were being added to quite a few forts, probably as a result of Marcomannic wars experience (Campona, Matrica, etc.).

The 3<sup>rd</sup> century crisis was not the best time for extensive reconstruction programmes but repairs were done on a regular basis. Large scale construction and refurbishing had to wait for the Tetrarchic period. Not only were old forts refurbished but new forts were built as well, constructed following a different pattern, i.e. irregular and polygonal, and their emplacement was often closely adapted to the terrain features, quite a few being constructed on heights. Contrary to old forts which normally had four gates, the late Roman forts as a rule had only one gate. Quite a few of the older forts were reconstructed and reduced in size, covering only a fraction of the space originally occupied, their former gates being walled.

The fan-shaped angle towers, attached to the rounded corners of the ramparts are a distinctive feature of early 4<sup>th</sup> century forts. In case of older forts, such fan-shaped towers regularly replaced the earlier projecting towers. All of these interventions and reconstructions, as well as the new layout of forts clearly show that by the 4<sup>th</sup> century Romans were facing more

dangerous enemies. Barbarians likely did not become proficient besiegers yet, but there were so many of them and Romans did not have the means anymore to intervene rapidly everywhere. Thus, fort garrisons had to be ready to sustain a longer siege and needed defences better adapted to such unfortunate circumstances.

Late Roman fortifications certainly influenced future developments in military architecture in what would become medieval Europe, but that is another story.

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### 3. The Danube in Roman Times – A Connecting Waterway or Natural Barrier?

#### 3.1. Roman Inland Navigation in the Northern Provinces

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Since the beginning of time, river courses have decisively determined the origin and development of human societies. The dwellers living on the riverbanks benefited from the advantages offered by such a convenient location. The easy and near water supply increased not only the crop yields, also fishing was an important source of income from very early on. Owing to these favourable natural geographical conditions, societies based on the division of labour developed, from which the earliest advanced civilisations in Egypt and in Mesopotamia originated. At the same time, river traffic too progressed considerably, enabling easy transport of trade goods and people. Until the expansion of the modern railway network in the 19<sup>th</sup> century, inland shipping was the most important means of transportation and distributor of goods.

Rivers rarely represented insuperable obstacles. In fact, until today, they have always been used as major traffic arteries. Especially near fords and later also near bridges, settlements soon grew, which benefited from the trade and cultural exchange that went with it. A location beside a river also offered additional shelter. All these advantages more than compensated the disadvantage of possible inundations.

Also the Danube has always been a transport route and a connecting link, but at the same time also a separating line and border. Its waters carried goods and people of diverse origins and cultures to the numerous settlements along the banks of this powerful stream, from small fisher villages to large cities. Of course, to enable such exchanges, natural or men-made landings, ports, fords and bridges were required.

### 3.2. Roman Riverboats

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Despite the fact that we have hardly any archaeological evidence for remains of Roman ships in and at the Danube, we can imagine quite well the different types used there and in other rivers and lakes in that area. One typical boat with a millennia-long tradition is the *monoxylon*, better known as **dugout canoe**, probably the oldest boat type in the world. Wherever people lived close to rivers, lakes or even the sea, dugout canoes were in common use. Even today, for instance at lake Mondsee in Upper Austria, professional fishermen go out with it for fishing and to control their fish traps. Even with simple tools, it is possible to construct a dugout canoe; the trees which are needed can easily be found along the seaside or respectively riverside. Several *monoxyla* of diverse historical periods were found in lakes all over Austria and Bavaria.

Another very old vessel type are **rafts**, originally two dugouts with a platform fixed on them or even more simple, just logs bound together. Although not easy to handle, heavy load could be transported on them. Often they were combined and connected to trains of barges. Downriver they floated with the current but the crew had to punt to remain on track or to get in and out of harbours. Most parts of the Danube and many tributary rivers were navigable. Upstream, these vessels had to be towed.



**Fig. 3.2.1.** Wine carrier from Neumagen (Source: A. Göttlicher, Materialien für ein Corpus der Schiffsmodelle im Altertum, Mainz (1) Tab. 41 Fig. 520).

For sure, also **plank boats** and ships were used to carry freight for the military camps and the civilian settlements all along the Danube. Most important for a successful economic use was a very low loaded draught of the ship. A very famous example for such a vessel is the so-called “wine carrier from Neumagen” (Fig. 3.2.1), part of a grave monument for a former wine

merchant who died around 220 CE. Its not demolished upper part was sculptured in the shape of a common merchant ship, designed for rivers. Stern and sternpost are decorated with dragonheads and, like warships; the bow has the form of a ram. Eight men on board are presented at their profile, but we also count 22 oars. As it is the sepulchre for a wine merchant, the cargo consists of four large wine casks. In 2007 and 2008, a wooden replica in original size was built by the University of Hamburg intended to give an idea how such a vessel worked. She was named Victoria and her measurements were 17.95 meters in length, 4.20 meters in width and 3.90 meters in height. She had a draught of 0.60-0.80 meters and an empty weight of 12 tons. That type of vessel was not only used on the Rhine or the river Mosel, but for sure also on the Danube and its tributaries.

Although not directly connected with the Danube area, three Roman shipwrecks of the 2<sup>nd</sup> century CE found in lake Neuenburg, Switzerland, provide very important information about the transfer of Mediterranean shipbuilding technology to the northern provinces of the *Imperium Romanum*. Still in a Central European building tradition, the new use of tongue and groove joints, developed in the Mediterranean during Hellenistic times, allows the construction of vessels with much higher loading capacity and a length up to 40 meters.

As mentioned above, the only archaeological evidence for Roman ships on the Danube are the excavated naval boats from the Roman fort at Oberstimm. That type of naval vessel with 15.70 meters in length, 2.70 meters in width and with the height of 1.00 meter patrolled all along the Danube. Dendrochronology data allocates one of the ships into the last decade of the 1<sup>st</sup> century CE and two into the first decade of the 2<sup>nd</sup> century CE. It needed 20 oarsmen to move the ship. Probably a sail could be raised to help them, if the wind blew from an appropriate direction. This type of naval vessel contains many elements of Mediterranean ship building traditions, but was adapted to the needs of daily duty in the northern frontier provinces.

Unfortunately, up to now, we have no ship finds on the Danube that date back to late antiquity, but we have the different flotillas listed in the *Notitia Dignitatum*. An idea of the naval ship design of that period is displayed in the Museum of Ancient Shipbuilding in Mainz. During the years 1981 and 1982, archaeologists excavated five shipwrecks in Mainz on the Rhine. They are dated to the late 4<sup>th</sup> century CE, served a military purpose and belong to the so-called type *Navis lusoria*. They are a little bigger than the ships we know from Oberstimm, but ideal for patrolling along river creeks (Fig. 3.2.2). They are of a length up to 21.70 meters, 2.80 meters wide and 0.96 meters in height; 30 oarsmen served on board and they could additionally use a sail, whenever possible.

Even after the end of Roman rule in the northwestern provinces the production of this type of ship did not stop. The Byzantine Empire used similar vessels and they are even known from the 16<sup>th</sup> century CE. A shipwreck of a Swedish military vessel was excavated at the east coast of the island of Rugen still following the tradition of a Roman *Navis lusoria*.



**Fig. 3.2.2.** Reconstruction of a late antiquity Roman ship, Museum of Ancient Shipbuilding in Mainz (© Rupert Breitwieser).

The recent finds of a ship and of *monoxyla* at *Viminacium* in 2020 is still waiting for its dating to be confirmed, but circumstances suggest that it is to be seen in connection with the last battle where *monoxyla* were part of the Avars' and Slavs' invasion fleet that brought *Viminacium* to its end during late 6<sup>th</sup> and early 7<sup>th</sup> century. The peculiarity of this find was that the nearest riverbed was several hundred meters away and that they were found in coal mine at the depth of more than seven meters. The river has changed its course during the centuries and today Danube is actually three kilometers away from its ancient course.

The find of *Viminacium* is a flat bottom river vessel, with an attachment point for the auxiliary sail mast. The preserved part of the ship has a length of 9.50 meters, and it can be assumed that it was up to 20 meters long, while its maximum preserved width was 2.70 meters. The ship type has elements that have not changed significantly over the millennia. As there were no artefacts found within a ship archeology cannot give a definite answer on its provenance. Results of the multiple dating methods are pending at the moment. A part of the ship was damaged during the excavation, but the fragments were found on the level of the mine below it, so the ship as a whole will be able to be reconstructed. 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 oakum soaked in an oily mixture. There are traces of crack repairs at the bottom of the ship which may have been caused by some earlier grounding.

### 3.3. Roman Harbours and Landing Sites along the Danube

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The *Notitia dignitatum*, a late-antique register of civil and military offices, lists a number of ports, such as Carnuntum, Vindobona (Vienna), Lauriacum (Enns), Adiuvense (Wallsee), Comagena (Tulln) und Ioviacum (Schlögen), which were used as bases for the flotillas. Unfortunately, there is only sparse information about actual harbour installations. For Carnuntum, a short note from the year 1823 situates the location of a harbour “*directly on the east side of Petronell, below the antique well*” (today’s “Pfaffenbründl”, approximately 200 meters east of the parish church in Petronell), (Obermayr 1967).

In Vienna remains have been excavated, which probably belong to the ancient port of Vindobona. Already “*in 1906, during excavation works for a new building on the corner Dominikanerbastei and Kaiser Franz Josef-Kai, in the direction of the Adlergasse, at a depth of nine meters, an extremely solid, excellently poured 60 cm thick concrete bottom was reached, which consisted of a mixture of pebbles, brick pieces and an almost insoluble binding agent embedded on a gravel layer. Based on the depth of this site, it’s safe to assume that this concrete was the base of a Danube harbour*” (Kenner 1909). “*In 1999, several Roman ashlar blocks were found on the north side of the legionary camp, at today’s staircase (Rabensteig 3) up to the Church of Maria am Gestade, at the foot of the camp level, which presumably were once part of a quay wall of a late antique harbour installation. The difference in height between the site of the find and the camp level was approximately twelve meters. Between 1901 and 1902, about half way up, a road, paved with flagstones, and the remains of a fortification, located directly on the antique steep slope of the Danubian river bank (gate system with ashlar blocks in front) was discovered. It is not known, when the first port facilities were built. Due to the type of construction, the remains date probably back to the late antiquity (4<sup>th</sup> century).*” (Mosser 2001).

So far, there is as yet no archaeological evidence for the other harbour locations mentioned in the *Notitia dignitatum*. Furthermore, in today’s Austrian section of the Danubian limes, no remains of Roman ships have been found. However, the patrol boats excavated near the city of Ingolstadt, on the Raetian Danubian limes, in the neighbourhood of the Oberstimm Fort, give an impressive idea of the ship types that were used in Roman times on the Danube River.

Today many of the tributaries of the Danube are treated as unnavigable under modern terms or as only partially navigable but with the average depth of only 0.5 meters, Romans operated in these waters normally and as a routine. This fact is confirmed by the location of some discovered naval vessels. The best example is river Velika Morava which is treated as navigable only for three kilometers upstream of the mouth to Danube today but the position of *Horreum Margi* as one of the central supply centres deep inland suggests that almost the whole length up to present day Čuprija was utilised for river transport. A special supply task of the fleet from ancient *Margum* at the mouth to Danube is indicated by the different and unique name for the fleet *Classis Stradensis et Germensis* that could indicate a role not related to navigation on the Danube but upstream along the Morava river to *Horreum Margi*.

In the upper and middle part of Danube protected landing areas are explored at multiple sites, while we do not see this situation in the lower area of Danube. These areas of low banks were protected by defensive walls connected to the corners of fortifications closing the area and making it accessible only from the water or from the fort itself. Sites in Serbia that have confirmed landing areas are Hajdučka vodenica, *Diana* (Karataš), *Egeta* (Brza Palanka). Major river ports were located at *Taurunum* / *Singidunum*, *Margum*, *Viminacium*, *Novae* (Čezava), *Aquae*.



**Fig. 3.3.1.** Roman Ships in the Kelten Römer Museum Manching (© Nemanja Mrđić, personal archive).

### 3.4. Known classes and nautae danuvi

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Already during the regency of Emperor Claudius, the deployment of a Danube flotilla was mentioned. In the 12<sup>th</sup> book of his annals (XII, 30), the important Roman historian Tacitus described how this flotilla was used in 51 CE or ship contingents that were especially set up for this purpose. It is however well documented that the *Classis Flavia Pannonica* existed since the Domitian period at the latest. The legions stationed along the Danube had however also their own nautical units, as indicated by a grave inscription for a *magister navaliorem*, who served in the *legio XIII Gemina* in Carnuntum (AE 2010, 1261, ll. 1-3).

The *Classis Flavia Moesica* was mentioned on a military diploma from Dacia (CIL XVI 97) in 92 CE. It was considered in multiple papers that after splitting the province into Moesia Superior and Moesia Inferior the commander of the *Classis Flavia Moesica* remained in Moesia Inferior while the Danube section of the Iron Gates more upstream was controlled by the *Classis Flavia Pannonica* from the base in *Taurinum* but this theory cannot be confirmed at this moment. In the Moesia Superior data is scarce to provide us with any detailed information on actions of the *Classis Flavia Moesica*, although the situation on the terrain suggests otherwise. The number of landing areas, the concept that cannot withstand without strong actions of the fleet, fear of barbarians mentioned in late Roman sources all testify that strong naval force existed and operated in Moesia Super.

In the *Notitia Dignitatum*, a document describing details of the Late Roman administrative organisation of the Eastern and Western Roman Empire, the *Classis Histricae* and its bases are documented at multiple locations, such as *Carnuntum*, *Viminacium* and *Egeta/Aegeta*. The *Classis Ratiarensis* with its *praefectus* was mentioned in the same manuscript (Ratiaria, Arčar in Bulgaria). The *Notitia Dignitatum* further mentions the *Classis Stradensis et Germensis* at *Margum* at the mouth of Morava river. At *Viminacium* there is an inscription mentioning the rebuilding of the Neptunes temple by the *Collegium Nautarum*.

### 3.5. Bridges and River Crossings

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These general statements apply particularly to Roman times. Like its model, the Trajan Column, the Marcus Column, finished not later than 193 AD and located in central Rome (Piazza Colonna), shows reliefs arranged like an illustrated book, similar to a comic, depicting in chronological order the fights against the Marcomanni and Quadi (166-180 CE). At its bottom, the story begins with the Roman army crossing the Danube River over a boat bridge. This boat bridge depicted on the Marcus or Marc Aurelius Column was probably constructed in the area of *Carnuntum* (Fig. 3.5.1).



**Fig. 3.5.1.** Boat bridge on the Marcus- or Marc Aurelius Column, Piazza Colonna in Rome (Source: G. Becatti, *Colonna di M. Aurelio* (Milano 1957) Fig. 4).

Such boat bridges have been known for a long time from ancient war descriptions. Already Herodotus described in detail the construction of two boat bridges across the Hellespont, over which the great Persian king Xerxes led his army in 480 B.C. to Thrace, to fight against the Greeks (Herodotus, VII, 34-37). Another pontoon bridge across the Danube is depicted on the already mentioned Trajan Column. There is also archaeological evidence of stone remains of the so-called Trajan Bridge, built by Apollodorus from Damascus at the end of the Iron Gate, located near today's Serbian-Romanian border.

That another Danube crossing existed near *Carnuntum* is possibly indicated by a (presumed) small fort in the Stopfenreuther Au, on the left bank of the Danube, on the municipal territory

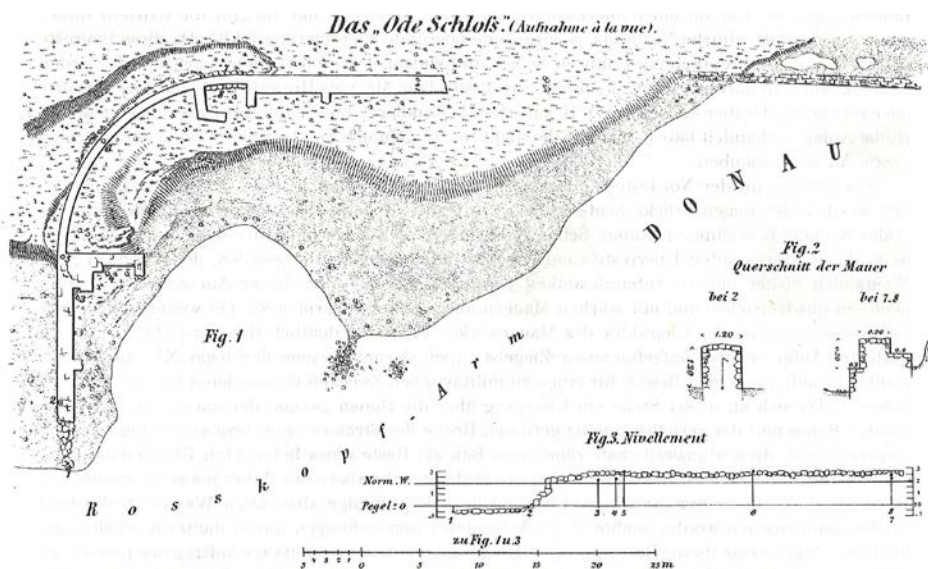
<sup>4</sup> Based on a consortium work of the *Partnership under the Obligations and Contracts Act “Danubius”* and *RubliMedia business SPL*.



of Engelhartstetten, north of Bad Deutsch-Altenburg and near the river mouth of the so-called Rosskopfarm, colloquially called the “Öde Schloss” (Fig. 3.5.2-3). The legionary camp of *Carnuntum* was located only three kilometers away. Whether in Roman times this fort was situated on the north or on the south bank of the main river, remains unclear due to the considerable changes in the riverbed over time. Already around 1850, E. von Sacken explored the visible walls and interpreted the found brick stamps, among which there was one of the *legio XV Apollinaris*, as the remains of a fortified bridgehead, where the Amber Road crossed the Danube. Also the topography supports this interpretation, as this place was ideally suited for a river crossing, due to “the mountains on the right bank and the narrow width of the stream”. Until the first half of the 19<sup>th</sup> century, the remains of a square tower, surrounded by strong walls, and a smaller building were allegedly still visible. At the end of the 19<sup>th</sup> century, further explorations were carried out, often hampered however by floods.



**Fig. 3.5.2.** Orthophoto of the small Stopfenreuth Fort (Source: NÖ Atlas 2020, [https://atlas.noegv.at/webgisatlas/\(S\(b2ukktbvqieao2xguymj1mu1\)\)/init.aspx?karte=atlas\\_gst](https://atlas.noegv.at/webgisatlas/(S(b2ukktbvqieao2xguymj1mu1))/init.aspx?karte=atlas_gst) (13.11.2020).



**Fig. 3.5.3.** Excavation plan of the small Stopfenreuth Fort also called “Öde Schloss” (Source: K. Genser, *Der römische Limes in Österreich. Der österreichische Donaulimes in der Römerzeit. Ein Forschungsbericht*, ÖAW 33 (Wien 1986) 662, Fig. 172).

Today between the Iron Gates gorge and the Danube Delta eight Roman bridges are known, the oldest of them were wooden floating bridges (also known as pontoon bridge). The first one was built near Dolni Vadin, a small village belonging the municipality Oryahovo, (Bulgaria) and Orlea (Romania) by Cornelius Fuscus, commander of the Pretorian Guard of Emperor Domitian (81-96 CE) during the Dacian War. Later, during the same war, Emperor Traian (98-117 CE) built two wooden floating bridges, transferring over 200,000 troops, combat equipment and food supplies to the other side in the Loderata-Dierna section and near the Iron Gates gorge.

The most remarkable construction of this period is the stone-wooden bridge connecting *Drobeta* (Turnu-Severin, Romania) and *Pontes* (Kostol near Kladovo, Serbia), built between 102-105 CE. This bridge was 1120 meters long – one of the longest bridges in antiquity, with fortifications protecting the direct access to the bridge itself (Fig. 3.5.4-6). Although the bridge was disabled by dismantling the upper wooden construction several times up to the age of Constantine, because of the fear that the Barbarians would use it, all 20 pillars could be located on both banks and in the riverbed through sonar surveys. This architectural wonder was designed and built by Apollodorus from Damascus, Traian's chief architect and it is depicted on the reliefs of the Traian's column in Rome. A number of auxiliary forts was located in the vicinity of *Pontes* for the soldiers of the *legio VII Claudia* who worked on both the bridge itself and the canals in order to lower the level of the Danube. Since there were additional bridges across these small canals, the name was assigned in its plural – *Pontes* in Latin / Bridges in English.



**Fig. 3.5.4.** Pons Traiani at Columna Traiana in Rome (Source: C. Cichorius, *Die Reliefs der Traianssäule*, Text volumes II and III. Plate volumes: vol I (*Die Reliefs des ersten dakischen Krieges*) and vol. II (*Die Reliefs des zweiten dakischen Krieges*). (Berlin 1896-1900) Plate LXXII).



**Fig. 3.5.5.** Pons Traiani / Trajan's Bridge between Kostol (Pontes) and Drobeta (Romania). Piers on the Serbian bank of Danube – present day situation (© Nemanja Mrđić, Archive of the Institute of Archaeology).



**Fig. 3.5.6.** Obverse of the coin with depiction of the Trajan's Bridge. (Source: C. Gazdac. Trajan's Column Versus Numismatic Programme. Prototypes in the Trajanic Imperial Ideology. *Journal of Ancient History and Archeology* 4 (1) (2017) 109 Plate 4. Fig. 15.

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## 4. Further Aspects Characterising the Roman Danube Limes

### 4.1. The Danube as Roman Frontier, Passage and Connection

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“The Ister [Danube] is of all the rivers with which we are acquainted the mightiest. It never varies in height, but continues at the same level summer and winter” (Hdt. 4, 48).

“Three days after the battle, Alexander reached the Istros [Danube]. This river is the largest in Europe; it drains a greater tract of land than any other river and forms the frontier to the territories of some very warlike tribes. Most of them are of Celtic stock – indeed, the source of the Istros is in Celtic territory – the most remote being the Quadi and the Marcomanni; then, flowing east, it passes through the country of the Iazyges, a branch of the Sauromatae” (Arr.succ. 1,3).

“And yonder lies the mouth of the Hister River [Danube]. It rises below Mount Abnovae in Germania, opposite of the town of Rauricum in Gaul, and skirts round the Alps. Many nations call it Danuvius” (Plin.nat. 4, 79-81).

In Antiquity the Danuvius/Danube or Ister/Danube was considered as one of the greatest rivers. Before the Roman conquest, geographers described it using the obscure accounts of the contemporary travellers. According to one of the most characteristic and longest-living concepts, the Danube was thought to fork two branches, of which one flowing into Adriatic Sea and the other into the Black Sea. These sources provide similarly obscure reports about the people living by the river. However, there is enough archaeological evidence about the Celts, Germanic tribes and others who occupied the Danube region on both banks of the river in the last centuries before Christ or after.

With the Roman conquest the geographical horizon of the world became wider: maps and travel accounts were compiled informing us about the ancient names of places and geographical benchmarks offering us valuable help in identifying the archaeological sites. During the 1<sup>st</sup> century CE the Romans occupied the southern bank of the Danube, while its northern bank was inhabited by Germanic tribes. Although the river marked the border between the Roman Empire and the so-called Barbaricum, it also bound them together throughout the centuries to come.

For most of its length the Danube frontier is bordered by wide floodplains (Pannonian plain, Danube Delta), which are separated by the outskirts of high mountain ranges (Carpathians, Little Carpathian Hills, Iron Gates) forcing the winding and meandering river into deep and narrow gorges. These alternating natural conditions are clearly reflected by the size and positioning of the military installations, with the gorges being secured by small posts in elevated positions, and the plains by larger forts at river crossings and at points overlooking the plains. There are parts of the still existing traces of roads to be discovered.

The Danube Limes as a complex of primarily military installations constitutes following elements: legionary fortresses, forts, fortlets, auxiliary troop bases and watchtowers, associated civil settlements (*vici* and *canabae legionis*), sanctuaries, necropolises, brickworks

and harbours. For the various parts of the frontier the Romans developed individual solutions appropriate to the topographical and geographic features as well as the political situation of the times. The goal was to create a frontier system that enabled effective control of trade and transportation along the river Danube. At the same time, the system should allow the military to prevent intruders from entering the Empire.

Nowadays, the frontiers of the Roman Empire or the Roman Limes consists of vestiges of built walls, ditches, forts, fortresses, watchtowers and civilian settlements. Certain elements of the Roman Danube Limes have been excavated, some reconstructed and a few destroyed, yet it still represents the largest single monument of the Roman Empire and an outstanding testimony of the Roman military and technical genius. Besides demonstrating the largest extent of the Roman civilisation, the limes also provided exchange of cultural values through movement of soldiers and civilians which stimulated “romanisation” progress in the regions beyond the borders.

It was crucial for the Roman Empire to maintain good relationships with the neighbouring tribes and kingdoms. The Romans often aided the kings with valuable objects or money and provided them with diplomatic and political support, so that they could maintain their power, e.g. the emperor Antoninus Pius supported a Quadian pro-Roman king and in this context produced coins with the inscription *Rex Quadis Datus*. An archaeological evidence of this practise are the numerous and valuable metal finds including silver, brass and bronze vessel, weapons, jewellery, pottery etc. In addition to them various items of the everyday life can be found, e.g. in Zohor and Krakovany Stráže. This procedure is also mentioned in Tacitus' *Germania*: “He [the Germanic monarch] is occasionally supported by our arms, more frequently by our money and his authority is none the less” (Tac.Germ. 42).

Many items can only indirectly be associated with the Germans. As a consequence of the various wars, quite a number of slaves might have arrived as prisoners of war from the territories outside the empire. In every day life, trade across the Danube between the Roman Empire and the “Barbaricum” was a common thing; livestock (cattle, goat and sheep) and corn might have been the main items. Part of the barbaric pottery appearing on the frontier might have been taken to the empire as containers of food, like honey and beverages. In the middle of the 1<sup>st</sup> century CE Vannius, the king of the Germanic tribe of the *Quadi*, was expelled from his throne by his nephews Vangio and Sidó. The dethroned king and his followers were therefore received in the Roman Empire and settled in *Pannonia* at Lake Fertő in Hungary or respectively Lake Neusiedl in Austria. There are a lot of sites, mainly burials, where Germanic objects, such as weapons and ceramics, have been found.

Beside the objects, stone buildings can be found in the once Germanic area, e.g. in Bratislava-Dúbravka, Stupava, Cífer-Pác, Veľký Kýr. Those buildings of several rooms and often with bathrooms followed the Roman pattern. They are assumed to have been built by the Romans for the members of the Germanic elite, but others consider them as road stations.

On the heels of the legions, merchants and craftsmen arrived in the Danubian territory. They mostly followed the Amber route beginning at the port of Aquileia at the Adriatic coast. Then they trailed northwards. The Amber road was one of the major European trading routes. Imports of amber and other raw materials from the Baltic and Central Europe came southwards along this route, while Roman quality products were delivered in the opposite

direction. The trade between the Romans and Germans was supervised by the procurator and in the hands of the beneficiaries on local level. The regulation of the trade between the two nations started from the 2<sup>nd</sup> century CE.

Legionaries were the first to cultivate the newly conquered territories. By building roads and bridging rivers, they paved the way for the creation of a civil infrastructure. "Romanisation" was also spurred on by urban development. The arriving craftsmen brought new technologies and aesthetic criteria. Roman houses, *villa rusticae*, and mansions were built of stone joined with quality mortar and their interiors were decorated with painted plaster or mosaics, using also the underfloor heating system, the *hypocaustum*, e.g. there are well-preserved examples in Bratislava-Dúbravka, Stupava. Although after four centuries the Romans were forced to retreat, the era defined by historians as the Roman Period brought long-lasting civilisational benefits.

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## 4.2. *Limitatio* – Roman Land Surveying

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### 4.2.1. *Technical Features*

During the description of the technical features of the Roman buildings, it shall be firstly stated that there is a continuity in the methodology of the Roman construction process with its antecedents. Many of the technical knowledge of the Roman Empire was based on Assyrian, Babylonian, Egyptian, Phoenician, Etruscan and Greek experience. In addition, it was supplemented by the knowledge that came from the field of military technology and had a constant effect on civilian construction. The reason for the diversity of the Roman buildings was the diverse needs of the builders and founders. Besides the construction of the private individuals and the elite of the community, the large-scale building programme of the emperors for the military can be mentioned.

Presumably, Roman architects prepared plans basically drawn on papyrus. There are indirect evidences about this fact – e.g. the tomb of T. Statilius Aper, *ensor aedificior* (architect-surveyor) from the 2<sup>nd</sup> century CE. At the background of the tomb, a very large roll of drawings (90 centimeters or taller) is visible. In two cases, a stone model has survived: one is a 1:24 or 1:32 scale marble model of a Roman church found in *Ostia*, and the other example is a 1:24 scale limestone model of the *adytum* of the larger temple in Niha. The maps or site plans with public interest were carved in stone. The most prominent archaeological find in this context is the cadastral plan carved in marble of the Roman town *Arausio*, today's Orange in Southern France. However, the status of the architect changed in Roman times – the name of the architect faded into anonymity and remained unrecorded, whereas the name of the founder was given more importance and was associated with the building.

During the discussion on the Roman architectural phenomenon, the aesthetic principles described by Vitruvius shall be mentioned. The golden rule of triple shall be followed: *firmitas-utilitas-venustas (elegancia)*, therefore the solidity, usefulness and beauty are all essential features. According to the Vitruvian principles, during the creation of an architectural work, it is necessary to follow and satisfy six principles: *taxis/ordinatio* (ordering), *diathesis/dispositio* (design), *eurythmia* (shapeliness), *symmetria* (symmetry), *thematismos/decor* (correctness), *oikonomia/distributio* (allocation).

In the Roman construction method, several workshops have become known, where, regardless of the place of construction, building elements of the same type have been prepared and manufactured in series. The product of such “prefabrication” was the brick itself. Due to its widespread and frequent use, it has inevitably become a cultivation of a certain size coordination system. The high level of engineering skills of the Romans enabled rapid urbanisation and the designation of regionally sized road networks. The exact execution of the technical work was also ensured by instruments such as the *groma*, *dioptra* and *chorobates*. For practical counting a spreadsheet, the *abacus*, was used as a tool.

The systematic land surveying and land measurement by means of highly technical equipment and with remarkable precision was mainly used in the late republic and the early principality period, the time of the great conquests. First of all, when establishing a new province, the ownership structure had to be clarified and official land assignments had to be made. The second important area of application of Roman surveying technology was the formal planning of various military installations. The best example of this high level of craftsmanship would be the 80 kilometers long, straight border line on the Upper Germanic Limes in the area between Walldürn and Welzheim.

When planning a new Roman settlement or military camp, the *agrimensores*, the Roman surveyors, laid a right-angled grid over the area, which was usually composed of squares, each with a side length of 20 *actus* (approx. 710 meters). Such a square corresponded to exactly 100 *heredia* (approx. 50.4 hectares), which is why one speaks of the so-called *centuriatio* referring to this form of land division. After the central point (for a camp or settlement) had been identified and the cardinal points determined with the help of a sundial, the *groma* – a horizontal cross (axis system) with right angles attached to a stick, rotatable and with plummets fixed on its four arms – could be aligned. The *groma* served for measuring right angles and drawing straight lines. Thus, the two main measuring axes, the *cardo maximus* and the *decumanus maximus*, were determined. So were the subordinate *cardines* and *decumani*, which ran parallel to them forming a chessboard-like road network. At the positions of their intersections, boundary stones were set, on the top of which an inscription with the number of the respective *centuria* could be seen.

In addition to the strict and regular *centuriatio*, another possible type of Roman land measurement is the so-called *scamnatio*. With this method, the area was divided into rectangular strips that were adapted to the relief, thus creating a far less uniform appearance.

The already mentioned *chorobates* was an ancient levelling instrument. The only evidence available for this tool today is the detailed description by the Roman architect and author Vitruv of the 1<sup>st</sup> century BCE (Vitr. 8,5,1-3). He explains that a *chorobates* consisted of a horizontal beam of 20 feet (approx. 6 meters) and vertical legs at its ends. It was levelled either by using plummets or by observing the level of water filled in a channel on the upper side of the beam. When the *chorobates* was perfectly levelled you could easily compare the elevation levels at the two ends of the beam and therefore determine the slope and altitude. Thus, the *chorobates* was crucial for the construction of aqueducts, viaducts and tunnels, as the correct inclination is of great importance for those installations.

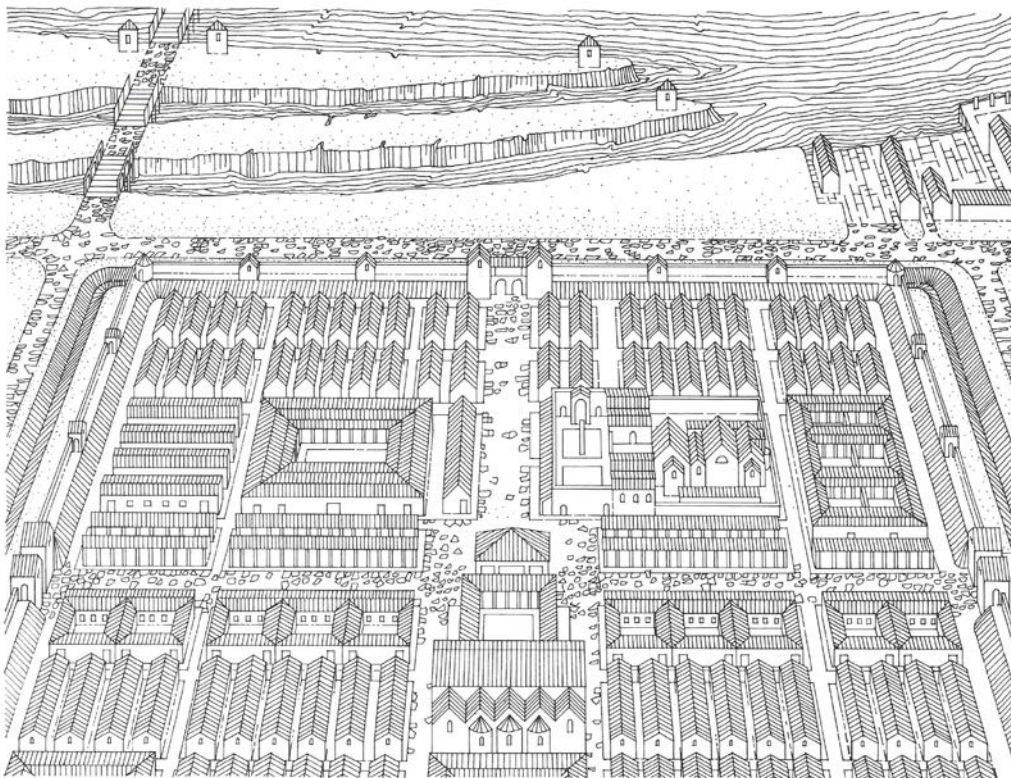
The *dioptra* is a universal geodetic instrument that can be regarded as an early predecessor of the modern theodolite. With a *dioptra* both horizontal as well as vertical angles can be measured and determined. Therefore, the instrument could be used for the surveying of land as well as for urban planning but also for the construction of buildings and aqueducts on the one hand, on the other it was used for astronomical observations.

The sources for the Roman limitation, which can bring us closer to the technical methods of the ancient art of surveying, are, in addition to the original finds of surveying equipment and boundary stones, written records of various *agrimensores*, representations on grave steles and the rarely preserved cadastral plans carved in stone.

The construction works were performed both by slaves and free people. Initially, among them, there were many Greeks, mainly stonemasons, who played a significant role in shaping the external image of Roman architecture. The skilled workers were grouped into guild-like organisations, the so-called *corporationes*, and the construction work was carried out on the basis of contracts. “Technical Romanisation” was spread in the provinces by the military. The engineering faculty of the legions, cohorts, and cavalry also included architects, road builders, and surveyors.

The military constructions of the Romans can be divided according to different levels, dimensions and functions. During the construction of the limes auxiliary forts and legionary camps were created at the strategically important defence points, and watchtowers at specified distances between them, such as those found at Lepence. The most complex architectural unit is the Roman legionary fortified camp, with urban scale and towers. However, the road construction, bridge construction and the mining operations all have close relations to the military activities which can be complemented with the civilian engineering by military troops.

In the case of legionary camps, the two main roads intersecting at right angles, the already mentioned *cardo maximus* and *decumanus maximus*, were called the *via principalis* and *via praetoria*. The *via principalis* divided a camp into the *retentura* and the *praetentura*, the latter always facing towards the Barbaricum. At its intersection with the *via praetoria* the command building (*principia*) and the camp shrine (*fanum*) were placed. In the earlier periods, the fort was surrounded by a ditch (*fossa*) and a rampart (*agger*) and a palisade was constructed over the rampart. Later the palisade was replaced by a stone construction with gate towers and further towers. This structure can be visible in the case of Aquincum, Budapest (Fig. 4.2.1).



**Fig. 4.2.1.** The Roman Legion Camp of Aquincum, Budapest. Reconstruction drawing by Gyula Hajnóczy (Source: Gy. Hajnóczy, *Pannónia római romjai*. [Roman Ruins of Pannonia] (Budapest 1987) 119. Fig. 152).

Outside a legionary camp of the Danube Limes line, the *via principalis* turned into the limes road (also Danube road). The Pannonian limes road is described in the *Itinerarium Antonini* and the *Tabula Peutingeriana*, however its exact course cannot be reconstructed from the data contained in these two sources. The known sections of the limes road reveal that the military engineers planned the course of the road as close to the Danube River as the floods and the terrain permitted. The course of the Danube Road was planned meticulously and its length was measured in Roman miles (*mille passus*), calculated from *Vindobona/Vienna*, *Carnuntum/ Bad Deutsch-Altenburg – Petronell*, *Brigetio/Komárom* or *Aquincum/Budapest*. The structure of the limes road differed inside and outside the forts and settlements. The excavated road sections revealed that road foundations were often dug to a depth of 80 centimeters; a foundation of stone and earth was made that was then surfaced with gravel.

#### 4.2.2. *Interplay between Military Camps and Civil Settlements*

In Western Europe, the germ of the development of urban culture is related to the Celtic *oppidum*. This phenomenon was also existing in the Eastern territories, e.g. in Pannonia, however they did not form a unified settlement system, therefore in these lands the beginning of urbanisation can be linked to the appearance of the Romans. But as a matter of there are numerous Roman towns that can be traced back to a Celtic *oppidum*. Prominent examples from along the Danube are Manching in Germany or Bratislava and Devin in Slovakia.

The creation of a civilised and cultured living environment was made possible by a combination of military, economic, administrative, technical and cultural organisation, which resulted in the differentiation of the settlement network. The cities recognised as Roman were the most prestigious, which privilege was provided for only civil settlement. The cities of Roman law were called *municipia*, most of which were then elevated to the rank of an even more privilege.

The several manifestations of settlements were civilised frameworks embedded in the cultural landscape; however, the military initiated this process, both directly through military constructions and indirectly by designating veteran settlements for decommissioned soldiers.

A frequent phenomenon with regard to the civil settlement in the surroundings of a legionary camp is the so-called double settlement. On the one hand, a military town for civilians closely related to the troops (*canabae legionis*) formed more or less directly along the arterial roads running from the *portae* of a legionary camp, and on the other hand, in many cases, another civil town was planned and established in a certain distance from the legionary camp (mostly approx. 2 kilometers), but still in its immediate vicinity.

Prominent examples of such double settlements along the Danube Limes are *Carnuntum/Bad Deutsch-Altenburg – Petronell* and *Vindobona/Vienna* in Austria, *Aquincum/Budapest* and *Brigetio/Komárom* in Hungary, *Durostorum/Silistra* in Bulgaria) as well as *Apulum/Alba-Iulia* in the province of *Dacia* on the other side of Danube River in Romania. This phenomenon is also widely spread on the *ripa* along the Rhine (*Bonna/Bonn*, *Vetera/Xanten*, *Noviomagus/Nijmegen*, *Mogontiacum/Mainz*) as well as in the Roman province *Britannia* (*Deva/Chester*, *Isca/Exeter*, *Eburacum/York*).

The construction of a Roman legionary camp followed a strict model, which is why most legionary camps have a very similar appearance. They were planned and measured by professional land surveyors. What is striking about the *canabae* along the arterial roads outside a Roman legionary camp is that in most cases they also seem to follow a regular pattern. Orthogonal structures can be recognised and a certain parcelling grid seems to have been laid out along those streets through the civilian settlement areas, although one would go too far to claim that they were planned settlements.

Civilian settlements around military camps, be it legionary or auxiliary forts, formed quite soon after or even at the same time as the establishment of the military structures. A certain supply train (*Tross*) always accompanied the Roman troops. There were civilian staff members, traders, craftsmen as well as the families of the soldiers. Further, it has to be considered that the permanent stationing of Roman troops meant a great sales market for the local community and therefore the presence of the military always was a considerable economic factor for a region.

What the *canabae legionis* were to the legionary camp, the *vicus* was to an auxiliary fort. In general, it can be stated that *vici* are better archaeologically explored than *canabae*, since the latter are very often overbuilt with modern structures. The reason for this phenomenon is that in many cases large cities have formed at the places of former legionary camps. Most of the ancient central sites have never lost their economic status and administrative functions over the centuries. Several European capitals stem from a Roman legionary fortress and its surrounding civilian settlements, e.g. *Vindobona*/Vienna, *Aquincum*/Budapest, *Singidunum*/Belgrade, mentioning only those along the Danube Limes.

#### 4.2.3. *Continuity until Today – Roman limitatio Visible in Modern Structures*

At the end of the 3<sup>rd</sup> century BCE, when the Romans started to colonise the Po Valley, they established the system of their *centuriatio*. As already mentioned above, the Roman *centuriatio* refers to the division of land into regular squares with a side length of 20 *actus* (approx. 710 meters) by professional *agrimensores* with special surveying instruments. After an occupation, the new land was measured and settlers were assigned with a certain number of *centuriae* which were clearly identified and recorded in cadaster maps.

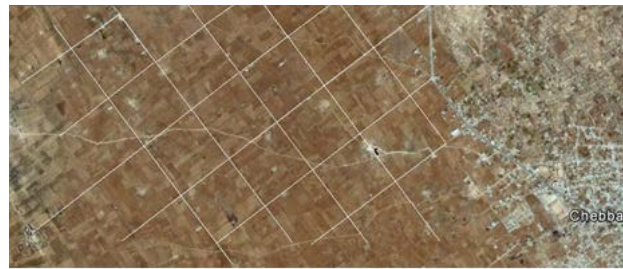
In many places all over Europe, traces of the Roman *limitatio* have been preserved to the present day and can be recognised in today's parcelling, in the form of modern field boundaries, paths and even streets. One of the most appropriate examples in this context is the surrounding area of Padua (Fig. 4.2.2). From a bird's-eye perspective, the Roman *centuriatio* is still visible at first glance. Until today, the land is divided into squares of 20 *actus* side length (with further rectangular subdivisions) and along their boundaries run the modern main streets in a chessboard pattern.

Similar phenomena can be found at several places all over the Roman Empire. Another prominent example is *Capu Vada*/Chebba in today's Tunisia (Fig. 4.2.3) which also shows a regular and extensive land division in its hinterland in squares of approx. 700 meters side length. Further, the rectangular and regular structures of the 1<sup>st</sup> century BCE military camp in *Torino*/Turin in Italy are still visible in the current city centre's road network (Fig. 4.2.4) and

today's field boundaries in the area of the ancient provincial capital of *Dacia*, the Colonia Ulpia Traiana Augusta Dacica Sarmizegetusa, can be traced back to the Roman land division.



**Fig. 4.2.2.** Borgoricco near Padua, Italy (Source: A. C. Sparavigna, Roman Centuriation in Satellite Images. PHILICA.COM Article no. 547 (2015). Fig. 5).



**Fig. 4.2.3.** Chebba, Tunisia (Source: A. C. Sparavigna, Roman Centuriation in Satellite Images. PHILICA.COM Article no. 547 (2015) Fig. 8).



**Fig. 4.2.4.** City centre of Turin, Italy (Source: A. C. Sparavigna, Roman Centuriation in Satellite Images. PHILICA.COM Article no. 547 (2015). Fig. 1).

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### 4.3. Barbaricum

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The geographical term *Barbaricum* is frequently used among archaeologists, historians and interested non-experts for the area beyond the northern limes of the Roman Empire. Sometimes is mixed up with the term *Germania* (or *Germania Mater*) which is confusing and actually inaccurate, since from the Migration Period onwards not only German tribes settled in the land north of the Roman Empire. The name *Barbaricum* has already been used as geographical term when referring to land beyond the *ripa* along the rivers Rhine and Danube by the Roman historians Ammianus Marcellinus and Eutropius during Late Antiquity (Amm. 18,2,14; Eutr. 7,9).

The territory beyond the limes and adjacent parts of Lower Austria and southern Moravia were settled by Germanic tribes of the *Marcomanni* and the *Quadi* during the 1<sup>st</sup> century CE. From geographical and environmental point of view, this part is situated from the so called Bratislava Gate (Porta Hungarica) at the confluence of two rivers Morava and Danube, up to the north along the Small Carpathians Hills. The Small Carpathian Hills begin in the south at the Devín Castle Hill. Favourable topography was also an advantage, with the Small Carpathian foothills extending to the fertile lowlands of the Danube country. The nearby areas were rich in mineral resources – bog iron ore was mined west of the highlands in the Záhorie region, the Danube River was a source of gold. Gold, silver and copper were mined in central Slovakia. The territory of Slovakia is hilly its central and northeastern part and with lowland and fruitful plains in the south on the left Danube banks, the so-called Žitný ostrov. The concentration of German settlements is situated between the rivers *Marus/Morava*, *Cusus/Váh*, Nitra and *Granus/Hron*.

The Morava river and the its lowland, called Marchfeld in Austria and Záhorie in Slovakia, are today part of Czech Republic, Austria and Slovakia. The Romans kept notably close and intensive relations with the Germans living in this fruitful area. Long lasting political and cultural dominance of the Romans can be observed in coexistence of these different socio-cultural and economic systems. Already after the first contacts with Germans the Romans started to interfere in power and political inner affairs of named Germanic tribes that led to the vassal dependence of Germans on the Rome.

Danubian Germans, particularly their elite upper class, profited from such way of coexistence, however. It was not only because of the gifts for allied tribe chiefs that helped keep their position in the Germanic society, and, at the same time, their vassal relationship to the Rome or because of the common frontier exchange (trade) that mediated noticeable import inflow to this region. Moreover, the *Marcomanni* and the *Quadi* obviously used convenient location of their tribe centres on important long-distance main trade road – on the Amber Route. This fact is evidenced by permanent and growing inflow of the Roman goods that is reflected not only by the rich graves (Zohor, Vysoká pri Morave, Stráže) but also by abundant Roman pottery, glass and metal products on Germanic settlements. Roman influence had an impact on social structure as well as on economy of the society of the *Marcomanni* and the *Quadi*. Acculturation process reached considerable stage of Romanisation.



A remarkable grow in population and power of the Danubian Germans manifested already at the end of the 1<sup>st</sup> century CE, but particularly in the 2<sup>nd</sup> century CE, as Germans had tried to get free from their vassal dependence. In such turbulent times Romans had to use military power and to perform punitive expeditions onto Germanic territory to confirm and strengthen their authority and power in this frontier region.

Under Marcus Aurelius (161-180 CE), in the time of major Roman-Germanic confrontation in the Middle Danubian region, the Marcomannic Wars, the situation reached a breaking point with serious impact on the further mutual relations. The resistance of the *Marcomanni* and the *Quadi* could have been broken only after the seizure of enemy territory by numerous Roman troops.

The places of Roman stay can be traced, besides the well-known rock inscription from Trenčín-Laugaricio (178/180 CE), according to the remains of several Roman temporary field camps that were discovered in the vicinity of Danube, at Žitný ostrov and at the river Morava (Hviezdoslavovo, Chotín, Virt, Mužla, Iža, Závod and Suchohrad). New discoveries of temporary field camps in Kráľová pri Senci, Cífer Pác, Rovinka and Radvaň nad Dunajom have to be verified by archaeological excavations. Emperor Marcus Aurelius wrote the first part of his famous philosophical work entitled “Meditations” – *Ta eis heauton* on the territory of Slovakia – in the “land of the Quadi up the *Granus* (Hron) river”. Central Danubia eventually turned out to be fatal for the Emperor, however. While preparing an offensive intended to annex the trans-Danubian lands as new provinces with their names already chosen, *Sarmatia* and *Marcomannia*, he succumbed to a plague epidemic in *Vindobona*. The Romans therefore never extended their frontiers beyond the Danube.

After the Marcomannic Wars (161-180 CE), the Danubian Germans re-submitted themselves to the Roman power but very soon they took the initiative again. Consequently, the power and political situation as well as mutual Roman-Germanic relations changed. On the territory of southwestern Slovakia a very unique phenomenon can be observed during that time, namely the architectures built in Roman styles but found in the Germanic environment. The oldest traces of the Roman military activities from the era of Augustus were unearthed in Bratislava-Devín. Other buildings found in Bratislava-Dúbravka, Stupava, Cífer-Pác, Veľký Kýr (before Milanovce) and Podunajské Biskupice come from later periods, namely from the 2<sup>nd</sup>-4<sup>th</sup> century CE.

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#### 4.4. Defence and Military

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The establishment of the limes reflects high organisation and planning, the developed communication network and the vision of a long-term defence system. It is not a simple linear defence but a highly complex both military and civilian zone that turned the frontier in a economically well-developed region in many provinces of the empire. This is the best example of how military can be a crucial wheel of comprehensive and fast buildup. The majority of the large cities in the border provinces developed either on the frontier itself or in its immediate hinterland allowing to exploit all the advantages that were provided by troops, border, and hopefully friendly barbarian tribes across the river. The military was a continuously highly paid population engaged in capital infrastructural buildup. The ease of access and financial potential brought traders and craftsmen followed by others looking for prosperity – a standard guidebook for new emerging societies. The constant movement of troops from one hot zone to another influenced on the exchange of cultural development and religious ideas.

The river, although a natural barrier, was used as linear defensive element with a chain of fortifications of different types and sizes connected by the Limes Road. The most important road ran more or less parallel to the Danube river itself and was the Roman equivalent of a modern highway. Transport with light ships was the backbone of supply, and even enabled long-range communication routes.

The limes meant a crucial change in Roman strategy and vision for the future. The original concept of the Empire without frontiers and end (*imperium sine fine*) turned into a realistic concept – hold what you can actually protect and defend.

Legionary fortresses were the strongholds of defence. They were positioned at strategic locations, not just taking into account geography and enemy position, but also other aspects, i.a. land to support a high number of soldiers providing enough food and water.

The *Constitutio Antoniniana* or edict of Caracalla granted Roman citizenship to everyone in the Empire effectively removing the best motivation for serving in the auxiliary troops.

Around the fortifications small settlements emerged, forming the civilian component of the frontier, and some cities even developed from the original *canabae legionis* – settlements under military command. This close co-life of the army and civilians led towards downfall. The army concept changed and the troops were split into *comitatenses* (highly mobile army, selected and high quality force) and *limitanei* (sedentary border troops).

Bridgeheads were the key points to influence barbarian tribes. Keeping them peaceful and under Roman cultural influence was top priority in order to enable normal life and less hostilities along the Danube. In order to use the river as the crucial trade and cultural communication artery, its both banks had to remain calm and safe. Culture and economy were crucial for the control of the Barbarians, sometimes even more than the legions and the high fortification walls on the Roman side. These bridgeheads were of enormous importance during both war and peace times. The Danube was a jump point for starting wars over the bridgeheads that the empire maintained on the left bank. In wars, they enabled a safe landing of troops in protected zones. Being the points for trade with the Barbarians and imposing the influence of

the Empire into the non-conquered territories they had both a political and economic role in controlling the situation on the opposite bank of the Danube. Bridgeheads that were pointed out into the opposing banks also were the heart of early the warning system combining intelligence service with constant surveillance.

#### 4.5. Economy and Trade

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The constant presence of the Roman army and imperial administration had major influence on the economy along the Roman Danube Limes. Economy based on agriculture in plains, while farming dominated in hilly parts, wood and stone working, handicraft, mining and especially trade.

Intensive agriculture in the Danube valley was well-known to ancient authors even before the 4<sup>th</sup> century BCE, who wrote about it in connection with the visit of Alexander the Great to the tribe of the *Triballi*. Ever since the beginning of Romanisation in the Middle Danube valley, land was bought by and given mostly to veteran soldiers or members of wealthy Roman families, while there were also imperial and state domains. These areas were economically developed and sustainable, although import was highly developed.

In the limes area, in military camps and around them, brick production is confirmed (*Singidunum*/Belgrade, *Viminacium*, *Diana*/Kladovo), covering the needs of building and repairing. Pottery production for everyday use, but also the production of luxury items, glass vessels and oil lamps is confirmed in *Sirmium*/Sremska Mitrovica, *Singidunum*/Belgrade, *Margum*/Dubravica and *Viminacium*. The settlements and camps along the Danube were supplied with luxury good from all over the Empire, from the western imperial centres (Northern Italy, South Gaul, *Germania*, *Noricum*, *Raetia*) as well as from the eastern imperial centres, especially *Syria* and Palestine, while agricultural products were imported in *amphorae* (olive oil, wine, *garum* etc.) along land and fluvial roads from the areas of the Black Sea, Northern Africa and northern Mediterranean. Special storage sites were built. They were called *horrea*, usually located within the camps, close to the main road, which made uploading and downloading easier. *Horrea* are not very well-explored in the Middle Danubian valley. Storage sites made of stone are known from *Singidunum*/Belgrade, Sapaja, Čezava, Boljetin, Talijata, Konopište and Kurvingrad.

Just as the province of Africa was the “Roman granary“, the Moesian mines played the most important role in imperial mining, since they brought major profit flowing directly to the imperial treasury. The Iron Gates area belongs to the mining district *metalla Aeliana Picensia*. The mines in the Pek, Porečka and Timok rivers gave silver lead, copper and iron, while gold was the best-exploited ore. In the forts along the Danube, traces of working ores were noticed (finds of smiths’ tools from Saldum, Boljetin, Porečka reka, Diana, Korbovo).

#### 4.6. Limes Zone and Hinterland

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Limes is considered to be the area under the control or administrative jurisdiction of the legionary fortresses, cities or other legal entities. In practice this was rather narrow area from the Danube with deeper area in case fortification line is pulled inland due to marshy lands, flood zones or other reasons. Limes road as the main land lifeline is the artery for all communication, small scale transport and supply. Danube was both the barrier and communication route. If it was safe and practical Romans often used Danube's branches to position defensive line rather than the main river course. Reasons for this were danger of enormous flooding and danger of flanking attacks. If the fortification was on the main course of the river hostiles could use branch to encircle it with fast landing in the rear effectively cutting off the first line from the mainland.

Discussion on that where limes ends and hinterland begins, probably will remain unsolved as points of view of scholars differ so much. Some say that everything what was in function of defence can be identified as limes.

Supply or logistics system of the Roman army was complex and planned to the details. If we exclude legionary fortresses, that had granaries (*horrea*) with large scale capacity, auxiliary forts, fortlets and especially watchtowers could not hold long term provisions. Therefore, stabile, and regular supply system was of crucial importance. For the cargo Danube was capital supply line. Roads were backbone during winter when river freezes or for small fortifications that could be purveyed with mule transport.

Although Tacitus mentioned that legionary forts could hold provisions enough for one year, it doesn't seem likely to be the case.

Distribution centers were positioned on strategic well-connected locations. Smaller rivers, Danube tributaries were preferred. Delivery from these centers to end users in forts was planned to function always downstream, as it was much easier to bring back upstream empty vessels. On the Hadrian's wall base at South Shields was identified as the supply center. In Moesia several sites are identified as supply centers. *Horreum Margi* (Ćuprija, present day Serbia) was the main supply center drawn into the safe hinterland but connected via Morava river to Margum at the mouth of Morava to Danube. Fortified complex at the mouth of Porečka reka and Mala Vrbica Konopište by the Trajan's bridge were smaller distribution centers further downstream. In Lower Moesia *Ratiaria* (Arčar) and *Sexaginta Prista* (Ruse) are the best candidates for this role.

Supply of the army depended on both military and civilian resources. *Prata legionis* was rarely enough to fill the granaries, so civilians, veterans and all available farms produced grains to feed the army. In positioning of the legionary fortresses large fertile plains played one of the

key roles. Where it was possible *vici* participated in food production, but for example in the Iron Gates, where was no space even for the basic road, all fortifications were fully dependable on outer supply lines. Fishing was the only locally available food resource that could hardly maintain the needs of even small garrison. Comparing to other sections of the frontier Danube limes actually was in major advantage. Fertile lands in the Danube basin were far useful than forests of Germania or sands of African deserts.

The conquest of the Alpine foothills from the southwest and from the central Alps by the adopted sons of Augustus to the Danube in 15 BCE was due to security policy considerations. Further communication channels were also to be established on a northern route along the new border and on newly laid out routes from west to east. We are well informed about the conquered Vendelic and Raetian tribes by corresponding victory monuments in honour of Drusus and Tiberius (*Tropaeum Alpium*). Roman camps such as the one in Dangstetten (15 BCE), followed by the camp of Augsburg-Oberhausen (8/7 BCE), secured the conquests as well as newly established south-north routes, including the *Via Claudia Augusta*, which guaranteed rapid movements from the centre of the empire to the border. Further roads, partly also attested by milestones, running west to east in the new conquered areas had to be built sometimes at great expense. This can be concluded from known bridges that were constructed on the lower Danube in *Moesia Superior* near Drobeta and in *Moesia Inferior* near Dolnivadín and Oescu) to facilitate traffic to the Dacian province.

It was precisely this strategy of assimilating the conquered population that led the population in the areas where the Danube ran quickly becoming an integrative part of the empire and Raetia to a province presumably from the reign of Tiberius onwards. In research this procedure of intentional introduction of the conquered population to Roman culture through the construction of cities with the accompanying infrastructure (roads, water supply, thermal baths) and their transformation into e.g. *civitates*, artificially formed communities is labelled "Romanization". Further east of the river Lech in eastern Raetia, settlement density seems to have decreased. Besides a few camps and forts, which have already been documented in Claudian times, as in Oberstimm, there was apparently – apart from the auxiliary camp of Kumpfmühl in Regensburg – hardly any military occupation at first. This was not least due to the fact that, as a result of Roman relocation measures during the occupation phase (soon after 8 BCE), it was the tribes of the *Quadi* and *Marcomanni* living south of the Main and north of the Danube that were resettled to the east in the Czech Corner. As a result, the area immediately north of the Danube river line was – as far as known – largely uninhabited until the end of the 2<sup>nd</sup> century, apart from the *Hermunduri*, who had a privileged role in the border traffic with Rome.

The expansion further to the east and further to the north until the final extension of the Limes west of Abusina/Eining, ultimately also in stone forts and stone towers, in the second half of the 2<sup>nd</sup> century was again due to security policy considerations, but also to arguments of better supply provided by areas close to the border. Along several sections of the Raetian (but also Upper Germanic) Limes the borderline had a dead straight course. This was not so much due to military-strategic reasons considering the local topography as to the incorporation of fertile areas and the demonstration of power and technical superiority. It should also be remembered that the directly controlled area still had a *glacis* area corresponding to the political-military apron control (often along the tributaries of the Rhine and Danube), which was pushed forward

as the empire grew and served to prevent large concentrations of power from forming in the first place. Thus, the loss of the initiative, especially in the aprons and thus also at the borders from the 3<sup>rd</sup> century onwards, cannot only be blamed on an objective increase in external danger but also on internal dissension.

First, however, the final position which the limes reached in Raetia in the 2<sup>nd</sup> century was secured by the typical measures. This included the installation of watchtowers and small forts along the limes line and (further back) larger camps whose crews were to intercept breakthroughs at the border in the rear area. These camps were accessible by roads along the limes line along the Raetian Limes and also from the south to the north, for example by the extension of the *Via Claudia Augusta*. An important, flourishing Roman city on this road was Augusta Vindelicorum/Augsburg which became capital of the province during the reign of Trajan or later, replacing Cambodunum/Kempten. At the end of the 2<sup>nd</sup> century, the transfer of the *legio III Italica* to Regensburg, to a new camp at the border of the Danube (175 CE onwards), was also an important milestone in military security, which was supplemented to the east by camps near *Quitana/Künzing* (since the 1<sup>st</sup> century), *Sorviodurum/Straubing* and Passau, each equipped by port facilities, like attested e.g. in *Sorviodurum/Straubing*. However, the main units of the fleet were stationed in Regensburg, operated by the *legio III Italica*.

Near to the auxiliary camps camp villages (*vici*) quickly emerged in the surrounding area, which allowed the auxiliary units to become indigenous, especially at the advanced positions, even if they had originally been recruited elsewhere. This happened in a similar way with regard to the core troops in the Upper Germanic, but also, to a lesser extent, Raetian hinterland. Civilian settlements emerged at their camp sites, which continued to exist even when a fort was abandoned (e.g. Oberstimm). These settlements as well as the granges or manors (*villae rusticae*) formed the backbone of the supply of the troops close to the camps. Additionally, the camps and fortresses were supplied by overregional commerce.

Because of the harsh climate in the northern provinces, the Roman administration ensured that the soldiers were provided with the food they were used to, regardless of the distances involved. Starting from the civil settlements near to the camp, towns and sometimes even provincial capitals developed.

At first, the core troops, the legions, were stationed south of the Danube in Raetia, e.g. in Augsburg, and from the end of the 2<sup>nd</sup> century in Regensburg. The *legio III Italica* stationed there was also involved in the construction and expansion of the border fortifications, camps and buildings of the surrounding settlements, villages, towns as craftsmen and architects. They were supplemented by auxiliary troops, who were close to the borders and only after their service in the first two centuries CE they had the possibility to obtain Roman citizenship.

In cavalry, infantry or in mixed units under the command of a knightly *praefectus* or a *tribunus*, appointed by the governor, they bore the main burden of border defence. In the beginning, it was a firm principle that the troops were not recruited locally, a realization from the negative experiences of the Varus defeat. Increasingly, however, the recruiting of the Auxilies from the hinterland was resorted to, although the original names for the origin of the troops remained as mere names. Exceptions were the special and specialised units, such as the Batavians, who learned their special skills for amphibious enterprises, which made them so important for the army from their earliest youth on. After 25 years, as a rule, the auxiliary soldiers left the

military service and received the Roman citizenship for themselves, their wives and families documented by the military diploma. This paved the way for a legal harmonisation and rapprochement for millions of inhabitants of the provinces, who perhaps originally came from the Gallic settlement area, like the population in the *agri decumates* (Tac.Germ. 29,3), and were supported by the Empire through appropriate incentives.

In the first years after the establishment of its power in the Balkan lands, Rome brought in significant military contingents to maintain order on the territory and protect the Danube border from barbarian invasions. Many camps were organised for their accommodation, mainly in the area between the Danube and the Balkan Mountains, where the danger of enemy invasions was greater. Over time, the camps grew into real settlements and well urbanised centers, inhabited by Thracian civilians, as well with people who came from other places, mostly craftsmen and merchants.

Among the widely known settlements south of Danube were *Bononia/Vidin*, *Castra Martis/Kula*, *Ratiaria/Archar*, *Oescus/Gigen*, *Novae/Svishtov*, *Nicopolis Ad Istrum/ Nikyup*, *Marcianopolis/Devnya* and others. It has become common practice for many soldiers, after completing their military service, to stay forever in the newly formed settlements, where many of them married and have started families. As veterans, they were receiving land to cultivate thus becoming a permanently settled population. This practice spread mainly in the provinces of Upper and Lower Moesia, where the number of soldiers and veterans, respectively, was higher.

As in the case of eastern Raetia, a linear occupation of the river boundary was not yet considered in Noricum until Vespasian. But even afterwards there were no legions stationed. With the exception of *Lentia/Linz* in today's Upper Austria, where first signs of military protection began to emerge from the end of the 1<sup>st</sup> century onwards. Only with Traian one can speak of an area-wide upgrading and safeguarding by rebuilding in stone, especially along traffic routes to and along the Danube. This can be explained by the low risk in the forefront against *Marcomanni* and *Quadi*, who were allies for a long time.

As in the west, the expansion of the defence system entailed the expansion of the civilian settlements guaranteeing the local supply along the roads and at the military sites. In late antiquity, these were also rebuilt in a fortress-like manner.

In Pannonia three legions were stationed, at first in the hinterland, one of them in Carnuntum from Claudius onwards. After the conquest of Dacia, Pannonia was divided, which now had a total of four legions, with Carnuntum as capital of Pannonia Superior being protected by three legions, and Pannonia Inferior with Aquincum/Budapest as capital being protected by one legion. From Commodus (180-192) onwards the marching camps built during the Marcomannic Wars were replaced by stone watchtowers. Civilian settlements sprang up, such as the vicus in Annamatia near Barac and the *cannabae legionis* near the legion camp of *Brigeto/Komárom*. The Roman soldiers controlled the trade along the Danube in Pannonia, which was secured by small fortresses and many towers, and guaranteed the safety of the traders (e.g. road station at Gönyö). In late antiquity, the camps were constructed like fortresses and supplemented inland, due to the increasing threat of invasions.



During the reign of Claudius, Moesia already had a sophisticated border surveillance system with two legions in the status of a province due to the ongoing threat also in earlier times. These legions perhaps not yet were located directly on the river. The number of legions was increased to five and during the reign of Domitian two provinces were created in conflict with the Dacians, a fleet secured the river. Further, civil settlements were established near Roman camps, such as Novae in Moesia Inferior. Between the years 106 and 275, the Dacian provinces were located upstream, then strongly fortified and a separate province, Dacia ripensis, was founded. In Moesia Inferior there were, but not simultaneously, four legions, at least one of which (from Arcar) is attributed to Dacia ripensis in Late Antiquity. In Moesia Inferior, up to 40 forts are documented, which served as bases of operations for the *classis Moesica*, whose area of operation was part of a control system that extended across the estuary to the Black Sea coast of the province to the south as far as Callatis. The border collapsed under the barbarian onslaught in the 5<sup>th</sup> century and was stabilised for another hundred years until the 6<sup>th</sup> century.

Traian had divided Dacia into three provinces, which were attractive because of its gold, silver and salt resources. The area spreading over the Danube far to the north was immediately secured by many auxiliary forts, to which civil settlements were attached. The border to the east is not well known, and had to be partly removed by Hadrian. To the northwest, in the Dacia Parolissensis, a limes was built on the Mesec ridge, secured by chains of camps and watchtowers, with legionary camps. Aurelian (270-274) withdrew his troops to the Danube after a victory over the Goths and Alans. After his numerous battles the Danube marked again the northeastern border of the Roman Empire. The section of the Danube Limes belonging to modern-day Bulgaria was used as a water frontier of the province of Moesia Secunda (to the east) within the diocese of Thracia and of Dacia Ripensis (to the west) within the diocese of Dacia. The *Asamus* river (modern Osam) was the borderline, separating not only the two dioceses, but also the two prefectures.

With the reorganisation of the provinces at the upper Danube after Diocletian's retreat to the Danube-Iller-Rhine line, *Curia Raetorum*/Chur became the capital of Raetia Prima, which covered most of modern Switzerland, and *Augusta Vindelicum*/Augsburg the capital of Raetia Secunda (which essentially covers what is now Bavaria south of the Danube), each with the seat of a praeses. The military command remained, however, for both Raetian provinces, united under the *dux Raetiae primae et secundae*, and the administration belonged to the diocesis Italia annonaria of the vicarius in Milan.

About the distribution of the troops along the border and the hinterland informs the *notitia dignitatum*, a troops manual of Late Antiquity, preserved in manuscripts of the Medieval times and therefore sometimes problematic concerning the contents and especially the painted troop emblems. The areas were secured by fortress-like forts, also in the hinterland, as stronghold for the reduced military personell as well as for the civil inhabitants around (like in the case of small inner late antique retreat fort of *Abusina*/Eining), until this position had to be abandoned in the middle of the 5<sup>th</sup> century with the decline of the Western Roman Empire. In the course of time, various Germanic tribes (Lombards, Alemanni, Ostrogoths, asf.) seeped into the area abandoned by the Romans, obviously also from the Bohemian region, from which the Bajuwares gradually emerged (6<sup>th</sup> century).

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## 4.7. Life Along the Limes: An Insight into Roman Social History

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### 4.7.1. What Does Social History Mean?

Social history describes the development and structure of a society during a certain period of time, particularly the life of people of varied social layers in the respective society. In addition, social history explores how the people of those times dealt with their basic needs and how they satisfied them.

This chapter deals with the life of people – Romans and Non-Romans, who were called *peregrini* – who lived along the Danube limes. Until now, limes science has focussed primarily on the life of soldiers living in the forts along the fortified limes. In this context, however, also the local civilian population must not be forgotten.

The Danube limes existed for several hundred years as a trade and border area. During those times, there were constant changes in the social structure as well as in daily life. Therefore, only a general survey can be provided on the various individual topics.

### 4.7.2. Building Types

The Romans imported their typical building types to the provinces administrated by them. Therefore, traditional local pit-houses as well as Roman strip-houses can be found.

In the course of the imperial period, civilian settlements developed in the neighbourhood of almost every Roman fort along the Danube limes, where, above all, merchants and artisans but also relatives of the soldiers took up residence. Those settlements were normally located along the main arterial roads of the camps and had the same basic construction.

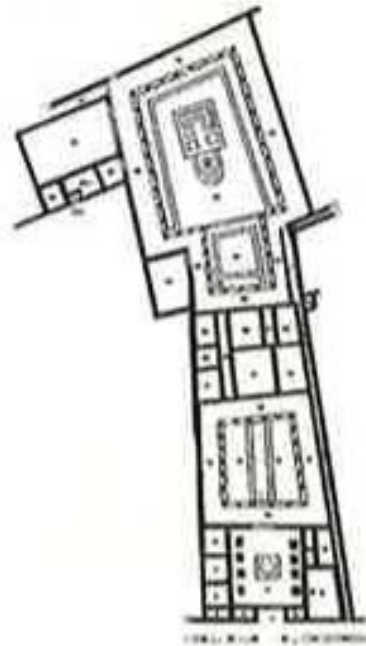
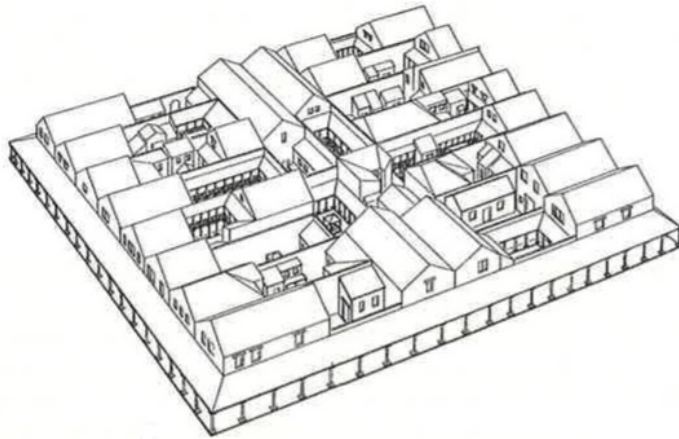
Along the main streets, narrow rectangular houses were built, often standing closely side by side, their short sides facing the street. These buildings were mostly built of wood and up to 30 meters long but generally only 6-12 meters wide. The entrance was on the short side facing the street; in the front were workshops or sales rooms, the private rooms were in the back. Due to their form and longish layout, archaeologists today call them Roman strip-houses (Fig. 4.7.1).

In big Roman cities, in addition to strip-houses, there also existed villa-like houses, built of stone around an inner courtyard, so-called Peristyl houses (Fig. 4.7.2). Many of those Roman houses had underfloor and wall heating, the so-called *hypocaustum*. Remains of such heating systems, which consisted of columns underneath the floor and hollow bricks in the wall, can still be found in archaeological excavations.

The Celts lived either in little homesteads or small settlements; there were only few cities called *oppida* by the Romans. The homesteads generally included some farm buildings, extending over an area of not more than 10,000 m<sup>2</sup> and were enclosed by a hedge or fence. The typical Celtic-Germanic construction form was the so-called pit-house: The house was built in a pit, its entrance led downwards and its roof almost touched the top edge of the pit.

Beside the settlements and Celtic homesteads, Roman estates and big farms could be found, which were typical for the Roman hinterland as it is called today. In those places, the everyday

necessities for the nearby settlements were produced, e.g. wine, pottery, or fruit and vegetables in large quantities. Often slaves worked in those estates and farms.

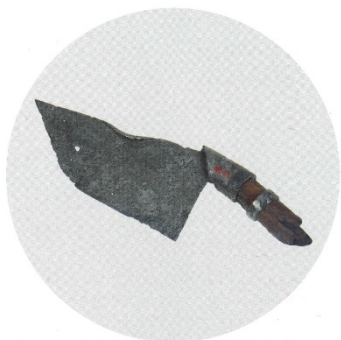


**Fig. 4.7.1.** Reconstruction of strip-houses within a compound (Source: Th. Fischer, *Die Römischen Provinzen: Eine Einführung in ihre Archäologie* (Stuttgart 2001) 86 Fig. B).

**Fig. 4.7.2.** Peristyl house (Source: Th. Fischer, *Die Römischen Provinzen: Eine Einführung in ihre Archäologie* (Stuttgart 2001) 86 Fig. A).

#### 4.7.3. Alimentation

Thanks to several findings, we know about the food and nutrition of the Roman population along the Danube Limes. Such archaeological objects included for example figural balance weights, cutlery made of metal (Fig. 4.7.3), e.g. spoons and knives, as well as tableware such as plates, bowls and jars made of clay or metal and cookware, such as pots and sieves (Fig. 4.7.4).



**Fig. 4.7.3.** Roman butcher knife from Enns (Source: Amt der OÖ. Landesregierung/ Direktion für Kultur, *Die Rückkehr der Legion: römisches Leben in Oberösterreich* (Linz 2018) 148).



**Fig. 4.7.4.** Roman sieve made of bronze (Source: Amt der OÖ. Landesregierung/ Direktion für Kultur, *Die Rückkehr der Legion: römisches Leben in Oberösterreich* (Linz 2018) 152).

In addition, at archaeological excavations, biological material of edibles are often found, such as oyster shells, date kernels and animal bones.

The staple food of the soldiers and civilian population was grain (Fig. 4.7.5), which was used to produce not only bread but, above all, a special extremely nourishing porridge, which the Romans called *puls*. It was the basic food of the soldiers, because it was easy to prepare, even on the road. The most important cereals in Roman times were spelt, barley, millet, rye, emmer, oat and einkorn wheat.



**Fig. 4.7.5.** Coloured reconstruction of a scene on the Trajan Column: Soldiers harvesting cereal (Source: R. Pogorzelski, *Die Traiansäule in Rom: Dokumentation eines Krieges in Farbe* (Mainz 2012) 116 Fig. 162).

Besides cereals, people ate regional and seasonal vegetables, cultivated above all on Roman estates in rural regions, which archaeologists today call *villae rusticae*.

Legumes, such as lentils and peas, and bulb and root vegetables such as onions and celery, were very popular, but also leek, purslane and salads were cultivated. Besides vegetables, the following fruits were widely consumed: apples, pears, cherries, plums, several berry varieties, such as blackberries and gooseberries, as well as hazelnuts and walnuts. One of the most important side dishes for meat dishes was the European chestnut.

The Romans already used a great variety of regional herbs that grew in the Danube region to flavour their meals, as for example dill, coriander, basil, fennel, savoury and parsley. In addition, a spicy paste called *garum*, made of salt, fermented fish and spices, was imported to the limes regions. To produce oil, flax was grown in the Limes area, in addition, olive oil was imported from Rome.

The animal bones found show that the most important meat was probably beef, followed by pork. The Romans brought their own cattle breed to the limes area, which was bigger and had more flesh than the local Celtic animals.

Also, sheep and goats were eaten, but they were kept primarily to provide milk for cheese production. The bone findings also show that the people also consumed all kinds of poultry (chicken, duck, and goose).

Besides meat, also fish, caught locally, was served. The Romans knew how to fish with fishnets and hooks. Seafood and mussels were imported from the Mediterranean regions.

The Romans' most important beverage was wine. Although, according to literary sources, wine was already cultivated in Noricum (today Austria), there is not a single Roman wine-growing district known. The wine receptacles that were found prove that wine was imported to the Danube limes from Spain, Italy and southern France. In antique times, wine was never drunk

pure; it was always diluted with water and often blended with herbs. In order to store wine for a longer time, it was often blended with resin.

The Romans were also acquainted with beer; however, it was mostly the Celts who consumed it and beer has never become a popular beverage among the Romans in the Mediterranean area. However, in the provinces along the limes in today's German-speaking areas beer was a popular drink among the soldiers. It was brewed from wheat, spelt and barley; hop was as yet not used. Possibly, they added yeast instead. In any case, they used additives such as oak bark and honey which modified the taste and helped to preserve the beverage for a longer time.

#### 4.7.4. Family Life

In the civilian towns near the legionary camps along the limes lived not only the relatives of the soldiers but also many artisans and merchants with their families. In the settlements and towns, they earned their living mostly as small entrepreneurs, and in the course of time, they intermarried with the local Celtic population.

This intermixture can be seen above all on the gravestones that have survived, which very often show a man in Roman dress beside a woman in Celtic costume. Only free Roman citizens were allowed to marry, slaves had no right to marry until the 3<sup>rd</sup> century CE.

The head of a Roman family was the *pater familias*, who had to take all decisions within the family and was also responsible for the veneration of the household gods. The patriarch had to officially declare his own children after their birth as family members. Women and children were completely dependent on the *pater familias*. The child mortality in Roman times was quite high; many families had up to twelve children.

Children were not only off-spring, especially in the artisan class they also worked in the family business. Nevertheless, most of the Romans could read and write, as a basic school education was offered to almost all children. Children of wealthy families generally had their own private teachers.

#### 4.7.5. Clothing

The clothes of the Roman and Celtic population in the Danube area was made of plant fibres (cotton, linen) and animal fibres (wool, felt, leather). The production process can be deduced from findings, such as spindle whorls and loom weights made of clay or bone, bronze thimbles and needles and needle containers made of clay or bone, as well as from pictures on antique objects showing the work process. The clothes were elaborately dyed with natural colours and partly embroidered with braids. Instead of buttons, they used *fibulae* and belts as fasteners.

The traditional Roman everyday dress for men and women consisted of a mid-length under-clothing with short sleeves (*tunica*), which reached down to the knees and was combined with other parts. A *tunica* was also worn by workers. As of the 3<sup>rd</sup> century CE, a *tunica* could also have long sleeves and reach down to the floor.

Men who were Roman citizens wore a *toga* consisting of one long panel of fabric over their *tunica*, and women dressed in a kind of longer *tunica*. Over this, they wore coats and scarves. Married Roman women also wound a long shawl, the so-called *palla*, around their body which also covered their hair. In the province, the women preferred hoods.

In colder regions, the Romans also adopted some local clothes which were quite comfortable and well adapted to the weather conditions, for example, a hooded traveller coat (*cucullus*) made of wool or leather, as worn by the Celts. This coat became an identifying mark for merchants and can be found on gravestones and wall paintings. On one gravestone from the Austrian city of Enns, the members of a merchant family are portrayed wearing these typical coats (Fig. 4.7.6).

The trousers, which reached down to the middle of the lower leg (*braccae*), were passed on to the Romans from the Gauls and Dacians. As of the 2<sup>nd</sup> century CE, these trousers made of wool or leather were part of the Limes soldiers' uniform, as can be very well seen on the Trajan Column in Rome (Fig. 4.7.7).

Especially sepulchral steles showing pictures of the dead are an excellent source of information on the people's clothing style in the provinces. Particularly interesting in historic terms are the depictions of women, who were often portrayed wearing elaborate local costumes with traditional headgears, jewellery and *fibula*. Their portraits beside men wearing Roman clothes also give evidence of the intermixing of cultures.



**Fig. 4.7.6.** Men in capuchins, detail on a gravestone (Source: Amt der OÖ. Landesregierung/ Direktion für Kultur,; Die Rückkehr der Legion: römisches Leben in Oberösterreich (Linz 2018) 67).



**Fig. 4.7.7.** Legionnaires in chain mails and trousers (Source: R. Pogorzelski, die Traiansäule in Rom: Dokumentation eines Krieges in Farbe (Mainz 2012) 116, Ausschnitt Fig. 163).

Most of the portraits of women wearing local clothing date back primarily to the 1<sup>st</sup> and 2<sup>nd</sup> century CE. Pannonian women wore a fur cap, women from Noricum and Raetia a cloth hood, in the border areas the two dress styles often intermingled. After the 3<sup>rd</sup> century, the hoods slowly disappeared from the images as Roman dresses began to replace the local clothes.

This gravestone (Fig. 4.7.8) shows a woman's bust with a Pannonian hood and wing fibula on the shoulders, a typical accessoire. With her right hand, the woman named Umma pulls together her woolen coat.

Besides wing fibulas, also disc brooches (Fig. 4.7.9) were used. They were often beautifully ornamented as is shown in pictures and by the finds excavated from graves.

Men are often depicted in the Roman toga to underline their social status as a free Roman citizen; sometimes they also wear a tunica with a cape over it, which is held together on the shoulder by a fibula. Whereas in many pictures women often hold an apple in one hand, many men are shown holding a scroll in their hands.

There remains one last item of Roman clothing, namely their footwear. The Romans had different kinds of shoes made of leather or cloth, as for example sandals (*soleae*), closed shoes (*calcei*) and shoes made of one single piece of leather (*carbatinae*). The legionnaires wore heavy, nailed soldier sandals, called caligae. Even today, remains of leather footwear are still found in archaeological excavations.



**Fig. 4.7.8.** Gravestone of Umma (Source: Beutler et al. 2017: F. Beutler et al., *Der Adler Roms: Carnuntum und die Armee der Caesaren* Bad Vöslau 2017) 25).



**Fig. 4.7.9.** Disc brooch (Source: Beutler et al. 2017: F. Beutler et al., *Der Adler Roms: Carnuntum und die Armee der Caesaren* (Bad Vöslau 2017) 421).

#### 4.7.6. *Cult and Religion as Part of the Provincials' Social Life*

The Romans peacefully integrated several peoples into the Roman Empire. They were successful, because they allowed the people in the new Roman provinces to keep their traditional local cults and ceremonies, as long as they accepted the Roman emperor as omnipotent ruler and practiced the emperor cult. This cult included the religious worship of the current emperor as well as of the departed emperors. Through this cult, the people should identify themselves with the Roman Empire.

Many locals in the provinces, especially the members of the upper class, soon adopted the entire Roman life style, including the Roman cults.

##### 4.7.6.1. *Mortuary Cult*

In the Limes region, one can find a mix of Roman and Celtic mortuary cults, just as the people intermixed. The Roman custom, to erect a stone memorial in the form of a stele with a Latin inscription for the deceased was soon copied by the local people. As of the 2<sup>nd</sup> century CE, numerous grave steles were created, which show pictures of men, women, children and even of entire families. The Roman custom had prevailed over the Celtic burial mound.

From the 1<sup>st</sup> to the 3<sup>rd</sup> century CE, the dead in the Danube limes area were mostly cremated and buried in an urn. The burning of corpses on funeral pyres took place in a special cremation



place on the edge of the settlements. During this ceremony, also beverages and dishes were sacrificed. The dead were then buried in an urn or another container in a pit together with burial objects such as oil lamps. Above the pit, they erected a stone stele, which was subsequently painted. As of the 4<sup>th</sup> century, more and more inhumation burials were carried out, as a consequence, among other things, of Christianisation.

The graveyards were always located outside of the settlements, mostly along the main roads, so that travellers could see the graves as a first and last impression of a town.

Roman soldiers were often depicted with their weapons and armour on their gravestones. Families were buried in family graves (Fig. 4.7.10). The inscription on the steles indicated the name, origin and profession of the dead, as well as the name of the grave sponsor. In some cases, the deceased were buried together with some personal objects, such as jewellery or tools. Interestingly, in *Noricum* and *Pannonia* weapons were never found in the soldier graves.

#### 4.7.6.2. Household Gods

Besides the typical Roman gods, such as Iuppiter and Mercurius, every Roman family had its own domestic gods, the so-called *lares* (Fig. 4.7.11). These were protective deities guarding the estate and house. Originally, they were also regarded as the custodians of crossroads and fields. In their honour, small altars were often erected in the courtyards of the Roman houses and decorated with little statues. They were also closely connected with the *genius*, the individual guardian spirit of the property owner. Both types of deities were worshiped on the occasion of major events in the Roman family life, such as births, deaths, marriages, and they were regularly offered sacrifices.



**Fig. 4.7.10.** Grave stone of Privatus Silvester and his 12-year old daughter (Source: Amt der OÖ. Landesregierung/ Direktion für Kultur, Die Rückkehr der Legion: römisches Leben in Oberösterreich (Linz 2018) 171).



**Fig. 4.7.11.** Dancing Lar, figurine (Source: Amt der OÖ. Landesregierung/ Direktion für Kultur, Die Rückkehr der Legion: römisches Leben in Oberösterreich (Linz 2018) 141).

There exist several *lar* depictions dating back to the period of the Roman Empire: busts, full-body statues, paintings, mosaics and little figurines, all of which only show men. It is quite interesting, that full-body *lares*, often depicted in sacrifice scenes, are almost always dancing.

#### 4.7.6.3. Gods in Everyday Life

In the areas along the Danube limes, various Roman gods were venerated. For example, Mercurius, the god of trade, was very popular in this economic region. He was often shown together with Minerva, the goddess of sanity and wisdom, and Apollo, the god of the muses. In addition to the typical Roman gods like Iuppiter and Iuno, especially Mars, the god of war, was important for the Roman soldiers in the forts along the Limes. Furthermore, every Roman legion had its own gods (*genii*), who were worshipped in a small temple within the camps.

In the Roman civilian settlements, the remains of several temples were found dedicated to various gods, as for example to Asclepius, the god of medicine. But also little statuettes give some indication of the most popular gods: along the Limes, figurines of Iuppiter, Mars, Eros, Hercules, Mercurius, Diana, Venus and Fortuna were found.

#### 4.7.6.4. Immigrated Gods

In addition to Mars, the god of war, who was often worshipped together with Victoria, the goddess of victory, the soldiers also imported new cults to the Limes region, most of them originating from oriental areas, as for example, the Mithras and Isis cults.

The Mithras cult derives originally from the Iranian – Persian culture (Middle East), and, since the end of the 1<sup>st</sup> century CE, was also practiced in the military camps on the Limes. The subterranean sanctuaries with large depictions of Mithras as bull killer are typical of this cult (Fig. 4.7.12).



**Fig. 4.7.12.** Mithras as bull killer, cult image from Carnuntum (Source: E. Windholz, Carnuntum: Die Metropole am Rande des Römischen Imperiums (Bad Deutsch-Altenburg 2006) 365).

Also the Egyptian goddess Isis was venerated in the Limes provinces. Like Mithras, it was mostly the soldiers who introduced her to the area. She was above all regarded as a goddess of women, who venerated her during special festivities and called on her for a good birth.

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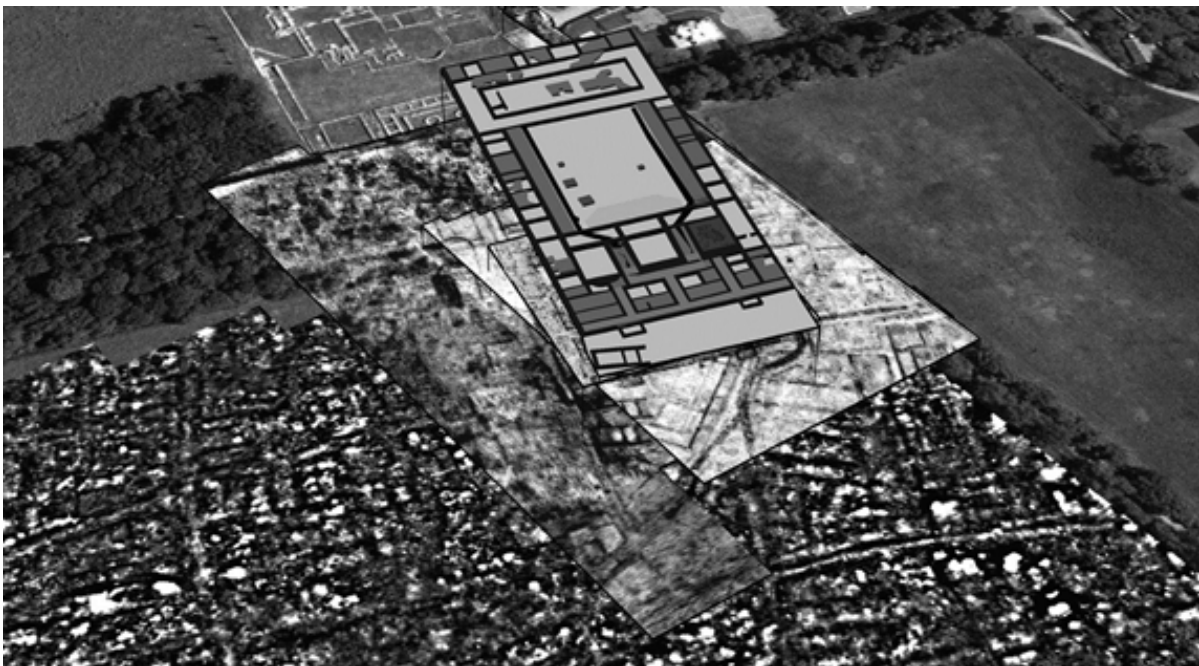
#### 4.8. Religion and Cults

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During its expansion, the colonial policy of the Roman Empire had been manifested in the dissemination of the Roman gods. The new and foreign gods were attempted to be incorporated by the natives into their own world of faith, in many cases matching them to their own gods. Consequently, a unique religious systems appeared in the different territories of the Roman Empire, and the variety and mixtures of religions and cults reflected in the construction activity in the Roman provinces.

Silvanus, considered by the Romans to be one of the chief gods of Pannonia, had a manifold meaning for the people of the province. This fact may also explain why the number of Silvanus inscriptions found in Pannonia is surpassed only by those mentioning Iuppiter. Nevertheless, only a few examples of the god's built memorials remained. Similarly to Silvanus, other gods, such as Mercurius, Mars or Diana, were not presented and worshiped in the same way as in Rome, but in many cases images of gods were endowed with new attributes and qualities.

Presumably, only the reverence of the Capitoline Triad resembled in the whole Roman Empire. Their temple, as site for the cult statues of the triune, was typically located right next to the forum (Fig. 4.9.1). It always consisted of three rooms (*cellae*), each of them assigned to one of the three Capitoline divinities – Iuppiter, Iuno and Minerva – and provided with a corresponding cult image.



**Fig. 4.9.1.** The Roman Capitoline Triad temple at the longitudinal axis of the forum in Carnuntum: Perspective view of the archaeological interpretation of the forum of Carnuntum (top), based on the integrated analysis of the aerial (bottom layer), magnetic (layer 1), earth resistance (layer 2) and GPR data (layers 3 and 4). (Source: W. Neubauer / M. Doneus / I. Trinks / G. J. J. Verhoeven / A. Hinterleitner / S. S. Seren / K. Löcker, Long-term Integrated Archaeological Prospection at the Roman Town of Carnuntum/Austria. In: P. Johnson / M. Millet (eds.): *Archaeological survey and the city*. (Oxford, 2012)).

A very important role in the religious life of the provincials had also the Imperial cult. Since the reign of Augustus, the Imperial cult was used as a political tool strengthening the bond between the emperor and the citizens all over the Empire. For soldiers in particular, this was a crucial connection, since the emperor was their supreme commander and the mutual loyalty between him and his troops had to be upheld at all times.

In addition to revering the traditional Roman gods and the emperor, other cults appeared along the Danube limes, according to the origin of the troops that were often recruited in the southeastern parts of the Empire. They brought new cults with them and particularly the eastern cults have attained a lot of followers providing them with the prospect of a contented life after death.

The adoration of Iuppiter Dolichenus in 2<sup>nd</sup> and 3<sup>rd</sup> centuries CE spread especially among soldiers. Memories of the cult are therefore located near military camps all along the northern border of the Empire, including the provinces along the Danube. The cult of Iuppiter Dolichenus evolved from the consecration of the warrior god from the Syrian city Doliche in Commagene (today Dülük in southeastern Turkey), which stems from the Baal cult. Following the Roman occupation of *Commagene* in 71 CE, Syrian soldiers, merchants, and slaves reached various parts of the empire, thus contributing to the spread of the adoration for Iuppiter Dolichenus. His followers were mostly found among the army in the Danube provinces and the Rhine region due to the stationing of Syrian units.

The cult of Mithras came to the area via Italy during the 2<sup>nd</sup> century CE. It is a mystery cult that is often practiced by its adorers in underground grottos or in cave-like cult rooms. The central motive on the Mithras monuments is the so-called tauroctony or bull-killing scene which shows Mithras killing a bull. Other important symbols in connection with this cult are the snake, dog, raven and scorpion, sometimes additionally also a lion and a chalice. The Pannonian settlements of the ethnic groups with eastern origin, mainly from Syria, played a significant role in the spread of the cult. This aspect resulted the existence of communities in *Poetovio*/Ptuj, *Carnuntum*/Bad Deutsch-Altenburg – Petronell, *Savaria*/Szombathely, *Fertőrákos* and *Aquincum*/Budapest as well as further towns in the Danube provinces during the middle of the century.

Among the various cults with Oriental origin, the one which is connected to Mithras earned the most followers in the Roman Empire. The adoration of the Iranian god of light, Mithra, dates back to the 14<sup>th</sup> century BCE in Persian territories. Nevertheless, the Roman cult of Mithras has only a limited resemblance to its ancestor. Therefore, two theories are known about the origins of the reverence for Mithras in Rome. The one side argues that the Roman Mithras religion derives from an ancient Iranian cult, although it has gone through significant transformations, while the other conception is that the Roman cult has developed independently from the Iranian cult.

Nemesis was originally the goddess of both bad and good luck. This is indicated by the origin of the name: νέμειν, with the meaning of “to give what comes”. In Rome, during the imperial era, the victorious generals revered the goddess often called Invidia or Pax-Nemesis, and those who fought on the battlefield adored Nemesis Campestris with religious belief.

She was also the guardian of gladiators and venators, thus, Nemeseums were mostly built in the immediate surroundings of amphitheatres. So far, a shrine of Nemesis has been found in the Danube provinces near *Flavia Solva/Leibnitz*, *Salona/Solin*, *Ulpia Traiana Sarmizegetusa/Sarmizegetusa*, *Porolissum/Moigrad-Porolissum*, and the civil town and military town of *Carnuntum/Bad Deutsch-Altenburg – Petronell*, the civil town and military town of *Aquincum/Budapest*, and amphitheatres of *Savaria/Szombathely* and *Scarbantia/Sopron*.

There was a significant community of admirers of Nemesis in *Aquincum* in particular, as evidenced by numerous inscriptions with dedication of Nemesis Regina, Nemesis Augusta, Nemesis Omnipotens – and proved by the statue of Fortuna-Nemesis excavated at the governor's palace and on the Western side of the amphitheatre of Civil Town in *Aquincum*.

Another important cult in the provinces along the Danube was the one of Isis. Important sanctuaries of this deity are the Iseum of *Savaria/Szombathely* and the temple in *Scarbantia/Sopron*.

In addition, the native population should not be forgotten either, as they also had their indigenous gods before the Roman conquest. For a long time, their cults were also preserved – some cults continued to be performed in their original ways but other indigenous divinities were identified with some Roman gods and the cult practices were adapted. Shrines were still erected for these gods in the early stages of the Roman conquest. Therefore, it is possible that Celtic shrines were found in several places. Later, their personality also merged with a Roman god or the memory of them faded.

In the late phase of the Roman era, Christianity gradually appeared and conquered along the Danube. There were no consecrated buildings or churches used for liturgy before the 4<sup>th</sup> century and Christian communities gathered in private houses to pray and sit agape. During the 4<sup>th</sup> century the first churches were built and Christianity increasingly prevailed in the Danube provinces.

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#### 4.9. Excursus: Spiritual Exchange Between the Romans and Local Population in the Eastern Danube Province

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The Lower Danube limes zone is one of the regions of Roman Empire described in the most detailed way. It is noteworthy that for this area of Moesia there is a great deal of credibility of the data in the historical sources, but also some essential lacks and inaccuracies exist.

It has become common practice for many soldiers, after completing their military service, to stay in the newly formed settlements, where many of them have started families. As veterans, they received land to cultivate and became a local permanently settled population. This practice spread mainly in the provinces of Upper and Lower Moesia, where the number of soldiers and veterans, respectively, was higher.

The basic historical sources on spiritual life of Thracians and the exchange between them and the Romans are the writings of the Greek and Roman authors, e.g. Herodotus, Plato, Strabo, the geographer Pomponius Mela, the Moesian-born Gothic historian Jordanes, the Neoplatonic philosopher Porphyry, who wrote about the Getic and Dacian divinity Zalmoxis, etc. In the last 20 years, the archaeological excavations on the Bulgarian territory provided the academic researchers with a lot of material on the subject. Some of the sites are Tatul, Belintash, Perperikon, Heraclea Sintica, Cybele's temples in the Laketown of Durankulak Lake and Balchik, Sborjanovo complex of the Thracian kings' tombs (in the ancient capital of *Getae Helis*, in the eastern part of Moesia), the Valley of Thracian Kings, etc.

Over the millennia, the Thracians created a complex cosmology and ritual practices. They had many gods, the cults of which were united in the Thracian Orphism and the Dionysian mysteries. Many of them were adopted by the Greeks and later by the Romans. The researcher Georgi Mikhailov published about 160 names of divinities of Thracians (1955–1956).

Described below, are some of the best-known:

The **Thracian Hero**, also known as the **Thracian Horseman**, was a central abstract figure in Thracian religion as protector of life and health of the people, the god of hunting, fertility, life and death, their main god – all-knowing and all-hearing. He was always depicted on a horse, usually slaying an object with a spear. Stone reliefs of the Thracian Horseman are exhibited in Bulgaria's museums originating from Thracian times, through the Roman period and into the middle ages. The Christian church succeeded in hiding the Thracian religious altars and Gods, but the cult and rituals still continued, some of them until today in many parts of the modern Bulgaria. In Christianity, The Thracian Horseman was represented as St. George, on a horse slaying a dragon. A lot of shrines and burials in Thrace, Hellas and Rome depict him. The cult of the Thracian Horseman was widespread in Roman times, as evidenced by the revival of the Thracian religion at that time – something unknown among other peoples under Roman rule.

For example, on many tombstones of Thracian soldiers of the Roman Army, stationed in Colchester, Britain, the Thracian Horseman is depicted.



The Thracian Rider was a demigod for ancient Thrace. In Greek and Latin inscriptions he is identified as "the hero" (*hērōs, heros, hērōn, heron, eron, etc.*). According to Dimiter Detschew, the name of the Thracian Horseman was probably related to the Thracian term for "hero," \*ierus, or \*iarus. In Roman iconography and inscriptions he was identified with Asklepios, Apollo, Dionysos, Silvanus, and other divinities. According to an inscription from the city of *Odessus/Varna* (Bulgaria), he was also known by the Thracian name of Darzalas. He carried the epithets *sōtēr* ("savior"), *iatros* ("healer"), and even *megas theos* ("great god"), as well.

The existing artifacts of the Thracian Hero are reliefs and statuettes in the context of rituals or funeral ceremonies. In the inscriptions, Greek and Latin epithets are often adapting the cult to specific heroes. The epithets are usually toponyms, names of tribes, or attributes of the horseman. Not much is known about the cult, which was a combination of Greek and Thracian beliefs, but it was definitely related to afterlife and healing.

**Cybele (Kibela, Cybila)** is another remarkable example of a Thracian goddess that has been adopted by Hellenes and Romans. In the Museum of Ancient Civilizations in Ankara, there is a huge statue of Kibela, found in the Hittites capital Hattusa in Anatolia with a text, which says: "The statue of the Goddess Kybele, The Mother Kibela – a protecting deity for Hittites" (also Hepat, The Sun Goddess of Arinna, Kibaba). Lydians call her Kibebe, Thracians Kibela. The Phrygians called the Mother Goddess Kybele, and worshipped her as their main deity, Mother of the Mountains and Mistress of the Land, Mother Nature". Greeks and Romans took the idea of Cybele as the Mother of the Gods. People were carving rock monuments and setting shrines and altars in her honor.

In Rome, Cybele became known as Magna Mater (Great Mother). The Roman state adopted and developed a particular form of her cult and recommended her as a key religious ally in Rome's second war against Carthage (218-201 BCE). Roman mythographers reinvented her as a Trojan goddess, and thus an ancestral goddess of the Roman people by way of the Trojan prince Aeneas.

Europe still remembers Cybele/Kibela. In Madrid, on the Plaza de Cibeles, there is a Fountain of Cybele (Spanish: Fuente de Cibeles, or simply, La Cibeles) is a neoclassical fountain. The sculptural group in its centre represents Cybele, the Phrygian earth and fertility deity. It has become one of the icons of the city. The fountain is the site where Real Madrid's supporters and players gather to celebrate the team's trophies as well as partakers of the successes of the Spain national football team. The statue of the goddess lost a hand in 1994 during a celebration of a victory of the Spanish national team, and again lost one on 21 September 2002.

The Fountain of Cybele has a replica, the Fuente de Cibeles, located in Mexico City and inaugurated in 1980. The fountain introduces the goddess Cybele as the Roman goddess of fertility, who wears a crown and carries a scepter.

There are a number of temples to the goddess' honour in Rome. The Temple of Cybele or the Temple of Magna Mater was one of Rome's most important temples. There is a statue in Formia in Lazio as well, etc.

The understanding is that cult of Cybele was formally brought to Rome during the Second Punic War (218-201 BCE). In Moesia, in the Durankulak Laketown, the Kibela's temple is the oldest one in the continental Europe. It dates back to the late bronze age (about 4<sup>th</sup> century BCE).

Kibela has been worshipped by the Hittites in Anatolia already for 3,000 years BCE. Scientists and researchers accept that she was adopted by the rest of the people from them. It was the most natural for the Thracians, who (according to Herodotus) lived along the southern coast of the Black Sea in today's Turkey during the same time, to worship Kibela as well and to pass on the cult and mysteries of Kibela to the other Thracians, living on the Balkans. There are even hypotheses that the Hittites are relatives to the Thracians, who lived west from the Bosphorus, as during the severe wars they had with Persians and Egypt they often asked the Phrygians and other Thracians for help.

**Orpheus**, a legendary person, known and admired all over the world for millenniums, a subject of the Greek mythology, and later of the Roman, but with a different background reality of his origin, philosophy and contribution to the world, which makes him one of the most mystique figures of antiquity.

There are many myths in classical mythology about his artistic performances but only a little is known about his cosmological doctrine on creation of the world (cosmogony) and his schools. Maybe because the devoted only were allowed to be part of his teaching, called Orphism, and to attend the mysteries. It was and is easier for the ordinary people, who were not initiated in the Orpheus's secrets, to better understand the musician and the singer Orpheus than the philosopher and the teacher.

Many ancient authors wrote about the man, who was preaching, "Help for the weak, solace for the suffering, hope for all" and "The world can be conquered by the lyre, not by the sword."

The French writer, philosopher and musicologist, Édouard Schuré stated, "In the Rodopi temple, in a cedar box, Orpheus kept numerous scrolls of papyrus with Egyptian characters, tablets in the Bessi people language and Phoenician scripts." Euripides talks about Orpheus' tablets in the tragedy about Alkestide. Plato, Pythagoras, and Heraclides wrote about his tablets as well. Orphic gold plates with Orphic symbols were discovered in various places from southern Italy to Crete. Xenophon wrote that the Kutalis Monastery in Palestine holds information that the Gospel was read in the Bessi people language. Plato wrote that priests have piles of Orpheus books. Virgil and Ovid call the singer Orpheus the Rhodopean. The great Hellenic philosopher Pythagoras, under the extreme influence of the Orpheus spiritual disciple, wrote, "The word of Orpheus is written on Thracian plates."

Orpheus was a real historical figure of a Thracian royal ancestry, born in the 13<sup>th</sup> century BCE, the king and the highest priest of the Thracian Bessi people, occupying the sacred Rodopi mountain and Thrace, he lived a generation before the Troy war and 500 years before the times of Homer. A thinker and a philosopher, an author of the preserved to this day poem *Argonautica Orphica* with 1384 verses, "Hymns of the Mysteries" – on the power of nature and the sacraments, "Ritaka" – magical songs about the healing properties of crystals and stones and "Magic botany" - about the healing properties of the Rodopi plants.

Orpheus was a religious reformer and enlightener of the divine soul, the genius of spiritual Thrace and Hellas. Orpheus was called 'theologian' by the ancient Hellenes. The Hellenic philosopher and historian Klisten wrote about Orpheus: "With his music and songs, Orpheus won the Hellenes, changed the hearts of the barbarians, and tamed the wild animals." His teaching was of a great importance in shaping the European culture, too. Orpheus was credited

with introducing fasting, chasing out epidemics, predicting the future and cleansing from sins. The singer with a magical voice treated not the souls of the sick, only, but also pointed the way to the divine to them. There was no other thinker and philosopher in that distant age that had been able to penetrate so deeply into the being and touch the endless fields of eternity. For this reason, many have followed in the footsteps of the great Thracian.

Prof. Alexander Fol wrote, “Thracians believed in the immortality of human intellectual energy. For the Hellenes, only the gods were immortal. In the cities of Hellas after the Mycenaean times and at the end of the second millennium BCE, Orphism became a literature and philosophical doctrine, while in Thrace it was practiced in oral folk rituals until the advent of Christianity. For the Hellenes, Orpheus was the singer, the cultural hero. While for the Thracians he was God. Orphism was a sign of the presence of God. Orphism for the Thracians was religiosity and hope, it was about the birth and death. The divine origin was called Dionysus by the Hellenes, or Sabazius by the Thracians. Orpheus was a child of the cosmos, who died and was born again. The wisdom here is: a man dies, but his songs, writings, art, etc., remain to sound, the knowledge remains, as an immortal energy.”

Herodotus wrote that the Thracians were immortalised because of their belief that they are constantly in the life-death-new birth cycle. The Thracian aristocrats were happy *daimons* (δαίμων: god, godlike) in their deaths. The *daimon*, according to the ancient Hellenes interpretation, was an intellectual energy that lies between man and god. When interaction takes place, he was a god. That is why the best known representatives of the Thracian happy kings and priests – Orpheus and Zalmoxis, were believed to be gods. Academics state, that there is a distinction between Greek Orphism, being the religion that the Greeks wrote down in text, inspired by the oral traditions of Thrace and the Thracian Orphism.

In the recent decades, the Orpheus’ doctrine about life and death became in focus due to the Orpheus tablet, or amulet.

The publication of the National Geographic Traveler magazine “50 Tours of a Lifetime 2012” promoting the tablet became sensational, although many historians and experts found it inaccurate and misinterpreting historical facts. The tablet, on which Orpheus is crucified was published. The authors ask whether this was a Christ’s prototype and mark the beginning of Christianity? Belief in the resurrection and the immortality of the soul were considered the basic principles of Orphism. There are certain researchers who argue that this was the reason why the Thracians accepted Jesus relatively easily. It was because his teachings were very close to Orphism. “Help for the weak, solace for the suffering, hope for all”, Orpheus preached. An interesting detail is that early Christians called the Savior the Second Orpheus. They were both doomed to martyrdom, but overcome the bodily and merged with eternity.

Some of the other deities and gods of the Thracians, who influenced the Hellenes and the Roman spiritual life, are mentioned in the following. In most of the cases, they were given different names and characters, adapted to contemporary social and political environments:

**Axiocersus:** one of the Kabirs, identified with Hades (a Pelasgian or Phrygian origin).

**Atis** (Ate, Ati): Thracian father of the gods, Cybele (Kibela, Kebap, etc.) was his mother and mistress.

**Bendis:** goddess of the wild, of hunting and of youth initiation.

**Bacchus** (Bakx, Dionysos Zagreus, the Divine Prince of the Thracians, also called Sabazios): god of wine, incarnation, fertility, religious ecstasy, learning through mysteries, festivity and theatre.

**Sabazios:** Thracian-Phrygian god-healer, god of fertility and agriculture, identified with Bacchus and Dionysos.

**Semela:** goddess of the earth, plants and fertility.

**Zagreus:** a chthonic cosmic god worshiped by the Orphics, the “First Dionysos”. Among the Thracians he was the sun god, the son of Bendida.

**Zamolxis:** a figure of legend or of history, worshiped by the *Getae* and the *Dacians*, the northernmost Thracian peoples of the ancient world. Associated both with priesthood and with kingship, he was divinized and became the object of a widespread cult among both northern and southern Thracian peoples.

**Zbelsurd:** a thunder god depicted holding lightning in his raised right hand, and to his right is an eagle with outstretched wings.

The worldview and the spirituality of the Thracians were strongly influenced by the Roman culture in *Moesia*. The evolution and mutual penetration are excellently represented by the burial practices in the mound tombs.

In the pre-Roman period, Thracians build solid built burial facilities with rich burial inventory, such as bronze and glass vessels, gold and silver jewelry and other valuables. In the Roman period, in addition to the cremation of the dead, simple mound burials became characteristic, under the influence of the Roman ethnic component. In the 1<sup>st</sup> century CE, cremation was mainly practiced. In the 2<sup>nd</sup> century CE, funeral burials became more and more common. In the 3<sup>rd</sup> century CE, the two types of funeral rituals were equally common.

Thracian tombs and temples are the only almost completely preserved representatives of the monumental cult architecture from Antiquity, which mirror the history of the Roman and Byzantine empires. On the territory of Bulgaria there are over 60,000 mound tombs, of which only about 1,000 have been studied. Similar mounds and tombs have also been found on the Northern Black Sea coast, near the Caucasus, in Asia Minor and Central Asia. However, the largest concentration of the mound tombs is in Bulgaria.

A notable example of the mutual penetration of the Roman and Thracian culture and spirituality is the unique Roman tomb with frescoes in *Durostorum/Silistra*. It is among the most emblematic symbols of the ancient civilisation in *Moesia*. The tomb is a national monument of culture.

Its significance as a cultural and historical monument and its unique feature are the late Roman architecture and rich frescoes. The tomb is a single-chamber and rectangular vaulted building measuring 3.30 x 2.60 2.30 meters. The entire interior is covered with fully preserved frescoes depicting human and animal figures, as well as hunting and family scenes. The paintings bear

the marks of the era of the Roman Emperor Constantine. It is one of the best preserved tombs in the Balkans from the beginning of the 4<sup>th</sup> century CE.

Durostorum was one of the most significant cities in the Roman Empire. The first written record on it is the order of the Roman emperor Trajan from 106 for the transfer of the *legio XI Claudia* from Pannonia to *Durostorum*. The legion was a strike force against the enemies of the empire coming from the north across the Danube. The tomb is located near the antique necropolis of Durostorum.

The *legio XI Claudia* was the most important military unit of the Roman Empire on the lower Danube. It was stationed in *Durostorum* from 106 to the 6<sup>th</sup> century CE without interruption.

In the 1960s, just a hundred meters west of the tomb, a tomb of a Roman general was discovered, decorated with gold jewelry, a scepter, a chariot and swords covered with precious stones. And in the 1970s, a *martyrium* (mausoleum) of three of the twelve early Christian martyrs of *Durostorum* was discovered to the south of the tomb.

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## 5. Research History

### 5.1. Germany

*Boris Dreyer, Friedrich-Alexander University Erlangen-Nürnberg (Erlangen, Germany)*

The interest in the Roman limes dates back to the time of humanism in Germany, i.e. to the time when, through the rediscovery of the writings of antiquity (and in particular the work *Germania* of Tacitus), those inhabitants of the Holy Roman Empire of the German Nation north of the Alps rediscovered their own supposedly “primeval Germanic” history, which could be distinguished from the hated heirs of Roman tradition, whose bearers even overran the Roman Empire. The first representative who described the supposed Roman Limes at a Landwehr in Nassenfels in the district of Eichstätt as part of the “Bayrisch Cronik” and in a work published in Latin until 1533, “*Annales ducum Boiariae*”, also in its further course (although wrongly dated) was Johannes Turmair (1477-1549), called Aventin. In the 17<sup>th</sup> and 18<sup>th</sup> century, research began again on a local scale. From the northernmost vertex of the Raetian Limes in Gunzenhausen, the priest Christoph Wagemann had quite correctly gathered from the wall there that the Limes was the result of a long-term development. According to general opinion, the limes research really started with Christian Ernst Hanßelmann. With his investigations the gap between the Upper Germanic and Raetian Limes could be closed. He identified and dated several construction stages of this limes section, which he was the first to understand as a whole, ultimately to a period between Augustus at the beginning of the 1<sup>st</sup> century and Maximian at the beginning of the 3<sup>rd</sup> century. The contribution of Döderlein, a school rector from Weissenburg, as late as the first half of the 18<sup>th</sup> century, was that he was the first to walk down the middle section of the Limes for his first Latin, then German Limes monograph. The local starting point of interest is also evident in the report by Abbot Werner of Monastery Weltenburg near Kehlheim, who reports on the eastern beginning of the Raetian Wall, as well as by Professor Buchner of Regensburg, who already lived until the 19<sup>th</sup> century and published his “*Reise auf der Teufels-Mauer*” (“Journey on the Devil’s Wall”) in 1818, and by the Eichstätt town priest Dr. Mayer, who published his “*Genaue Beschreibung der unter dem Namen der Teufelsmauer bekannten römischen Landmarkung*” (“Exact description of the Roman landmark known as the Devil’s Wall”) until 1837. With him, the dating of the Upper Germanic and Raetian Limes to the age of Hadrian was consolidated as the end point of a multi-stage expansion.

The historical interest in the limes continued to grow during the 19<sup>th</sup> century, and this is also reflected in the creation of historical associations and the protective regulations imposed by the state. It was also mapped in detail for the first time. But it was not until the unification of all the German states into an empire in 1871 that a supra-regional effort became possible, particularly under the leadership of the Reichslimeskommission (Imperial Limes Commission), which was largely inspired by Theodor Mommsen. In a total of 15 volumes of “*Der obergermanisch-rätische Limes des Römerreiches (ORL)*” (“The Upper German-Raetian Limes of the Roman Empire”), the old research and new excavations were published until 1939, when the commission was dissolved.



During this time the ORL was divided into stretches that are still relevant today: The Upper Germanic Limes comprised the stretches 1-10 (up to the Odenwald Limes), the stretches 11-12 the Baden-Württemberg part and the stretches 13-15 the Bavarian part of the Raetian Limes. In these stretches the guard posts (Route 15, Tower 1 = GP 15/1), the limes towers, were mapped individually. Voluntary excavators, route commissioners, were appointed for the stretches.

Until 1939, the Imperial Limes Commission was mainly responsible for the limes of the last expansion phase, while the Romano-Germanic Commission in Frankfurt, the Late Roman Commission of the Bavarian Academy in Munich and the branch offices of the Bavarian State Office for Monument Protection were responsible for the preliminary stages of the Upper Germanic-Raetian Limes from the Tiberian-Claudian period as well as for the retreat stage on the Danube-Ille-Rhine line. The district archaeologists of Kehlheim and Deggendorf and the city archaeologists of Straubing and Passau worked on the eastern sections of the “wet limes” up to the Austrian border. Especially, but not only with the emergence of new scientifically supported investigation methods in aerial archaeology and geophysics, supraregional the cooperation with powerful research institutions was crucial. These could – and still can – be found at universities such as Frankfurt, Würzburg, Erlangen-Nuremberg, Munich, Passau, often in cooperation with the institutes of ancient history there.

In preparation of the declaration of the Upper Germanic-Raetian Limes as a World Heritage Site in 2005, the German Limes Commission was established to coordinate research on the Upper Germanic-Raetian Limes. All these efforts, as well as the attempts to include the “wet border” of the province Germania Inferior and the river border along the Danube in the provinces of Raetia and east of it up to the Black Sea in the Unesco World Heritage List, serve to protect the already much attacked remains of the Roman heritage along these borders from the North Sea to the mouth of the Danube.

For the same aim, in addition to communicating the World Heritage theme, associations of non-governmental archaeological museums in Bavaria have been set up which develop and coordinate visitor-oriented mediation strategies for the Danube Limes.

Just as research is clearly determined by the political framework conditions, the research perspectives and questions posed at the limes are also determined by the prevailing political conditions, as David J. Breeze recently demonstrated (2018). While research in the era of nation-states in Europe tended to recognise the dividing, linear aspect of the Roman border, research in the 1990s increasingly emphasised on the communicative function of the limes (e.g. S. von Schnurbein 1992), both along the course of rivers and along the advanced fortifications on land. This perspective has rather strengthened over the last 15 years. It is not denied that it was precisely in the intensified phases of the conflict from the end of the 2<sup>nd</sup> century onwards that the delimiting function gained the upper hand. But it is also recognised that the limes, both over land and along rivers, also fulfilled a function of communication control and – as far as rivers are concerned – of faster communication and better transport. Even along the borders over land, specially constructed country roads were not only built for the relocation of troops, but also for communication and transport purposes. Research on the limes in its state since Antoninus Pius has become so fragmented in the meantime that the discussion is going on as to whether individually identifiable expansion and renewal measures are due to a general

change in policy or military strategy or whether they are only attributable to local necessities for repair. Here, future excavations, the application of new techniques (e.g. Airborne Laserscan-DGM-data) and interpretation activities will provide further information. Many things remains unclear, but it is apparent that research on the eimes encompasses much more than the investigation of forts, walls, towers and palisades. This is also shown by Stefan Pircher's excellent analysis of the Raetian and Noric Danube Limes (unpublished master's thesis), which reveals shows the often still deficient state of research on Roman frontier, military and civil buildings. There is still a lot to be done in this field.

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## 5.2. Austria

*Raffaella Woller, Danube University Krems (Krems, Austria)*

In Austria the Roman heritage has always been of great importance. The records of the monk Eugippius, who wrote the vita of Saint Severin at the beginning of the 6<sup>th</sup> century and who belonged to the monastery of *Favianis*, have been known ever since and inform about the monumental and significant Roman remains and about *Favianis* as the ecclesiastical center with the Order of Severin. The importance attached to the Roman cultural heritage since the Middle Ages can be recognised by the fact that various historical people referred to this heritage and tried to connect it with Vienna. One of them was Otto von Freising, who lived in the 12<sup>th</sup> century and recorded the deeds of Frederick I Barbarossa. In this factual report he tries to connect *Favianis* with the Babenberg royal seat in Vienna in order to increase the city's ecclesiastical and political importance. Today we know that the Roman *Favianis* is a predecessor of today's Mautern, which lies about 80 kilometers from Vienna up the Danube. This and similar reports show how important the Roman heritage has been ever since in Austrian history.

Large parts of the Roman substance were lost during the boom of the European cities in the 11<sup>th</sup> to 13<sup>th</sup> centuries and the associated stone robbery to purchase building materials. In this context, it is noticeable that the state of preservation of the Roman buildings in the Austrian Danube region diverges to a great extent. While in Lower Austria (the eastern part of the Austrian Danube region) upright Roman ruins have been preserved, those in Upper Austria (the western part of the Austrian Danube region) served as quarries in many cases and were massively exploited. In particular, remains of the massive fortifications of late antiquity were very clearly visible until modern times and were often misappropriated, e.g. the so-called Roman Tower of Tulln, a horseshoe-shaped tower flanking the Roman cavalry fort *Comagena* which became a municipal armory and salt warehouse.

At the end of the 18<sup>th</sup> century, so-called ruin romanticism emerged in England, a fashion that was also reflected in Austria to a certain point. For example, artificial ruins were built in the Schönbrunn Palace Park which in turn made Roman antiquity popular and made it a new subject of poetry, painting and other arts.

With the destruction and loss of cultural assets during the French and Industrial Revolution, a new awareness of the dangers for archaeological and historical objects and buildings developed and with it, for the first time, the intention to preserve and protect them. The cultural and historical value of these objects which were evidence of the national heritage was recognised, and thus, according to the political tenor of the 19<sup>th</sup> century, they stood for the identity of the respective nation. Archaeological objects were exhibited in museums for the first time in the early 19<sup>th</sup> century.

The first, although unsystematic, investigations on the Austrian Danube Limes included the discovery and drawing documentation of a mosaic floor in the civil town of *Lauriacum/Enns* in 1765, as well as the research work of the Benedictine Father Schaukegl from Seitenstetten, who was responsible for the recognition of the fortification of *Ad Muros/Mauer* on the Url as a Roman fort and for its documentary recording.

Since the 19<sup>th</sup> century, actual research work has been developing around the Roman legacies, as well as the material legacies of other epochs, in Austria. Even if a certain part of the population was now well aware of the scientific and identity-creating importance of the archaeological objects, the focus was still primarily on researching the remains and less on preserving them.

However, since there were no regulations under monument law at this early time, anyone with the necessary financial resources could carry out archaeological excavations. The pre-emptive right for the imperial collections existed since 1812 and was replaced by a new regulation in 1846, which said that every find was to be divided equally between the finder and the landowner.

The “father of Austrian archeology” Joseph Gaisberger carried out the first systematic archaeological excavation on the Austrian Danube Limes in the area of Fort Schlögen during the years from 1838 to 1840. In the years of 1851 and 1852 excavations followed in the legionary camp of Lauriacum/Enns. In the decades that followed, various associations and museums were founded in order to research, preserve and present Roman legacies. In the last third of the 19<sup>th</sup> century, large excavations were finally conducted on the limes and in 1897 the Austrian Academy of Sciences was founded based on the model of the German Limes Commission. Until the outbreak of the First World War, the academy together with the Austrian Archaeological Institute, founded in 1898, carried out extensive archaeological research activities mainly in the legionary camps of *Lauriacum/Enns* and *Carnuntum/Bad Deutsch-Altenburg – Petronell*.

Since the beginning of the 20<sup>th</sup> century, the archaeological monument preservation had also developed in Austria and people no longer detached the monuments out of their original context, but restored them on-site and preserving them in their original condition as well as possible. After the First World War, however, due to the lack of funds Austria was not able to carry out archaeological research activities with modern methods, which made it possible to swiftly examine large areas. In 1923, the Austrian Monument Protection Act was enacted.

When Adolf Hitler came to power in Germany in 1933, archaeological research increased due to ideological reasons. The National Socialists understood the Germanic past as part of their ideology, which they wanted to highlight and legitimise through prehistoric research. In this nationalistic way of thinking, they saw themselves as descendants of the German people and the Germans’ legacies as evidence of an early Aryan period. This made prehistory and early history a crucial science and an important tool for the National Socialist propaganda.

In the course of the construction of large-scale facilities shortly before the outbreak of Second World War (highways, factories, etc.) various large-scale archaeological landscapes were discovered. Therefore, the Nazis required new methods of monument preservation in order to document these areas quickly and according to appropriate standards, in case they could not be saved from destruction. With this, they laid the basis for the later modern archeology and monument preservation. In addition to aerial archeology, new scientific, conservation and documentation methods were implemented.

During the reconstruction work after the Second World War, numerous important discoveries were made in *Lentia/Linz* and *Vindobona/Vienna* and in the course of increasing settlement

extensions further knowledge about *Lauriacum/Enns* and *Carnuntum/Bad Deutsch-Altenburg* – Petronell could be gained.

The increasing interest in archaeological monuments, the growing awareness of the past as well as the sites' attractiveness for visitors finally made it possible to conserve and protect the excavated limes monuments through structural measures and thus make them accessible to interested parties. The essential elements of today's archaeological monument landscape along the Roman Danube Limes are the preserved remains on-site and their harmonious integration into the modern landscape and urban environment.

### 5.2.1. Bibliography

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### 5.3. Croatia

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Danube Limes in Croatia consists of a number of individual sites located along a stretch of 138 km from the fort of *Ad Militare*/Batina close to the Hungarian border, to the fort of *Cuccium*/Ilok close to the Serbian border. Up to this day 23 registered archaeological sites are recognised as part of Danube limes system with many more possible sites that might raise this number in the future. The study of Danube region should begin with the Roman maps, mainly *Tabula Peutingeriana*, *Itinerarium Antonini Augusti et Hierosolymitanum*, *Ptolomeus Geographus*, *Geographus Ravennas* and *Notitia dignitatum* which mark some of the Roman places in Croatia.

Roman Danube Limes sparked the imagination of many polymaths in the 16<sup>th</sup> and 17<sup>th</sup> century who described it, speculated about the Roman names of the sites and studied milestones and distances between the sites themselves. Next centuries brought with them first archaeological excavations, more sites surveyed and identified along the Danube with its peak in the middle of the 20<sup>th</sup> century when first systematic archeological campaigns were carried out. Unfortunately, the last decade of the 20<sup>th</sup> century was devoid of any research in this region but archaeological excavations were restarted again in early 2000s and from then they are continued until today. Excavations of the Roman Danube Limes today have changed from speculations and the collecting of chance finds to systematic excavations of the sites and modern approaches with non-invasive methods such as geophysical survey and LIDAR. With a growing interest and a flagship project of UNESCO nomination of the Roman Danube Limes spearheaded by the Croatian Ministry of Culture, the Institute of Archaeology and Croatian Academy of Science and Arts the new period of research on Roman Danube Limes in Croatia is at its start.

The earliest accounts of documenting the Roman Danube Limes can be traced back to the 16<sup>th</sup> century. The first historian who provided the account of the Roman ruins in Mursa/Osijek was István Brodarics (Stjepan Brodarić), a Croatian-Hungarian bishop, diplomat, and historian most famous for his account of the 1526 battle of Mohács. He delivers known locations of the Roman city of Mursa in his work titled “*Narratio de proelio quo ad Mohatzium anno 1526*”. Two other early historians interested in Roman settlements in the eastern part of nowadays Croatia were Wolfgang Lazius and Abraham Ortelius. Wolfgang Lazius, an Austrian historian and cartographer, wrote about *Mursa/Osijek* and *Teutoburgium*/Dalj in his book “*Commentariorum Reipublicae Romanae illius, in exterisprovinciis, bello acquisitis, constitutae, libri XII*” in 1551. Abraham Ortelius, a Barbantian cartographer, and geographer, mentioned the Roman sites of Mursella, Ancianae, Hiulca palis, Mursa, and Cornacum on his painted chalcographic plate titled “*Pannoniae et Illyrici Veteris Tabula*”. Commissioned to lead Habsburg-Ottoman demarcation commission after the Treaty of Karlowitz, the Italian naturalist count Luigi Ferdinando Marsigli marked a few Roman remains during his surveys along the Danube in present-day Croatia. Most notable are the Roman road systems leading out of *Mursa/Osijek* and the *agger longissimus* between *Mursa/Osijek* and present-day Darda. He also sketched Roman ruins in *Cibalae*/Vinkovci as well as *Cuccium*/Ilok. Several notes regarding Roman sites in the eastern part of modern-day Croatia such as *Mursa*, *Mursella*, *Tutoburgium*, *Cornacum*, and *Cuccium* can be found in the work of a Jesuit monk and historian named Samuel Timon from 1733, titled *Imago “Antiquae Hungariae”*. While two more extensive accounts on Roman remains of Roman Danube Limes were done by an Austrian

Friedrich Wilhelm von Taube and named “Historische und geographische Beschreibung des Königreichs Slawonien, und des Herzogthums Syrmien” and a Hungarian István Schoenwisner named “Commentarius geographicus In Romanorum iter per Pannoniae ripam” in 1778 and 1780 respectively. A first thorough analysis of sites, their names as witnessed on various epigraphic sources were done towards the end of the 18<sup>th</sup> century by the Croatian Franciscan monk and polymath Matija Petar Katančić. In two of his books, “Specimen philologiae et geographiae Pannoniorum” and “Istri adcolarum geographia vetus” he analyses ancient place names from various sources. His other works include “Orbis Antiquus Ex Tabula Itineraria Quae Theodosii Imp. Et Peutingeri Audit Ad Systema Geographiae Redactus Et Commentario Illustratus”, which deal with the *Tabula Peutingeriana* as a source for Roman Danube Limes in present-day Croatia, while his “Disertatio de columna miliaria and Eszekum reperta” focused on the interpretation of Roman milestones and their distances compared to contemporary ones. The plan of *Mursa/Osijek* is also accredited to Matija Petar Katančić. In the last 20 years of the 18<sup>th</sup> century, several cartographers worked in Baranja. They included several of the Roman ruins in their maps, such as Dost’s “Országos Széchényi Könyvtár” map and Samuel Pávai’s map of Kopačevo and Bilje. In 1804, Joseph Koller, together with Hungarian professors, and clergymen drew the detailed map of Osijek and included the sites of the ancient Mursa, the Roman bridge over Drava river and roads leading in and out of ancient Mursa, all drawn with dotted lines over a contemporary plan of the city. In 1845 Mihály Haas published a publication, titled “Baranya földirati, statistikai és történeti tekintetben” in which he summarised and cataloged all of the known sites and finds along Croatian part of Roman Danube Limes. Sites that he mentions are as follows: Osijek, Zmajevac, Čeminac, Darda, Kneževi Vinogradi, Baranjin Vrh, and Batina. One of the founding fathers of Hungarian archaeology, Floris Rómer, surveyed Batina and Zmajevac in 1866 and concluded that both sites could be interpreted as Roman forts. The Croatian historian Ivan Kukuljevič compiled the study of Roman roads and their mentions on milestones in 1873 at the same time, and the Hungarian archaeologist Jozsef Hampel described a grave from Batina in 1876, now in Nemzeti Múzeum in Budapest.

By the end of the 19<sup>th</sup> century, the National Museum in Zagreb (today Archeological Museum in Zagreb) established a museum commissioner network. It consisted mostly of local intellectuals such as priests and school teachers who would periodically send their reports of finds they encountered at their place of residence. From that moment onwards, first finds from Slavonija and Baranja regions of modern-day Croatia started finding their way to the Museum in Zagreb. In 1877 the Museum of Osijek was founded. Towards the end of the 19<sup>th</sup> century, three famous archaeologists connected to the University of Vienna, Wilhelm Kubitschek, Emmanuel Loewy, and Josip Brunšmid, surveyed and collected finds from Dalj, Osijek, Vukovar, Ilok, Sotin, Aljmaš, and Erdut and published their work. Later on, Josip Brunšmid became the director of the National Museum in Zagreb. His diaries provided insight into what modern prospecting and excavations are concluding on the existence of a watchtower network along the Roman Danube Limes. Ferenc Várady published a book in 1897 titled “Baranya múltja és jelenje” describing all of the known finds from what was at the time one and today are now Hungarian and Croatia Baranya/Baranja regions.

The end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century is a landmark in research along Roman Danube Limes in Croatia. It marks a shift from the speculative phase to an early scientific phase of archaeological research. At the start of this period work of Viktor Hoffiller, from 1911, documenting and publishing sites of the Roman necropoles and chance finds from Sotin and Dalj continues the new scientific tradition of his predecessor Josip Brunšmid. Viktor Hoffiller is

credited for collecting and curating finds from the Croatian part of Roman Danube Limes for the entire first half of the 20<sup>th</sup> century. During Second World War, in 1942 the German archaeologist Robert Rudolf Schmidt excavated and documented remains of the Roman building at the site of Sarvaš-Gradac. In 1943, the Hungarian archaeologists János Dombay and Tibor Nagy conducted a field survey in Batina and Kneževi Vinogradi and excavated a Roman necropolis in Zmajevac. After the end of the war, the Croatian archaeologist Danica Pinterović surveyed Dalj and Batina and carried out numerous small-scale rescue excavations. Together with colleagues from Zagreb and Vinkovci, she continued the work of her predecessors Brunšmid and Hoffiller. Her works mainly focused on ancient *Mursa*, the Roman remains of the present-day city of Osijek, but her focus gradually shifted towards the entire Roman Danube Limes between sites of *Ad Militare*/Batina and *Cuccium*/Ilok. She surveyed and excavated the sites of *Ad Novas*/Zmajevac, Bansko Brdo, Jasenovac, *Albanum*/Lug, *Ad Labores*/Kopačevo, Nemetin, Aljmaš, Erdut, *Teutoburgio*/Dalj, Borovo, Vukovar, *Cornacum*/Sotin, Opatovac, and Mohovo.

The importance of research on the Roman Danube Limes in entire Yugoslavia at the time was emphasised by the “Quinti congress internationali limitis romani studiosum” held in Celje, Ptuj, Varaždinske Toplice, Zagreb, Osijek, Novi Sad, Sremska Mitrovica, and Beograd. The main organiser of the congress was the Yugoslavian Academy of Science and Arts. Right after the congress in 1961, the Academy established the Interacademic Limes Research Committee, and it is no wonder that Danica Pinterović was at the head of the Croatian branch from 1961 up until 1974. The establishment of the said committee was an attempt to catch up with other central European countries regarding research along the Roman Danube Limes. In the early 1970s, Danica Pinterović led the first research campaign at the site of *Ad Militare*/Batina on behalf of the Museum of Slavonija in Osijek along with the team of the Smithsonian Institute from Washington, which is considered a first systematic excavation of a site related to Roman Danube Limes in Croatia. The campaign lasted for three years and unearthed the foundations of the Roman castrum. After this intensive archaeological campaign, several small-scale research excavations and development led excavations, continued on the site of *Ad Militare*/Batina. In 1978 Danica Pinterović retired; her map published in the same year marks the end of her career and continues to be the still relevant map of the Croatian part of Roman Danube Limes. Two Croatian archaeologists marked the last 20 years of the 20th century, and they are Kornelija Minichreiter and Mirko Bulat. From 1972 until 1992 Kornelija Minichreiter worked as an archaeologist in the Conservation Department and is responsible for Osijek-Baranja. She led numerous small-scale excavations along the Danube and continuously published her findings. Mirko Bulat succeeded Danice Pinterović as a curator in the Archeological Museum Osijek where he worked from 1956 until 1991.

Furthermore, he primarily focused on researching the Roman Danube Limes. His field surveys and excavations in *Mursa*/Osijek, *Ad Militare*/Batina, Skela, *Teutoburgio*/Dalj, Kopačevo, Sladojevci, and many others brought to light many new features of the mentioned sites. Of course, the mentioned researchers are not the only ones who excavated and focused their research on Roman Danube Limes but are by far the most prominent ones. Other archaeologists that have to be mentioned here and whose work at some point included the research of the Limes are as follows: Zdenko Vinski, Antun Dorn, Zvonko Bojčić, and Ivica Degmedžić. In the early 1990s, excavation and research were halted because of the Croatian War for Independence, which lasted from 1991 to 1995 and was most intensive primarily in the Slavonija, Baranja, and Srijem regions. After the war, the first excavation was conducted in Zmajevac in 1998 by Jasna Šimić from the Museum of Slavonia in Osijek when due to a family



house's renovation, the Roman necropolis already excavated in 1943 was rediscovered. Excavations continued in 1999 under Slavica Filipović from the Museum of Slavonia in Osijek, and the site was registered as Mocsolás.

The aforementioned site of Zmajevac and associated Mocsolás necropolis continued to be excavated from 1999 until 2008 and the last excavation season was undertaken in 2012. Along with this systematic research-driven excavation, numerous developments have been carried out in Zmajevac during the last 20 years, revealing the Roman settlement there. In 2001, the Institute of Archaeology started excavations on the northern parameter of Odescalchi castle in Ilok where a Roman grave was found. Excavations were led by Željko Tomičić from the Institute of Archaeology of Zagreb and lasted for three years on this location and various other ones until 2007, revealing numerous finds of the first half of the first millennium. The location of the eastern necropolis of the ancient *Cuccium*/Ilok can be found on the site of Odescalchi castle in Ilok. In his doctoral dissertation defended in 2003, Mato Ilkić catalogued and documented artefacts dated to the Roman period in eastern Slavonia which he collected while surveying around Sotin. Intensive surveys and test excavations have been carried out in Croatian part of Srijem as well as Baranja by the Institute of Archaeology including sites such as Ilok, Sotin, Šarengrad, Borovo, Batina, Zmajevac and many others. The work on the mentioned research has been carried out by Marko Dizdar and Daria Ložnjak Dizdar from the Institute of Archaeology. Many new sites of the Roman road infrastructure, as well as the watchtower network, have been documented in these systematic surveys. Along with Mato Ilkić, intensive surveys and the mapping of the finds from Sotin has been carried out from 2008 and has been continued until today by Daria Ložnjak Dizdar, Marko Dizdar and Mirela Hutinec. The site of castrum *Cornacum*/Sotin has clearly been identified along with three separate necropoles and a Roman marching camp. In 2004 on incentive by Mirjana Sanader from the Department of Archeology of the Faculty of Humanities and Social Sciences in Zagreb, a full spectrum imaging of all of the Roman Danube Limes sites has been undertaken. The Museum of Slavonia in Osijek started with a series of intensive field surveys and test excavations on the site of Batina in the scope of the Croatian Ministry of Culture Programme "Archeological Heritage of Baranja" under Tomislav Hršak along with the Institute of Archaeology and the Croatian Academy of Science and Arts. The work started in 2008, and after the identification of a second *castrum*, it shifted from a traditional excavation to remote sensing and prospection. Two campaigns were undertaken in 2010 and 2012, and until today Batina remains the only site where a clear identification of all buildings within one *castrum* is made. Several necropoles and possible marching camps were found in Batina alongside numerous finds from older periods of the Bronze and Iron Age. In 2008, an underwater excavation and a survey of the Roman bridge over Drava river in Osijek have been carried out by Kruno Zubčić of the Department of Underwater Archaeology of the Croatian Conservation Institute. In 2012 a monograph by Branka Migotti of the Croatian Academy of Science and Arts, titled "The Archaeology of Roman Southern Pannonia" has been published and as such has compiled the current state of research of the Roman Danube Limes in Croatia and charted the course of the further research to come. Mirjana Sanader and her team from the Department of Archaeology of the Faculty of Humanities and Social Sciences started the project "Between the Danube and the Mediterranean: Exploring the role of Roman military in the mobility of people and goods in Croatia during the Roman Era" which lasted from 2014 until 2018.

Since 2001 Croatia has contributed to the nomination of the Frontiers of the Roman Empire as World Heritage Site. At the UNESCO World Heritage Board meeting in Durban in 2005, the Frontiers of the Roman Empire was officially declared a serial, transnational site with the

Croatian part of the limes as integral part. Today, Croatia is part of Danube Limes as “Eastern Sector” together with Serbia, Romania and Bulgaria. The countries of the “Eastern Sector” have to prepare a joint nomination and dossier that will eventually be united into a cluster with the common name “Frontiers of the Roman Empire”. At this very moment the project of the UNESCO World Heritage Site nomination of the Roman Danube Limes is spearheaded by the Croatian Ministry of Culture in collaboration with all the institutions that are currently working on the Danube Limes in Croatia, which are the Institute of Archaeology, the Croatian Academy of Science and Arts, the Faculty of Social Sciences and Humanities, the Archaeological Museum in Osijek, the Municipal Museum in Vukovar and the Municipal Museum in Ilok.

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## 5.4. Serbia

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Research on the Roman frontiers begun in Serbia rather late. Excavations were rare and relatively unbalanced both through time and geography. The only systematic projects were the explorations on *Singidunum*, *Viminacium* and *Diana* that included long-term excavations, conservation, and presentation segments.

### 5.4.1. Srem region or Lower Pannonian Limes

Major part of the archaeological research in Srem was conducted while it was part of the Austro-Hungarian Empire. Unfortunately, nothing was ever presented, and these results are not available today. Modern excavations focus on *Sirmium*/Sremska Mitrovica, its hinterland, roads and aqueducts. The defence line was barely touched. Very few sites in Pannonia have clear legal status as cultural heritage. New motivation in connection with the ongoing UNESCO nomination gave new strength to finish what was started so many decades ago.

During the tetrarchy the forts in *Pannonia Inferior* flourished, although without legions as the backbone of the defence system in the early centuries. The rich hinterland in Srem between the Sava and Danube, with *Sirmium* as one the tetrarchic capitals of the Roman empire brought the limes of the province *Pannonia Secunda* in the very focus of the researchers. The only units explicitly mentioned by name in Flavius Vegetius Renatus' *De re militari*, also known as *Epitoma rei militaris* ("Concerning Military Matters"), were *Ioviani* and *Herculiani* or the *legio V Iovia* and *legio VI Herculia*. Both units were famous for using *martioarbuli* or *plumbatae* – specific ranged weapons. They were often treated as special forces corps with main function to protect *Sirmium* as the capital. The presence of the *Classis Flavia Pannonica* is notable on many sites.

Plans for the presentation have been initiated only recently after the sites had become part of Serbia's UNESCO Tentative List. All sites have good potential for presentation if the current problems are overcome. The major problem on the majority of the sites remains private ownership that should be carefully analysed. The bridgehead at *castellum Onagrinum* at Begeč is in the initial phases. The sites of *Acumincum*/Stari Slankamen and *Rittium*/Surduk are to be explored by geophysical surveys and planned to be expanded as archaeological parks. Sites in public areas (*Ad Herculem*/Čortanovci and *Cusum*/Petrovaradin) are being already prepared for different types of presentation as they have no issues with ownership and are located in highly protected zones.

*Taurunum*/Zemun, one of the most important bases for the river fleet, lies under the modern urban center. Only the section of the Roman cemetery will be marked and described on info boards as there are no other ways for presentation at the moment.

### 5.4.2. Central Serbia (Moesian frontier)

We still lack research along the frontier excluding capital sites (*Singidunum*, *Margum*, *Viminacium*). Several smaller sites had few trenches excavated to confirm their stratigraphy but the results of these researches are more or less not adequately published.

*Singidunum*/Belgrade is the second largest site and legionary fortress and presented partially in the modern urban environment. Small-scale visible remains are visible in Kalemegdan park and within the ramparts of later fortifications. The best-presented section is located in the Roman hall of the Belgrade city library.

The longest scientific excavation project in Serbia is located in *Viminacium*, capital city and legionary fortress. The excavations begun in 1882, and continued in 1902/1903 with large decades long pauses after until 1970s. From 1973 systematic or protective excavations ran almost continuously until the present day. This resulted in more than 14,000 excavated graves, entire urban sections covered by geophysical surveys and multiple monumental buildings presented within ancient city and legionary fortress. Today it is the largest and best-developed Archaeological Park in Serbia on the Limes with tradition since 2006. At the moment this is still the largest active multidisciplinary project employing more than 30 experts from different scientific branches, and with its own basic sources of financing. All facilities for mass tourist visits and developed tourist infrastructure exist with plans for further systematic development. Newly discovered ships in the area of the riverbed of 1600 ago (today the banks of Danube are 3.5 km away from the site, at least 2 km further than originally) bring new possibilities for a Roman navigation museum on-site. Several events already have a long tradition and are organised annually.

The auxiliary forts and Roman towns between *Singidunum* and *Viminacium* are being surveyed and in process of posing legal protection (Ad Octavum/Višnjica, Castra Tricornia/Ritopek, Aureus Mons/Seone, Margum/Dubravica).

#### 5.4.3. *Projects Djerdap I and II*

Djerdap or the Iron Gates gorge is one of the most beautiful parts of the entire Roman frontier regions. It includes the deepest and narrowest points of the Danube river and is the largest and longest composite gorge in Europe, a National Park in Serbia and newly internationally recognised geopark. Most of Roman sites are submerged after the building of the hydroelectric power plant Djerdap I, but what remains provides extraordinary potential with a non-classic approach to present Roman cultural heritage. There are possibilities for presentation at several points starting from *Cuppae*/Golubac, *Novae*/Čezava, *Gerulata*/Miroč, and Hajdučka vodenica.

26 known Roman sites are now submerged into the waters of the Danube. In 1970, after the dam of the new hydroelectric power plant had been built, the level of the Danube rose by 5-20 meters depending on the position in the gorge. Eight of these sites are included in the UNESCO nomination process that are proved to still exist.

The imperial tablets in Gospođin Vir and Kazan, accessible only via boat, could be presented to the visitors from the water with the plan to enable the access via the land in future (at the moment not possible because of the steep cliffs – the original roman roads and fortification elements are 5-20 meters under the Danube's water level). Underwater surveys of the sites are in progress.

The exploration of Djerdap began in the first half of the 18<sup>th</sup> century (Merci 1716, Ferdinand Marsili 1680 with results published in 1726 in The Hague). During the 19<sup>th</sup> century, engineering endeavors and the growth of interest in historical research, combined with the

opening of Serbia and the Balkans to Western Europe, made the Iron Gates an exotic tourist destination. Felix Kanitz toured through the Danube region several times in 1866, 1887, 1896 and after each of those trips he systematically published the results of his surveys. In numerous books and travelogues he published data on more than 80 different sites, mostly Roman fortifications.

The archeological understanding of Djerdap, although the research was intensive, is unfortunately not completely known. The focus of the research was on fortifications, while settlements, villas, sacral buildings and necropoles remained largely unknown. The excavation of the fortification primarily resulted in the recording of the dimensions, shape and size of the defensive walls, while the interior was not fully explored. Therefore, the internal organisation of the fortification is not precisely documented.

This region has one unique defensive element: walls closing the mouth of small tributaries to the Danube. In the gorge with often vertical cliffs, these small streams represented the only way inland and had to be closed with defensive structures.

An overture to extensive research were the systematic excavations at Veliki Gradac (Taliata) near Donji Milanovac in 1958.

In 1964, the Republic Commission for Scientific Research and Protection of Cultural and Natural Monuments in Djerdap was formed, with the main activity to manage all research works, but also to provide financial resources for them. The commission consisted of over 20 members, the president was Dr. Lazar Trifunović and the secretary Dr. Borislav Jovanović. The commission was formed of four subcommittees to facilitate coordination of protection activities:

- for archaeological research,
- for the relocation of cultural monuments,
- for ethnographic research,
- for protection of natural resources and heritage.

The largest salvage and research project “Djerdap I” took place in the Iron Gates gorge from Golubac (Livadice site) to site Sip (Roman canal and fortification) from 1965 to 1970.

The research began with extensive surveys of the area of the Djerdap gorge in 1956, which were planned and led by the Institute of Archaeology. This pre-project ended with the creation of an extensive study for the entire area, which was assumed to be submerged by the formation of an accumulation lake. All associates of the Institute of Archaeology participated in these works with the help of external associates from all other institutions as this became the largest ever project in Serbian Archaeology. The Faculty of Philosophy from Belgrade, the National Museum Belgrade together with smaller museums (Belgrade City Museum, and museums from Vršac, Niš, Požarevac, Zaječar and Negotin), the Military Museum, as well as all Republic and Regional Institutes for protection of Cultural Heritage took part in the excavations.

The Djerdap projects have also been the first real multidisciplinary projects in former Yugoslavia that included anthropologists, paleozoologists and geophysicists.

Funds for these researches as well as for the relocation of Trajan's tablet (*Tabula Traiana*) were provided by the investor. Unfortunately, further financing was suspended after the building of the dam, because it was then considered that their obligation was fulfilled.

All the main institutions dealing with archeological excavations were involved in this project, led by the Institute of Archaeology from Belgrade, which coordinated the research and tried to unify diverse documentation systems that existed among institutions. In preparation for this project the creation of a common national documentation system was a major leap as up to that point there was no standard in documenting excavation results. The results of these papers have been published in a series of reports, exhibition catalogues, studies, and conference acts. Among the most important are Starinar XXXIII-XXXIV (published in 1984) and Roman Limes in the Middle and Lower Danube.

The second major salvage campaign – “Djerdap II” project – lasted from 1980 to 1984 prior to construction of the Djerdap II hydroelectric power plant, 80 kilometers downstream from the existing one. 15 sites were covered by these excavations (fortifications, settlements, road remains), from *Diana/Karataš* to *Aquae/Prahovo* and *Kusjak*, close the Serbian-Bulgarian border.

The research within this project was conceived somewhat differently, primarily due to the quite different configuration of the terrain, more accessible and easier to excavate. Opposite the cliffs and the narrow space within the Karataš gorge, the banks of the Danube open into a wide and more or less flat river valley. The research in this phase covered the next 80 kilometers of the right riverbank. The first works began in 1980 and continued for the next four years until 1984. The flat terrain with large visibility zones enabled them to be distributed even more evenly and over greater distances, at least when it comes to sites in the function of the Roman Limes.

The principle in the research remained the same as in previous campaigns. The works were concentrated on sites in the immediate vicinity of the river, which were directly endangered by submerging. In this case too, a number of sites located on plateaus and elevations above the new water level remained outside the area covered by the works.

The results of these excavations were published in a special series of publications, the *Djerdapske sveske / Cahiers des Portes de Fer I-IV* (1980-1987). After this campaign had ended, only small-scale excavations have been carried out on the Diana fortress in Karataš near Kladovo until today, and at the sites of Mala Vrbica Konopište, Mihajlovac – Mora Vagei, *Egeta/Palanka Brza*.

During these two projects attempt were made to document the sites in the area between Golubac and mouth of river Timok (where starts Bulgarian section of the Danube Limes) to the maximum extent. At least 26 Roman sites are submerged into the Danube after building of these two dams.

Recent underwater surveys in order to establish state of preservation of the submerged sites in the Iron Gates in the “Djerdap I” research area showed that the most important sites still exist. The year 2020 was a sad anniversary, since for 50 years so many important sites have been lost in the Danube. The strength of the Roman walls was extraordinary and for five decades by now they are opposing the force of the Danube river.



Since preliminary surveys and excavations have been carried out in previous decades all research stopped for some time. Many of the documented sites have been almost completely destroyed or seriously endangered. Examples for problematic sites at which researchers face a lot of difficulties are *Burgenae/Novi Banovci*, *Lederata/Ram* and *Cuppae/Golubac*. Roman *Lederata*, on the hill above modern village of Ram, out of sight of the local population, was systematically looted. The looters destroyed a significant part of the Roman fortifications with their illegal trenches, which are visible even on satellite images.

The situation varies from site to site. Some, like *Singidunum/Belgrade*, lie under modern settlements. The remains of the Roman legionary fortifications are located under the Kalemegdan Park and Belgrade Fortress. The Roman settlement and cemeteries are located below the current city centre. Thus, the possibility for the presentation of the ancient architecture is quite limited, but almost all the necessary infrastructure exists. On the other hand, the Roman city and the legionary fortification of *Viminacium* are far from modern settlements or important routes. It required major efforts to establish access roads and even basic infrastructure for operation of the Archaeological Park. The possibilities of presentation, reconstruction and visualisation are practically unlimited, but dependent on the pace of acquisition of the fields that are still mostly in private hands. In the eastern part of the Limes, the sites are located either under modern settlements or very close to them. Sites such as *Diana* and *Pontes* are well-preserved and have excellent opportunities for presentation. It is a particularly interesting idea to use holographic technology to visualise a Roman bridge, which would not interfere with navigation on the river itself.

As the presentation of the 450 kilometers long Limes requires many activities involving management and presentation, it was proposed to establish regional centres for a better control over UNESCO-protected sites. So far, the idea is to organise four centres as regional hubs. The centre for the area of Srem can be in Novi Sad. Belgrade and *Viminacium* could manage the central zone. Kladovo serve the eastern center, in charge of controlling Djerdap and part downstream towards Bulgaria. Also, there is the idea to designate or establish a central institution that will be the coordinator for the entire Limes area. However, in the current financial crisis, this is unlikely to be implemented.

Being on the World Heritage List is the ultimate recognition of international value. The responsibility of maintaining this status is probably an even more difficult task than the nomination itself. Regardless of the outcome of all our efforts, the preservation of the Roman heritage for future generations will remain the primary task of this project.

*Diana* auxiliary fort is one of the best excavated and presented sites. It lacks most of the visitor infrastructure. At the moment, there are no traditional festivities or events. The site is not actively presented and has no tourist facilities. The municipality of Kladovo is interested and motivated for presentation of the site which has excellent potential if connected to a common presentation concept together with the Archaeological Museum of the Iron Gates in Kladovo and the *Pontes/Kostol* site.

Traian's Bridge at Kostol and Drobeta-Turn Severin (*Pontes* in Serbia and *Drobeta* in Romania) is a Serbian-Romanian transnational nomination site. There is a close border bridge crossing at the dam of the hydroelectric plant Djerdap I 16 kilometers upstream. The piers of the ancient bridge on both of the banks are visible and presentable as well as the forts on the approaches

to the bridge. The potential for virtual presentation is enormous. There is a project ongoing with the aim to create a hologram image of the virtually 3D reconstructed Traian's Bridge. This virtual reconstruction would not interfere with original remains and would give an adequate impression of the construction. This type of presentation too is not interfering with modern navigation along Danube. The municipality Kladovo is highly interested and motivated for presentation of the site.

Most of the sites downstream from *Pontes/Kostol* face a suboptimal situation for high exploitation because the land is mostly in private hands.

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## 5.5. Bulgaria

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The Danube Limes sites in Bulgaria have been systematically studied; some of them – for more than a century (the first excavations of *Ulpia Oescus* date back to 1904 and of *Nicopolis Ad Istrum* – since 1900). Nevertheless, the level of research is still considered to be insufficient. Interest in the various Danube sites has been different over the years. Apart from Bulgarian archaeologists, expeditions from other countries were undertaken, including expeditions of Italians to *Ratiaria*, of Germans to *Iatrus* and of British people to *Nicopolis Ad Istrum*. At present, only a Polish research expedition in *Novae* is still operating. Some sites are better studied at larger scale, such as *Ulpia Oescus*, *Nicopolis Ad Istrum*, *Novae*; others such as *Ratiaria* and *Durostorum* not in so much detail, and for the majority of sites only drillings have been made. There are also known Roman sites that are not yet localised, but their identification is important in order to obtain a complete view of the defence system along the Lower Danube Limes.

In Bulgaria 98 archaeological sites of the Roman heritage have been identified so far, distributed by region as follows: 17 in Vidin; 9 in Montana; 15 in Vratsa; 30 in Pleven; 3 in Veliko Tarnovo; 10 in Ruse and 14 in Silistra.

80% of these sites in the Bulgarian part of the cross-border region are located outside urbanised areas, a large part of them at a distance of one to ten kilometers from the next settlement. 20% of the sites are located entirely or partly in settlement areas (cities or villages), with large parts of their ruins under the modern structures. For twelve of the sites located in urbanised areas, conservation, restoration and exposition activities were carried out and they were integrated into the urban part as tourist sites of the cultural heritage of the settlement. Some of these are the ancient fortress *Castra Martis* (Kula), *Kaleto* (Belogradchik), ancient *Bononia* under the medieval and Ottoman fortress *Bdin* (Vidin), *Nikopol Fortress* (Nikopol), the ancient fortress *Sexaginta Prista* (Ruse), the northern fortified wall of *Transmariska* (Tutrakan), part of the ancient *Durostorum* (Silistra) with its Roman villa and Roman tomb inside, etc. In the ancient city of *Almus* (Lom), archaeological excavations were carried out, but minimal conservation efforts were made.

Examples for sites located in urbanised areas are the Roman city *Ulpia Oescus*, the village of *Gigen*, and *Novae* near *Svishtov*. Some of the ancient ruins are preserved and restored, while others are still under archaeological excavations and restoration activities.

For more than one third of the sites in the urbanised areas no archaeological excavations have been performed, e.g. the ancient fortresses of *Palatiolum* (Baykal), *Trikesa* (Dolni Linevo, Lom), *Cebus* (Dolni Tsibar, Valchedram), etc. Archaeological drillings have been made for the ancient of fortress *Regianum* (Kozloduy).

Some of the most significant historical sites are located at the border of urbanised areas, where archaeological excavations and restoration activities have been carried out and which function

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<sup>5</sup> Based on a consortium work of the *Partnership under the Obligations and Contracts Act “Danubius”* and *RubliMedia business SPL*.

as tourist attractions, e.g. the Roman fortress Kaletto (Belogradchik), the ancient fortress Storgozia (Pleven), the road station and ancient castle *Dimum* (Belene), the ancient city *Novae* (Svishtov), the ancient and medieval settlement *Iatrus* (Krivina), the fortress of Cherven (Cherven, Ivanovo) and the Roman tomb in Babovo, in the municipality of Slivo pole.

For 60% of the identified sites no archaeological excavations have been carried out. For 11% of the sites excavations were made, but no conservation and restoration work was undertaken. Only 23% of the all sites have been studied, and archaeological excavations, conservation and restoration activities were undertaken. The Regional Museum of History of Ruse is very active in their exploration work and carries out annual excavations in Sexaginta Prista, Trimamium and other less popular sites such as the Batin Fortress, the Scaidava Fortress, the necropolis at the village of Marten belonging to the Fortress Tegra.

Sites of great scientific interest for the Bulgarian and foreign scientists are Ratiaria (studied jointly with Italian teams), Iatrus (studied together with German scientists), Novae (studied jointly with Polish teams and using state-of-the-art methods), Nicopolis Ad Istrum (jointly with English experts).

The archaeological and scientific priority lies with the sites of Roman legionary camps – *Ratiaria*, *Novae*, *Ulpia Oescus*, and *Durostorum*. Major settlements and fortresses on the Danube Limes at that time also have great scientific potential. Many of the sites, especially in Northwestern Bulgaria, have lost a lot of their archaeological potential, since there has been a lot of devastating treasure hunting activity. Unfortified settlements and roads as engineering facilities are not of priority in the current archaeological research work.

The existing Roman cultural heritage sites in the cross-border region Romania–Bulgaria form part of the cultural heritage of all Mediterranean countries and are a strong connecting element in building a shared identity. The cultural heritage significance of the sites of the Roman Danube Limes is great because of the valuable data obtained from this cultural heritage.

The Bulgarian part is an excellent example of the influence of Roman rule on the economic, social and cultural development of peoples of different ethnicity, inhabiting a vast territory between the Balkan Mountains and the Danube. The rapid penetration of the Roman culture was due to the large number of Roman soldiers and civilians dealing with trade, agriculture and crafts, as well as to the multiethnic local population. The Roman army accomplished cultural exchange between the western and eastern parts of Europe by building a route guarded by the army and fortresses, combining eastern and western influence.

The Roman expansion in the Danube lands would not have been so successful without the major engineering effort and achievement. First of all, these were the roads built by the army. At the beginning of the 1<sup>st</sup> century, the army began the construction of the Danube Road, and the first Legionary camp on the territory of Novae was created around the middle of the century. The system of the linear defense was created gradually in several stages and started in the first quarter of the 1<sup>st</sup> century CE on the west.

The most distinctive thing of this sector was the gradual expansion of Roman power along the Danube River and the specific organisation of the territory along the border, characterised by major changes in administration, economy, and military organisation. The fortification system and the Roman army played an important historical part for the entire empire during the

invasions of the Costoboci (6<sup>th</sup>-7<sup>th</sup> century), the Goths (3<sup>rd</sup> century), the Huns (4<sup>th</sup> century), the Avars and the Slavs (6<sup>th</sup>-7<sup>th</sup> century). Many civilian settlements formed along the borders. Together with the military buildings, they became important economic centers with economic power equal to that of the large cities located in the central part of the Empire. These were centres of intense trade exchange with the other Roman centers, as well as with the peoples inhabiting the territories beyond the border.

The Roman sites from the Danube Limes help to understand the techniques and methods of Roman construction as well as the evolution and adaptation of the fortifications in the late Roman period. The relatively good conservation status of the archaeological sites and their preserved authenticity determine their high cultural heritage value.

The Danube Limes is one of the most important and irreplaceable material evidence to understand the cultural exchange and the history of human communication in the region and it represents a world heritage. Apart from their military characteristics, the fortresses embody ideological aspects that serve to protect or express the ideology and order of the given territory. They have a high historical value as witnesses to events and as documents subject to multidisciplinary interpretation.

Fortresses and fortified cities are a network of structures with great technical complexity and diverse cultural concepts, containing a wide range of messages that can vary throughout history. In addition, the limes had a representative influence as a demonstration of power. The ruins of the fortification facilities prove the duality of Roman politics – on the one hand, demonstrating power and, on the other hand, cultural influences; on the one hand, a magnificent architecture, and on the other hand, its impact on the enemy's concepts. The limes is a complex system of inland roads, terrain, and anthropogenic interventions related to the cultural and technical organisation of large territories.

In terms of scale and complexity, fortresses and fortified cities, especially legionary camps, represent tremendous efforts and are a step forward in the development of technology, architecture and construction techniques of their time. They combine urban, architectural, typological, and morphological values. Besides their aesthetic and material stylistic value, the Roman border sites in the cross-border region along the Danube bring together different cultures from different territories.

The Lower Danube Limes is an example of historical and cultural changes and exchanges and its multifaceted basis explains the different aspects of historical reality.

#### *5.5.1. Bibliography*

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